

Final minutes of the 22nd meeting of the EAC held on 27th November, 2017 for appraisal of Coal mining projects

A. The 22nd meeting of the Expert Appraisal Committee (EAC) for Thermal & Coal mining projects was held on 27th November, 2017 in the Ministry to consider the proposals relating to coal mining sector. The lists of participants and the project proponents are at Annexure-I & II respectively.

B. Confirmation of minutes

There being no comments from any of the members of the Committee, minutes of the 21st meeting of the EAC held on 27th October, 2017 were confirmed.

C. 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 No.22.1

Amadand Open Cast Coal Mine expansion project from 2.15 MTPA to 5.4 MTPA in ML area of 1443.02 ha by M/s South Eastern Coalfields Limited located in District Anuppur (Madhya Pradesh) - For ToR

22.1.1 The proposal is for TOR for Amadand Open Cast Coal Mine expansion project from 2.15 MTPA to 4.0 MTPA Normative/5.4 MTPA Peak in a total land area 1443.02 ha (ML area 1382.22 ha) of by M/s South Eastern Coalfields Limited located in District Anuppur (Madhya Pradesh).

22.1.2 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 EC vide letter no. J-11015/46/2002-IA.II (M) dated 18th March, 2015 for 2.15 MTPA capacity for an area of 884.71 ha.

(ii) The latitude and longitude of the project are 23^o 07' 28" N to 23^o 09' 46" N and 82^o 02' 04" E to 82^o 04' 53" E respectively.

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

(iv) Coal Linkage : Thermal Power Stations

(v) Employment generated / to be generated: 244 Nos

(vi) Benefits of the project: This coal Mine will go a long way in fulfilling the demand nation's electricity and other coal based industries, apart from earning revenue for the government. Opportunity of employment for the project affected villagers and allied industries.

(vii) The total land area is 1443.02 ha ha. Mining lease area as per approved Mining Plan is 1382.22 ha.

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

S.N	LAND USE	Within ML Area (ha.)	Outside ML Area (ha.)	Total (ha)
1	Agricultural Land	1303.84	0	1303.84

2	Forest Land	0	0	0
3	Govt Land	64.92	60.80	125.72
4	Surface Water Bodies	13.46 (9.38 Tenancy+4.08 Govt.)	0	13.46
	Total	1382.22	60.80	1443.02

Pre-Mining:

S.N	LAND USE	Area (ha.)
.		
1	Agricultural Land	1303.84
2	Forest Land	0
3	Govt Land	125.72
4	Surface Water Bodies	13.46 (9.38 Tenancy+4.08 Govt.)
	Total	1443.02

Post- Mining:

S.No.	Land use	Area in ha
1.	Quarry Area Reclaimed Area: 464.62 Ha. Final Void/ Water body: 250.41 Ha	715.03
2.	External dump Reclaimed Area: 376.70 Ha	376.70
3.	Safety zone as green belt Afforested Area: 116.00 Ha	116.00
4.	Infrastructure, Explosive Magazine etc. Afforested Area: 18.45 Ha. Built-up Area: 166.04 Ha	184.49
5.	R & R Site Built-up Area: 45.72 Ha Afforestation area: 5.08 Ha	50.80
	Total	1443.02

Core area :

S.No.	Land use	Area in ha
1.	Quarry Area	715.03
2.	External dump	376.70
3.	Safety zone as green belt	116.00
4.	Infrastructure, Explosive Magazine etc	184.49
5.	R & R Site	50.80
	Total	1443.02

(ix) The total geological reserve is 160.57 MT. The mineable reserve 66.258 MT, extractable reserve is 66.258 MT. The per cent of extraction would be 100 %.

(x) The coal grade is G-8. The stripping ratio is 10.85 Cum/tonne. The average Gradient 2 degree (1 in 28). There will be 15 seams with thickness ranging from 0.5 m to 4 m.

(xi) The total estimated water requirement is 2.7 MLD. The level of ground water ranges from

3.5 m to 7.3 m.

(xii) The Method of mining would be Opencast.

(xiii) There is one external OB dump with Quantity of 238.02 Mm³ in an area of 376.70 ha with height of 120 m above the surface level and one internal dump with Quantity of 526.38 Mm³ in an area of 464.62 ha.

(xiv) The final mine void would be in 250.41 ha with depth varying upto 60 m. and the Total quarry area is 715.03 ha. Backfilled quarry area of 464.62 ha shall be reclaimed with plantation. A void of 250.41 ha with depth of 60 m is proposed to be converted into a water body

(xv) The life of mine is 19 Years.

(xvi) Transportation: Transportation of coal from face to siding by trucks/tippers.

After 5 years:

1. The transportation of coal from face to siding by in-pit belt conveyor and surface belt conveyor up to Amadand siding.
2. Coal from railway siding will be loaded into railway wagons with the help of Rapid loading system.
3. To local consumers by trucks/ tippers.

(xvii) There is no R & R involved. There are 1100 PAFs.

(xviii) Cost: Total capital cost of the project is Rs. 869.44 Crores. CSR Cost Rs. 2.00 per Tonne of coal production. R&R Cost Rs. 78.21 Crore. Environmental Management Cost Rs. 101.99 Crores

(xix) Water body: Banki seasonal nallah is located to the east of the block and flows from north to south.

(xx) Approvals: Ground water clearance from CGWA obtained on 11.10.2001. Board's approval obtained on 05.03.2016. Revised Project Report including Mine Closure Plan for 4.00 MTPA was approved on 05.03.16 in the 325th CIL Board Meeting held in Kolkata.

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

(xxii) Forestry issues: No forest land area involved in the project.

(xxiii) Total afforestation plan shall be implemented covering an area of 957.32 ha at the end of mining. Green Belt over an area of 116 ha. Density of tree plantation 2500 trees/ ha of plants.

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

(xxv) The Certified Compliance Report of Regional Office located at Nagpur of the MoEF&CC No. 3-22/20159ENV/1157 dated 04.10.2017 was deliberated in the EAC meeting.

22.1.3 During deliberations on the proposal, the Committee noted the following:-

The proposal is for ToR to the expansion project of Amadand Opencast Coal Mine project from 2.15 MTPA to 5.4 MTPA of M/s South Eastern Coalfields Limited in a total area of 1443.02 ha (ML area 1382.22 ha) located in villages Nimha, Amadand, Kuhka, Manjholi and Bhalwahi, Tehsil Kotma, District Anuppur (Madhya Pradesh). The project involves no forest land.

Mining plan for the proposed expansion from 2.15 to 5.4 MTPA has been approved by the Board of M/s SECL in its meeting held on 5th March, 2016. Mine Closure Plan is an integral part of the mine plan.

Earlier, the project for its expansion from 1.15 MTPA to 2.15 MTPA in an area of 884.71 ha was accorded environmental clearance by this Ministry vide letter dated 18th March, 2015. The

Regional Office of the Ministry at Bhopal has forwarded the monitoring report on compliance status of the conditions stipulated in the EC dated (based on the site visit carried out on 11th September, 2016), vide their letter dated 4th October, 2017.

Consent to Operate for the Amadand Opencast coal mine at the production capacity of 2.15 MTPA has been obtained from the Madhya Pradesh Pollution Board. The same is presently valid up to 30th June, 2021.

Baseline air quality data has been generated /collected during the period April-June, 2017.

22.1.4 *The EAC, after detailed deliberations, recommended the project for grant of ToR to the expansion of Amadand Opencast Coal Mine from 2.15 MTPA to 5.4 MTPA Peak in a total land area 1443.02 ha (ML area 1382.22 ha) of M/s South Eastern Coalfields Limited located in District Anuppur (Madhya Pradesh), and for preparation of EIA/EMP reports with public consultation subject to compliance of all conditions as specified/notified in the standard ToR applicable for opencast coal mines, along with the additional conditions as under:-.*

- *For proper baseline air quality assessment, adequate monitoring stations as per the extant guidelines/norms, in the downwind areas need to be set up and included in the air quality modelling.*
- *Ecological restoration and mine reclamation plan to be prepared with local/native species found in the area.*
- *In-pit belt conveyor should be installed from the pit bottom up to the loading point//railway siding.*
- *The mine is proposed for an increase in production by over 150%. As such, to know the pollution load bearing capacity of the surrounding ecosystem, a study of IRR in its ecological dimension may be arranged through an expert institution.*

Agenda No.22.2

Expansion of Gevra Opencast Coal Mine from 41 MTPA to 49 MTPA in ML area of 4184.486 ha of M/s South Eastern Coalfields Limited at district Korba (Chhattisgarh) - For EC

22.2.1 The proposal is for grant of EC for expansion of the project, Gevra Opencast coal mine from 41 MTPA to 49 MTPA in mining lease area of 4184.486 ha of M/s South Eastern Coalfields Limited in District Korba (Chhattisgarh).

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

(i) Earlier, the Environmental Clearance for Gevra Opencast coal mine granted by the Ministry vide letter no. J-11015/484/2007-IA.II (M) dated 3rd June, 2009 for expansion from 25 MTPA to 35 MTPA in leasehold area of 4184.486 ha, based on the public hearing held on 22nd August, 2008.

(ii) Further, EC for expansion from 35 MTPA to 40 MTPA was accorded vide letter no. J-11015/85/2010-IA.II (M) dated 31.01.2014 under clause 7(ii) of EIA Notification, 2006 (in accordance with OM J-11015/30/2004.IA.II(M) dated 19.12.2012) exempting public hearing.

(iii) In accordance to the OM J-11015/30/2004.IA.II (M) dated 2.9.2014 further, Ministry 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

(iv) Further to meet the country's demand of coal, a proposal was made for expansion of project from 41 MTPA to 45 MTPA within the existing infrastructure and leasehold area. for same the ToR was accorded vide letter No. J-11015/85/2010-IA.II(M) dated 28th February, 2017 and the revised ToR dated 05.07.2017.

(v) To verify the status of compliance of EC conditions for Gevra opencast expansion project 41 MTPA, the Regional Office of MoEF&CC, Nagpur has carried out the site inspection on 11th September, 2016. The compliance and monitoring reports forwarded to this Ministry vide their letter No. 3-28/2014(Env) dated 4th November, 2016, which was deliberated in the 4th EAC meeting held on 30/31.1.2017. The project proponent presented the action taken on each of the observations made by Regional Office during the site visit.

(vi) Meanwhile, MoEF&CC issued OM No.J-11015/224/2015-IA.II (M) dated 15.09.2107 for environmental clearance for expansion of coal mining projects up to 40% with exemption of public hearing. On the basis of same OM a fresh application has been submitted for expansion of Gevra Opencast coalmine project from 41 MTPA to 49 MTPA without public hearing in mining lease area of 4184.486 ha.

(vii) Project has the potential to produce and dispatch 49 MTPA of coal within existing mining lease area of 4184.486 ha and infrastructure.

(viii) Stage-1 Forest Clearance have been obtained for entire forest land, 1016.412 Ha involved in the mining lease area of 4184.486 ha.

(ix) Mining plan for 49 MTPA was approved by SECL Board in its 262nd meeting held on 10th/11th October 2017. Mine closure plan is an integral part of mining plan.

(x) The latitude and longitude of the project site are 22^o18'00" to 22^o21'42" N and 82^o32'00" to 82^o39' 30" E respectively.

(xi) Joint Venture: No

(xii) Coal Linkage : NTPC and various thermal power plants

(xiii) Employment generated / to be generated: 4391 Persons

(xiv) 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 and post-mining enhancement of green cover.

(xv) The land use pattern of the project will be as follows:

Pre-Mining:

SN.	Land use	Within Mining lease area (ha)	Outside Mining lease area (ha)	Total (ha)
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 and 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 and 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	Infrastructure 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 and 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	298.564	59.568	0.000	0.000	0.000	60.022	60.022	418.174
	Total	2520.571	1016.412	0.000	0.000	7.000	640.503	647.503	4184.486

(xvi) Total geological/ mineable reserve within mining lease area of 4184.486 ha is 528.93 MT and extractable reserve is 528.93 MT (as on 1.4.2017).

(xvii) The life of mine is 11 Years.

(xviii) The grade of the coal is G-10 and the stripping ratio is 1.30 m³/T. The average gradient varies from 1 in 6 to 1 in 12 having 6 seams with thickness ranging from 3.14 m to 57.86 m.

(xix) Total estimated water requirement of the project is 22,560 KL/day. The level of ground water ranges from 2.30 m to 11.98 m in post-monsoon and 5.56 m to 14.60 m in pre-monsoon season.

- (xx) The method of mining would be opencast.
- (xxi) There are 7 external OB dumps in an area of 480 ha with quantity of 147.60 Mcum and height of 90 m above the ground level, and 8 internal dumps with quantity of 1119.40 Mcum in an area of 1378 ha.
- (xxii) The final mine void would be in 659.250 ha with depth of 40 m, which is proposed to be converted into water body.
- (xxiii) External OB dump area 480.00 ha and backfilled quarry area of 1378.00 ha shall be reclaimed with plantation.
- (xxiv) The transportation of coal from face to in-pit crusher is by trucks, from surface to siding is by conveyor system upto Silo and from siding by Rail and MGR. In-pit belt conveyor is under construction and will be completed within December 2017.
- (xxv) Rehabilitation and resettlement is involved in the project. There are 3428 PAFs.
- (xxvi) Total capital cost of the project is Rs. 11,816.40 Crores.
- (xxvii) The 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.
- (xxviii) R&R Cost Rs. 455.96 Crores and Environmental Management Cost Rs. 142.82 Crores.
- (xxix) Hasdeo river flows approximately at a distance of 8 km from the project site. There are number of seasonal nallah and tributaries of Hasdeo river like Ahiran, Kholar nallah and Lilagar river.
- (xxx) The ground water clearance has been obtained for the project on 18.06.2004.
- (xxxi) There are no national parks, wildlife sanctuary, biosphere reserves in the 10 km buffer zone of the study area.
- (xxxii) Total forest area involved is 1016.412 ha. The status of diversion of forest land for non-forestry purposes is as under:-

Area (in ha)	Stage-1 /Final FC issued vide letter no. and date	Validity period of FC
100.898	vide MoEF Clearance F no.8-33/2005-FC dated 05.05.2008	Co-terminus with the mining lease or 20 years
46.198	vide MoEF Clearance F no.8-81/ 2006-FC dated 20-04-2015	Co-terminus with the mining lease or 20 years
192.046	vide MoEF Clearance F no.8-77/2006 – FC, dated 20-04-2015	Co-terminus with the mining lease or 20 years
564.885	vide MoEF Clearance F no.8-79/2006 – FC, dated 20-04-2015	Co-terminus with the mining lease or 20 years
112.385	vide MoEF&CC Clearance F.No. 8-41/2017-FC dated 27.09.2017.	Co-terminus with the mining lease
1016.412	Total forest land for which Stage-1 Forestry Clearance obtained	

- (xxxiii) Afforestation plan shall be implemented covering an area of 2438.672 ha at the end of the mining. Density of tree plantation shall be 2500 trees/ ha of plants.
- (xxxiv) There are court cases / violation pending with the project proponent as per the following details:-

S N	Year of Violation	Production	Case No	Court	Parties	Brief	Present Status
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1	31.7.2000	Consent not renewed and capacity expanded from 10 MTY	613/2007	HC of CG, BSP	CECB, Korba. Vs. SECL Gevra Project	Regarding Cri. Complaint filed under Sec.15 and 17 of EP, 1986. Criminal revision.	Pending
2	2001-02 to 2004-05	More than 10 MTY	1217 /2007	JMC Class-I Korba	CECB, Korba. Vs. CGM Dipka Extension Gevra area SECL	Regarding Cri. Complaint filed under Sec.15 and 17 of EP Act.	Pending for examination of proposed accused

(xxxv) Status of the Compliance of OM dated 15.09.2017 vide F No. J-11015/224/2015-IA.II for expansion of coal mining projects upto 40% without public hearing. Details are as under:

S. No.	Requirement of the OM	Compliance
1.	Predicted air quality parameters are within the prescribed norms	Air quality impact prediction for incremental coal production (49 MTPA) was conducted in October 2017 and air quality parameters were found within the prescribed norms. Additional mitigation measures like <ul style="list-style-type: none"> • Long range fogging system, • Sweeping machines to prevent accumulation of dust in the roads. • Wind shield/breaker attached with creeper (potential to arrest dust pollution), • 50 m wide greenbelt has also been taken into consideration.
2.	Coal transportation is through conveyor system up to the silo and then loading to railway wagons, involving no transportation through roads.	<ul style="list-style-type: none"> • The incremental coal production will be transported through conveyor system up to the silo and then loading into the railway wagons.
3.	Coal mining is done through deployment of surface miners, replacing three dust generating operations of the conventional mining system namely drilling, blasting and crushing in one go.	<ul style="list-style-type: none"> • Coal production is by deployment of surface miners. • Incremental production will also be done through deployment of surface miner.
4.	Public hearing already conducted for the total mine lease area involved and no more area is required for the	<ul style="list-style-type: none"> • Public hearing has been conducted for the entire land area of 4184.486 Ha. on 22-08-2008. • No additional land is required for proposed expansion.

	proposed expansion.	<ul style="list-style-type: none"> The major concerns raised in public hearing were regarding employment, supply of drinking water to affected villages, education and healthcare services to affected people. All concerns have been addressed.
5.	Compliance status of EC conditions monitored by the concerned Regional Office of this ministry is found to be satisfactory.	<ul style="list-style-type: none"> Compliance status of EC conditions monitored by the concerned Regional Office of Ministry has been found satisfactory.
6.	Other statutory requirements like Consent to Establish/Operate, Clearance from CGWA, approval of Mining Plan and the Mine Closure Plan, Mine Closure Status Report as applicable, Forest Clearance, etc are satisfactorily fulfilled.	<p>Details of the statutory requirements such as Consent to Operate, Forest Clearance, CGWA Clearance, approved Mining Plan and Mine Closure Plan for 49 MTPA etc are as below:</p> <ul style="list-style-type: none"> Consents to operate issued by Chhattisgarh Environment Conservation Board, Raipur for 41 MTPA, which is valid upto 28.02.2018. Clearance of ground water from CGWA has been obtained. Mine plan and Mine closure plan has been approved by the SECL Board on 10/11.10.2017. Forest Clearances- Stage-1 Forest Clearance has been obtained for the entire forest land of 1016.412 ha involved in the project.

22.2.3 During deliberations, the EAC noted the following:-

The proposal is for environmental clearance to the expansion project of Gevra Opencast coal mine from 41 MTPA to 49 MTPA in the existing area of 4184.486 ha of M/s South Eastern Coalfields Ltd located in District Korba (Chhattisgarh).

The total area includes 2037.250 ha of mine lease area and the area outside mine lease is 2147.236 ha. The total forest land involved is 1016.412 ha (441.410 ha within the mine lease and 575.002 ha outside the mine lease area). Stage-1 Forest Clearance for the entire forest land has been obtained in stages for its diversion for non-forestry purposes.

Mining plan for the proposed expansion from 41 to 49 MTPA has been approved by the Board of M/s SECL in its meeting held on 10-11 October, 2017. Mine Closure Plan is an integral part of the mine plan.

Earlier, Gevra Opencast coal mine for its expansion from 25 MTPA to 35 MTPA in mine lease area of 4184.486 ha was accorded environmental clearance vide letter dated 3rd June, 2009 based on the public hearing held on 22nd August, 2008. Later, the environmental clearance for expansion from 35 MTPA to 40 MTPA in mine lease area of 4058.145 ha (after excluding forest patch of 126.341 ha) was granted on 31st January, 2014, exempting the expansion project from the requirement of public hearing as per the provisions of this Ministry's OM dated 19th December,

2012. The said OM provided for 25% expansion in the production capacity subject to a ceiling of 5 MTPA if the transportation is proposed by means of a conveyor and/or rail transport.

The project was granted another expansion from 40 MTPA to 41 MTPA by the Ministry vide letter dated 6th February, 2015 without insisting for public hearing, but now in terms of the provisions of this Ministry's OM dated 2nd September, 2014 providing exemption from public hearing subject to the ceiling of additional production of 6 MTPA.

The present proposal for expansion from 41 MTPA to 49 MTPA seeks environmental clearance without conducting the public hearing in view of this Ministry's OM dated 15th September, 2017. The said OM provides for exemption from public hearing in cases where the expansion in production capacity up to 40% is envisaged in 2-3 phases, subject to fulfillment of certain parameters of environmental concern. In compliance of the said OM, the status is reported to be as under:

S. No.	Requirement of the OM	Compliance
1.	Predicted air quality parameters are within the prescribed norms	Air quality impact prediction for incremental coal production (49 MTPA) was conducted in October 2017 and air quality parameters were found within the prescribed norms. Additional mitigation measures like <ul style="list-style-type: none"> • Long range fogging system, • Sweeping machines to prevent accumulation of dust in the roads. • Wind shield/breaker attached with creeper (potential to arrest dust pollution), • 50 m wide greenbelt has also been taken into consideration.
2.	Coal transportation is through conveyor system up to the silo and then loading to railway wagons, involving no transportation through roads.	<ul style="list-style-type: none"> • The incremental coal production will be transported through conveyor system up to the silo and then loading into the railway wagons.
3.	Coal mining is done through deployment of surface miners, replacing three dust generating operations of the conventional mining system namely drilling, blasting and crushing in one go.	<ul style="list-style-type: none"> • Coal production is by deployment of surface miners. • Incremental production will also be done through deployment of surface miner.
4.	Public hearing already conducted for the total mine lease area involved and no more area is required for the	Public hearing has been conducted for the entire land area of 4184.486 ha on 22-08-2008. No additional land is required for proposed expansion.

	proposed expansion.	The major concerns raised in public hearing were regarding employment, supply of drinking water to affected villages, education and healthcare services to affected people. All concerns have been addressed.
5.	Compliance status of EC conditions monitored by the concerned Regional Office of this ministry is found to be satisfactory.	Compliance status of EC conditions monitored by the concerned Regional Office of Ministry has been found satisfactory.
6.	Other statutory requirements like Consent to Establish/Operate, Clearance from CGWA, approval of Mining Plan and the Mine Closure Plan, Mine Closure Status Report as applicable, Forest Clearance, etc are satisfactorily fulfilled.	<p>Details of the statutory requirements such as Consent to Operate, Forest Clearance, CGWA Clearance, approved Mining Plan and Mine Closure Plan for 49 MTPA etc are as below:</p> <p>Consents to operate issued by Chhattisgarh Environment Conservation Board, Raipur for 41 MTPA, which is valid upto 28.02.2018.</p> <p>Clearance of ground water from CGWA has been obtained.</p> <p>Mine plan and Mine closure plan has been approved by the SECL Board on 10/11.10.2017.</p> <p>Forest Clearances- Stage-1 Forest Clearance have been obtained for the entire forest land of 1016.412 ha involved in the project.</p>

The ambient air quality data for PM₁₀ was found varying from 93-97 ug/m³ (98th percentile values) whereas the incremental concentration due to the proposed expansion was estimated to be between 0.96-12.91ug/m³. With the proposed additional measures to control particulate emissions, predicted GLCs would be in the range of 83.7- 87.3 ug/m³ and thus complying with the NAAQ standards in this regard. These additional control measures include mechanized sweeping, water sprinkling/mist spraying on haul roads and loading sites, long range misting/fogging arrangement, wind barrier wall and vertical greenery system, green belt (50 m wide), dust suppression arrangement at railway siding, etc.

Different works taken up under the CSR during last five years are as under:-

Year	Expenditure incurred (in Rs.lakhs)	Major works
2013-14	1487.59	Construction of CC road at Dipka-Pali up to Dumarkachhar (22.40 Km). Construction of cultural munches at Darri, Batora and Navapara.

2014-15	5152.98	Construction of CC road at Ralia, Bhilaibazar, Bandha-khar and at Haldibazar. Community building at Bhatora, Khamaria and Katkidabri, Black topping of Nehru nagar approach road.
2015-16	6332.70	Construction of 476 nos. of toilets in 3 districts of Chhattisgarh namely Korba - 109, Mungeli - 199 Mahasamund - 168. New building of primary school at Gevra, Repair at 03 pre-tribal girls hostel at haldibazar.
2016-17	6627.28	Construction of open defecation free (ODF) toilets at 07 villages of 6 gram panchayat of Katghora block, korba. Renovation of 16 nos. hostel / ashrams at Korba. Construction of the Korba Overbridge at Korba

Consent to Operate for the Gevra Opencast coal mine with its present production capacity of 41 MTPA has been obtained from the Chhattisgarh Environment Conservation Board. The same last renewed for a year, is presently valid up to 28th February, 2018.

The Regional Office of the Ministry at Nagpur has forwarded the monitoring report on compliance status of the conditions stipulated in the last EC dated 6th February, 2015 (based on the site visit carried out on 11th September, 2016), vide their letter dated 4th November, 2016. Many of the conditions were found to be 'being complied with' and/or 'partially complied'. The project proponent has informed the Committee about the actions taken in response to the observations of the Regional Office. The Committee desired the action taken report should have been submitted by the project proponent to the Regional Office for examination at their end, and then forwarded to the Ministry along with the comments.

22.2.4 *The EAC expressed its deep concern over the base line air quality in the area especially, the higher PM₁₀ values, which are bound to increase with the proposed expansion of the project. The Committee further observed that with the different control measures presently in place, the air quality would not be meeting the prescribed standards. Instead, it is only after the proposed mitigative measures, the air quality is reported to be within the norms. Considering the same, the Committee preferred to allow the proposed expansion for a limited period only, and it is only after evaluating the efficacy and adequacy of the proposed control measures and its impact, the continuance of the project at the enhanced capacity may be allowed thereafter.*

The EAC, after deliberations, recommended the project for grant of EC to the expansion of Gevra Opencast coal mine from 41 MTPA to 45 MTPA for the present, commensurate with the proposed production plan, of M/s South Eastern Coalfields Limited in an area of 4184.486 ha located in District Korba (Chhattisgarh), subject to the compliance of terms and conditions as applicable, and the additional conditions as under:-

(i) The environmental clearance for the proposed increase in capacity shall be valid up to 31st March, 2019. The continuance of the project thereafter at the increased capacity, shall be based on evaluation of the proposed control measures and its impact on the ambient air quality by the EAC in later half of the FY 2018-19.

(ii) To control the of dust generation at source, the crusher and in-pit belt conveyors shall be provided with mist type sprinklers.

- (iii) *Mitigative measures shall be undertaken to control dust and other fugitive emissions all along the roads by providing sufficient numbers of water sprinklers. Adequate corrective measures shall be undertaken to control dust emissions as presented before the Committee, which would include mechanized sweeping, water sprinkling/mist spraying on haul roads and loading sites, long range misting/fogging arrangement, wind barrier wall and vertical greenery system, green belt, dust suppression arrangement at railway siding, etc.*
- (iv) *Efforts shall be made to explore the possibility of providing wind shield/breaker arrangement with creepers and climbers.*
- (v) *Thick green belt of 50 m width at the final boundary in the down wind direction of the project site shall be developed to mitigate/check the dust pollution.*
- (vi) *Persons of nearby villages shall be given training for their livelihood and skill development.*
- (vii) *To ensure health and welfare of nearby villages, regular medical camps shall be organized at least once in six months.*
- (viii) *The predominant Sal species in the forest area shall be protected, and in case of coal mining operations inevitable therein, compensatory afforestation of these species shall be carried out in consultation with State Forest Department.*
- (ix) *In view of the mining potential of the area and the pollution concerns, carrying capacity of the eco-system shall be studied through some expert agencies to assess optimal mining operations with minimal impact on ecosystem services.*
- (x) *A sustainable mining practice shall be developed in the mine, catering to attributes of ecological, societal and economical dimensions.*

Agenda No.22.3

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 (Chhattisgarh) - For EC

22.3.1 The proposal is for grant of EC for Dipka Opencast expansion Project from 31MTPA to 35 MTPA in Mining lease area of 1999.293 Ha of M/s South Eastern Coalfield Limited at district Korba (Chhattisgarh).

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

- (i) Earlier, the Environmental Clearance for Dipka Opencast coal mine granted by this Ministry vide letter no. J-11015/87/2003-IA.II(M) dated 04.10.2004 for production capacity of 20 MTPA in an area of 1461.51ha.
- (ii) Further, the project was accorded Environmental Clearance vide letter no. J-11015/487/2007-IA.II (M) dated 03.06.2009 for expansion from 20 MTPA to 25 MTPA in lease areas of 2000.642 ha based on the public hearing held on 05.09.2008.
- (iii) Further, EC for expansion from from 25 MTPA to 30 MTPA in an area of 1999.293 was accorded vide letter no. J-11015/487/2007-IA.II (M) dated 12.02.2013 under clause 7(ii) of EIA Notification, 2006 (in accordance with OM J-11015/30/2004.IA.II(M) dated 19.12.2012) exempting public hearing.
- (iv) In accordance to the OM J-11015/30/2004.IA.II(M) dated 2.9.2014 further, Ministry accorded amendment in the EC vide letter No. J-11015/487/2007-IA.II (M) dated 06.02.2015 for incremental difference in the production capacity from 30 MTPA to 31 MTPA.
- (v) Further to meet the country's demand of coal, a proposal was made for expansion of

project from 31 MTPA to 35 MTPA within the existing infrastructure and leasehold area. for same the ToR was accorded vide letter No. J-11015/487/2007-IA-II(M) dated 28.02.2017 and the revised ToR dated 10.07.2017.

(vi) To verify the status of compliance of EC conditions for Dipka opencast expansion project 31 MTPA, the Regional Office of MoEF&CC, Nagpur has carried out the site inspection on 11.09.2016. The monitoring report was forwarded to this Ministry vide their letter No. 3-28/2014(Env) dated 04.11.2016, 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.

(vii) Meanwhile, OM No. J-11015/224/2015-IA.II, dated 15/09/2017, was issued for production capacity expansion up to 40% of PH capacity without Public Hearing with certain conditions. On the basis of the above said OM the proposal has been submitted for grant of EC for expansion of Dipka opencast coal mine from 31MTPA to 35 MTPA without public hearing in the existing mine lease area of 1999.293 ha.

(viii) The latitude and longitude of the project are 22°18'59" to 22°19'43" N and 82°30'47" to 82°33'34"E respectively.

(ix) Joint Venture: No

(x) Coal Linkage : NTPC Seepat and various other power plants

(xi) Employment generated / to be generated: 2694 persons

(xii) 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

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

Pre-Mining:

Activity	Types of land are (Ha)			Total Area (Ha)
	Forest	Tenancy/	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

(xiv) The total geological reserve is 617 MT. The mineable reserve 314.04 MT, extractable reserve is 314.04 MT. The percent of extraction would be 100 %.

(xv) The coal grade is E/G10. The stripping ratio is 1.20 Cum/tonne. The average Gradient is 3.37⁰-6.34⁰. There will be 3 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).

(xvi) The total estimated water requirement is 8010 m³/day.

(xvii) The level of ground water ranges (CGM Office- Avg 8.275 m; Pragati Nagar- Shallow Avg-3.125 m deep Avg-19.17 m).

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

(xix) There is three external OB dump with Quantity of 81.00 Mbcm in an area of 206.00 ha with height of 90 meters above the surface level and three internal dump with Quantity of 534.00 Mbcm in an area of 780.00 ha with height of 90 meters above the surface level

(xx) The final mine void would be in 222.053 Ha with depth 80m and the total quarry area is 1002.053. Backfilled quarry area of 780.00 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

(xxi) The life of mine is 10 Years as on 01.04.2017.

(xxii) Transportation: Coal transportation from face to In pit crusher: by trucks. surface to siding: by trucks ; siding to consumer : rail

(xxiii) There is R & R involved. There are 1690 PAFs.

(xxiv) 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. 198.13 Lakhs for the FY (2016- 17).

(xxv) Hasdeo river flows approximately at a distance of 18 km from the project site. There are number of seasonal nallah and tributaries of Hasdeo river like Kholar nallah and Lilagar river.

(xxvi) Ground water clearance has been obtained for the project on 25.03.2004.

(xxvii) Mining plan for the 35 MTPA was approved by SECL Board on 13.05.2016 and mine closure plan is an integral part of mining plan.

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

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

(xxx) Total afforestation plan shall be implemented covering an area of 1009 ha at the end of mining including green Belt over an area of 23 ha. Density of tree plantation 2500 trees/ ha of plants.

(xxxi) 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

22.3.3 During deliberations, the EAC noted the following:-

The proposal is for environmental clearance to the expansion project of Dipka Opencast coal mine from 31 MTPA to 35 MTPA in the existing mine lease area of 1999.293 ha of M/s South Eastern Coalfields Ltd located at District Korba (Chhattisgarh).

Total mine lease area of 1999.293 ha includes 409.056 ha of forest land. Stage-1 Forest Clearance for the entire forest land has been obtained in stages for its diversion for non-forestry purposes.

Mining plan for the proposed expansion from 31 to 35 MTPA has been approved by the Board of M/s SECL in its meeting held on 13th May, 2016. Mine Closure Plan is an integral part of the mine plan.

Earlier, Dipka Opencast coal mine for its expansion from 20 MTPA to 25 MTPA in mine lease area of 2000.642 ha was accorded environmental clearance vide letter dated 3rd June, 2009 based on the public hearing held on 5th September, 2008. Later, the environmental clearance for expansion from 25 MTPA to 30 MTPA in mine lease area of 1999.293 ha (after reconciliation of land area and excluding Revenue forest patch of 0.093ha) was granted on 12th February, 2013, exempting the expansion project from the requirement of public hearing as per the provisions of this Ministry's OM dated 19th December, 2012. *The said OM provided for 25% expansion in the production capacity subject to a ceiling of 5 MTPA if the transportation is proposed by means of a conveyor and/or rail transport.*

The project was granted another expansion from 30 MTPA to 31 MTPA by the Ministry vide letter MOM 22nd EAC 27th November, 2017_Coal

no. 6th February, 2015 without insisting for public hearing, but now in terms of the provisions of this Ministry's OM dated 2nd September, 2014 providing exemption from public hearing subject to the ceiling of additional production of 6 MTPA.

The present proposal for expansion from 31 MTPA to 35 MTPA seeks environmental clearance without conducting the public hearing in view of this Ministry's OM dated 15th September, 2017. *The said OM provides for exemption from public hearing in cases where the expansion in production capacity up to 40% is envisaged in 2-3 phases, subject to fulfillment of certain parameters of environmental concern.* In compliance of the said OM, the status is reported to be as under:

S. No.	Requirement of the OM	Status
1.	Predicted air quality parameters are within the prescribed norms	Air quality impact prediction for incremental coal production (35 MTPA) was conducted in October 2017 and air quality parameters were found within the prescribed norms. Additional mitigative measures like <ul style="list-style-type: none"> • Mobile long range mist spray system. • Sweeping machine to remove dust from roads. • Wind shield/breaker arrangement with creeper (potential to arrest dust pollution) • 50m wide green belt has also been taken in to consideration.
2.	Coal transportation is through conveyor system up to the silo and then loading to railway wagons, involving no transportation through roads.	The incremental coal produced is proposed to be transported through conveyor system up to the silo and then will be loaded to rail wagons.
3.	Coal mining is done through deployment of surface miners, replacing three dust generating operations of the conventional mining system namely drilling, blasting and crushing in one go.	Coal production is by deployment of Surface Miners. The incremental coal production will also be done through deployment of surface miners.
4.	Public hearing already conducted for the total mine lease area involved and no more area is required for the proposed expansion.	Public hearing for 25 MTPA was conducted for the entire land area of 2000.642 ha on 5 th September, 2008 and no additional land is required for proposed expansion.

5.	Compliance status of EC conditions monitored by the concerned Regional Office of this ministry is found to be satisfactory.	Compliance status of EC conditions monitored by the Regional Office, MoEF&CC, Nagpur on 4 th November, 2016.
6.	Other statutory requirements like Consent to Establish/Operate, Clearance from CGWA, approval of Mining Plan and the Mine Closure Plan, Mine Closure Status Report as applicable, Forest Clearance, etc are satisfactorily fulfilled.	Other statutory requirements such as Consent to Operate, CGWA Clearance, approved Mining Plan and Mine Closure Plan for 35 MTPA, Forest Clearance, etc. are fulfilled.

The ambient air quality data for PM₁₀ was found varying from 92-97 ug/m³ (98th percentile values) whereas the incremental concentration due to the proposed expansion was estimated to be between 0.1-5.42 ug/m³. With the proposed additional measures to control particulate emissions, predicted GLCs would be in the range of 83-90.19 ug/m³ and thus complying with the NAAQ standards in this regard. These additional control measures include mechanized sweeping, water sprinkling/mist spraying on haul roads and loading sites, long range misting/fogging arrangement, wind barrier wall and vertical greenery system, green belt (50 m wide), dust suppression arrangement at railway siding, etc.

Different works taken up under the CSR during last five years are reported to be as under:-

S.No	Year	Total Expenditure (Rs. in Lakhs)	Works Undertaken
1.	2012-13	1073.60	Repairing & blacktopping of damaged roads, ,pump maintenance, deepening of pond, community hall, bridge construction samudhayikbhawan, borewell, boundary wall & furniture for school
2.	2013-14	881.87	Approach road, samudhayik pond & beautification village ponds, tubewell, submersible pumps, higher sec.school
3.	2014-15	1465.04	Road black topping, construction/repair of damaged roads & CC roads
4.	2015-16	1207.45	Black topping of road, CC road, construction of class rooms, boundary wall for primary school, construction/repair of toilets at schools.
5.	2016-17	103.84	Primary schools, Samudayik bhawan

Consent to Operate for the Dipka Opencast coal mine with its present production capacity of 31 MTPA has been obtained from the Chhattisgarh Environment Conservation Board. The same last renewed for a year, is presently valid up to 28th February, 2018.

The Regional Office of the Ministry at Nagpur has forwarded the monitoring report on compliance status of the conditions stipulated in the last EC dated 6th February, 2015 (based on the site visit carried out on 11th September, 2016), vide their letter dated 4th November, 2016. Many of the conditions were found to be 'being complied with' and/or 'partially complied'. The project proponent has informed the Committee about the actions taken in response to the observations of the Regional Office. The Committee desired the action taken report should have been submitted by the project proponent to the Regional Office for examination at their end, and then forwarded to the Ministry along with the comments.

22.3.4 *The EAC, after deliberations, recommended the project for grant of Environmental Clearance to the expansion of Dipka Opencast coal mine from 31 MTPA to 35 MTPA of M/s South Eastern Coalfields Limited in an area of 1999.293 ha located in District Korba (Chhattisgarh), subject to the compliance of terms and conditions as applicable, and the additional conditions as under:-*

- (i) The environmental clearance for the proposed increase in capacity shall be valid up to 31st March, 2019. Further continuance of the project shall be based on evaluation of the proposed control measures and its impact on the ambient air quality by the EAC in later half of the FY 2018-19.*
- (ii) To control the of dust generation at source, the crusher and in-pit belt conveyors shall be provided with mist type sprinklers.*
- (iii) Mitigative measures shall be undertaken to control dust and other fugitive emissions all along the roads by providing sufficient numbers of water sprinklers. Adequate corrective measures shall be undertaken to control dust emissions as presented before the Committee, which would include mechanized sweeping, water sprinkling/mist spraying on haul roads and loading sites, long range misting/fogging arrangement, wind barrier wall and vertical greenery system, green belt, dust suppression arrangement at railway siding, etc.*
- (iv) Efforts shall be made to explore the possibility of providing wind shield/breaker arrangement with creepers and climbers.*
- (v) Thick green belt of 50 m width at the final boundary in the down wind direction of the project site shall be developed to mitigate/check the dust pollution.*
- (vi) Persons of nearby villages shall be given training for their livelihood and skill development.*
- (vii) To ensure health and welfare of nearby villages, regular medical camps shall be organized at least once in six months.*
- (viii) The predominant Sal species in the forest area shall be protected, and in case of coal mining operations inevitable therein, compensatory afforestation of these species shall be carried out in consultation with State Forest Department.*
- (ix) In view of the mining potential of the area and the pollution concerns, carrying capacity of the eco-system shall be studied through some expert agencies to assess optimal mining operations with minimal impact on ecosystem services.*
- (x) A sustainable mining practice shall be developed in the mine, catering to attributes of ecological, societal and economical dimensions.*

Agenda No.22.4

Murpar Expansion UG Mine (Phase-I) for a sanctioned EC capacity of 0.28 MTPA with increase in Land Area from 325 ha to 482.09 ha by M/s Western Coalfields Limited Located in Tehsil Chimur, District Chandrapur of (Maharashtra) - For EC

22.4.1 The proposal is for environmental Clearance to Murpar Expansion UG Mine (Phase-I) for a sanctioned EC capacity of 0.28 MTPA with increase in Land Area from 325 ha to 482.09 ha by M/s Western Coalfields Limited Located in Tehsil Chimur, District Chandrapur of (Maharashtra)- EC under 7(ii) of EIA Notification 2006.

22.4.2 The proposal was last considered in the 19th EAC meeting held on 26th September, 2017, wherein observations of the Committee were as under:-

“The EAC, after detailed deliberations, was convinced with the submissions by the project proponent and to the grant of EC to the project ‘Murpar Expansion UG Mine (Phase-I)’ of capacity 0.28 MTPA with increase in land area from 325 ha to 482.09 ha by M/s Western Coalfields Limited Located in Tehsil Chimur, District Chandrapur of (Maharashtra). However, the Committee noted that the Mine Plan for the project stands approved by the functional directors of M/s WCL, but yet to be approved by the WCL Board which remains the competent authority for the needful. The project, although recommended for grant of EC on merits but deferred for want of Mining Plan approval by the Company Board”.

22.4.3 In response to the observations of EAC, the project proponent obtained Mining Plan Approval from the Board vide letter no. WCL/BD/SECTT/BM-293/2017/921 dated 10.11.2017. the same is found to be in order to accept by the EAC.

22.4.4 *The Committee recommended the project for grant of EC to Murpar Expansion UG Mine (Phase-I) of capacity 0.28 MTPA of M/s Western Coalfields Limited with increase in land area from 325 ha to 482.09 ha in Tehsil Chimur, District Chandrapur (Maharashtra), subject to the terms and conditions as applicable, and the additional conditions as under:-*

- *The project proponent shall obtain Consent to Establish from the Maharashtra Pollution Control Board for the proposed capacity of 0.28 MTPA prior to commencement of the production.*
- *Transportation of coal from face to Coal Handling Plant and silos shall be carried out through conveyor belts, and then to the TPP by rail.*
- *Sufficient coal pillars shall be left un- extracted around the air shaft (within the subsidence influence area) to protect from any damage from subsidence, if any.*
- *Solid barrier shall be left below the roads falling within the block to avoid any damage to the roads and no depillaring operation shall be carried out below the township/colony.*
- *Depression due to subsidence resulting in water accumulating within the low lying areas shall be filled up or drained out by cutting drains.*
- *Regular monitoring of subsidence movement on the surface over and around the working area and impact on natural drainage pattern, water bodies, vegetation, structure, roads and surroundings should be continued till movement cases completely. In case of observation of any high rate of subsidence movement, appropriate effective corrective measures should be*

taken to avoid loss of life and materials. Cracks should be effectively plugged with ballast and clay soil/suitable materials.

- *Garland Surface drains (Size, gradient and length) around the safety areas such as mine shaft and low lying areas and sump capacity should be designed keeping 50% safety margin over and above the peak sudden rain fall and maximum discharge in the area adjoining the mine sites. Sump capacity should also provide adequate retention period to allow proper settling of silt material. Sufficient number of pumps of adequate capacity shall be deployed to pump out mine water during peak rain fall.*
- *The company shall obtain approval of CGWA for use of groundwater for mining operations, if applicable.*
- *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.*

Agenda No.22.5

Expansion of coal washery at Talcher from 9.52 MTPA to 11.0 MTPA in an area of 36.95 ha by M/s Spectrum Coal & Power Limited located in village Danara, District Angul (Odisha) - For reconsideration of ToR

22.5.1 The proposal is for grant of ToR to the expansion of coal washery from 9.52 MTPA to 11 MTPA of M/s Spectrum Coal & Power Limited in an area of 36.95 ha by located in village Danara, District Angul (Odisha).

22.5.2 The proposal was last considered by the Expert Appraisal Committee (EAC) in the Ministry for Thermal & Coal Mining Projects in its 13th meeting held on 29th June, 2017. During the meeting, the observations of the Committee were as under:-

“the similar proposal for grant of EC to Basundhra Coal Washery of 15 MTPA was earlier considered by the EAC in its meeting held in January/February, 2017. In that case the committee had deferred the proposal till the submission and approval of the Mine Closure status report by the Ministry of Coal. The Committee desired for the same stand in the instant case also. The proposal was, therefore deferred”.

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

(i) M/s Mahanadi Coalfields Limited (MCL) vide letter No. MCL/GM/HA/SPECTRUM/2017/402 dated 21st July, 2017 stated as under:

- The operation of Kalinga OCP Mine had never been closed and the said mine was re-named as Balaram OCP by MCL before August, 2009. therefore mine closure plan in the name of Kalinga has no meaning.
- The mine closure plan of Balaram OCP was prepared (old name Kalinga OCP) in the year 2015 and was approved by the Board of MCL which is the Competent Authority to approved the mine plan/closure plan as per the direction of MOC. The site and the area

allocated for setting up 11 MTPA washery has been recorded in the said mine closure plan as an area earmarked for APGENCO washery.

- The land parcels allocated for setting up of 11 MTPA washery has been given on lease basis in the year 2004 and the said land parcels are part of already excavated area.

22.5.4 During deliberations on the proposal, the Committee noted the following:-

The proposal is for terms of reference for the expansion project of coal washery from 9.52 MTPA to 11 MTPA of M/s Spectrum Coal & Power Ltd in an area of 36.95 ha at village Danara, Tehsil Talcher, District Angul (Odisha).

The project site for setting up 11 MTPA washery is a part of the already excavated area of the Balram Opencast coal mine, reportedly recorded in the Mine Closure Plan of the said OCP as an area earmarked for APGENCO washery. The project proponent has entered into an agreement with the APGENCO to build and operate the washery to make the washed coal available for their linked thermal power plants in the State.

The project with the washed coal capacity of 7 MTPA is reported to be established in year 2005 after obtaining permission from the Odisha State Pollution Control Board vide their letter dated 9th February, 2005. At that stage, there was no requirement of prior environmental clearance in terms of the provisions of then EIA Notification, 1994.

The permissions/consent order has since been reviewed at stages, and is presently valid up to 31st March, 2021. The SPCB has also given its approval for transportation, storage, loading and unloading of coal at railway siding to the tune of 11 MTPA (including rejects).

22.5.5 *The EAC after deliberations, asked the project proponent to clarify the following:-*

- *Presently, the EC for Balram OCP is in the name of M/s Mahanadi Coalfields Ltd. How a third party can make a proposal directly or indirectly, for some other project/activity in the same area.*
- *Operational status of the Balram OCP.*
- *Compliance status of the existing EC conditions for the Balram OCP.*
- *Proposal for amendment in the EC of the Balram OCP to be submitted by M/s Mahanadi Coalfields Ltd.*

The Committee further desired that M/s Mahanadi Coalfields Ltd may also be informed on the above lines for their comments on the proposal.

Agenda No.22.6

Ananta OCP Expansion Project, Phase-III (From 12 MTPA to 20 MTPA in the existing ML area of 1419.821 Ha (1181.968 Ha + 237.853 Ha) of M/s Mahanadi Coalfields Limited, Tehsil Talcher, District Angul (Odisha) - For correction in EC

22.6.1 The proposal is for dovetailing of forest land with the environmental clearance letter granted to Ananta OCP Expansion Project, Phase-III (From 12 MTPA to 20 MTPA in the existing ML area of 1419.821 Ha (1181.968 Ha + 237.853 Ha) of M/s Mahanadi Coalfields Limited, Tehsil Talcher, District Angul (Odisha).

22.6.2 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) EC to Expansion project of Ananta Open cast coal mining, Phase-III from 12 MTPA to 20 MTPA was granted vide letter No. J-11015/397/2008-IA.II(M) dated 10th December, 2014. for an area of 1181.968 ha (excluding the non diverted forest land of 237.853 ha from the entire ML area of 1419.821 ha)
- (ii) The EC for non diverted forest land was not made available at the time for want of Stage –I FC for the forest land.
- (iii) Now, MCL has been granted Stage-I FC for the remaining forest land vide letter No. 8-37/2015-FC dated 11th September, 2017.
- (iv) Therefore, EC may be granted for the entire ML area of 1419.821 ha including forest land.
- (v) There are some typographical corrections in the EC letter vide letter No. J-11015/397/2008-IA.II (M) dated 10th December, 2014. which are as under:

EC letter Condition No.	EC letter Condition	Reason for Correction	Correction requested
Page-1, Subject of EC letter	(From 15 MTPA to 20 MTPA ...	typographical error	(From 12 MTPA to 20 MTPA ...
Page-1, Point no. 2	(From 15 MTPA to 20 MTPA ...	typographical error	(From 12 MTPA to 20 MTPA ...
Page-1, Point no. 2(i)	from 15 MTPA to 20 MTPA	typographical error	from 12 MTPA to 20 MTPA
Page-5, Point no. 6	(From 15 MTPA to 20 MTPA ...	typographical error	(From 12 MTPA to 20 MTPA ...
Page-6, Specific Condition A(iii) River Konar	typographical error Bangaru Jhor
Page-6, Specific Condition A(xxiv)	The CSR cost should be Rs 5 per Tonnes of Coal produced which should be adjusted as per the annual inflation.	The EC was recommended in the 63 rd EAC meeting held on 17-18 Dec 2012. CSR policy was changed pursuant to the Companies Act 2013.	The CSR cost should be at least 2% of the average net profit of the company made during the immediate preceding financial year.

22.6.3 During deliberations on the proposal, the Committee noted the following:-

Ananta OCP expansion project, Phase-III was granted environmental clearance by the Ministry vide letter dated 10th December, 2014, for expansion from 15 MTPA to 20 MTPA of M/s Mahanadi Coalfields Ltd in the mine lease area of 1181.968 ha in Tehsil Talcher, District Angul (Odisha). The said EC was granted after taking out/excluding the forest land of 237.853 ha from the total area of 1419.821 ha due to Stage-I forest clearance not available for the said forest land at that point of time.

The present proposal is for amendment in the EC dated 10th December, 2014, mainly in respect of adding the forest land to the area for which the EC was issued, modifying the condition for expenditure towards CSR and some typographical errors as explained in the preceding para 22.6.2 (iv) above.

The project proponent has informed that the Stage-I forest clearance for diversion of 240.672 ha (including 2.776 ha for safety zone) was obtained vide Ministry's letter dated 11th September, 2017. The said forest land is required to be added to the present project area of 1181.968 ha to increase the quarry area and thus to enhance the life of the mine.

22.6.4 *The EAC, after deliberations, recommended for adding the forest land of 237.853 ha to the present project area of 1181.968 ha, making the total area available now as 1419.821 ha, for the Ananta OCP expansion project Phase-III of M/s Mahanadi Coalfields Ltd in Tehsil Talcher, District Angul (Odisha). Further, the proposed expansion shall now be read as from 12 MTPA to 20 MTPA in place of 15 MTPA to 20 MTPA mentioned in the EC. The Committee also recommended for few corrections as per para 22.6.2 (iv) above).*

All other terms and conditions stipulated in the Environmental Clearance dated 10th December, 2014 shall remain unchanged.

Agenda No.22.7

Discussion on any other item

Item No.22.7.1

Compliance of the directions of the National Green Tribunal (CZ) at Bhopal in OA No.117/2016

In compliance of the directions of the NGT (CZ) at Bhopal vide order 23rd August & 30th August, 2017 in OA No.117/2016 in the matter of 'Human Rights Redemption Social Welfare Association of India Vs Union of India & Others' the EAC in its 19th meeting held on 26th September, 2017 recommended for the site visit to be undertaken by some of its members and to submit the site inspection report before it for deliberations vis-à-vis the orders of the NGT.

The sub-committee comprising members of the EAC namely, Dr. N P Shukla, Dr. J K Pandey and Dr. H. V. C. Chary as representative of this Ministry visited the site during 28-29 October, 2017. The site inspection report forwarded by the concerned RO at Bhopal vide their letter dated 20th November, 2017, was placed before the Committee for their consideration. The Committee took a

note of precautionary measures to strengthen the pollution control approach to curtail environmental degradation. The EAC agreed to the findings and recommendations of the sub-committee.

Item No.22.7.2

Bhubaneshwari Opencast Expansion from 25 MTPA to 28 MTPA in existing ML area of 638.341 ha of M/s Mahanadi Coalfields Ltd. Tehsil Talcher, District Angul (Odisha)-EC

22.7.2.1 The proposal is for grant of EC for Bhubaneshwari Opencast expansion Project from 25 MTPA to 28 MTPA in Mining lease area of 638.341 ha of M/s Mahanadi Coalfield Limited at district Angul (Odisha).

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

(i) Earlier, the Environmental Clearance of Bhubaneshwari Opencast was accorded vide MoEF&CC letter no. J-11015/45/1996-IA.II (M) dated: 06.06.2003 for production capacity of 10 MTPA in an area of 808.294 ha & ML area of 638.341ha.

(ii) Earlier, the Environmental Clearance of Bhubaneshwari Opencast was accorded vide MoEF&CC letter no. J-11015/128/2007-IA.II (M) dated: 30.11.2012 for production capacity of 20 MTPA in an area of 808.294 ha with public hearing. Public Hearing for same was held on 10.02.2009.

(iii) Further, the project was accorded Environmental Clearance from 20 MTPA to 25 MTPA vide letter no. J-11015/280/2013-IA.II (M) dated 19.02.2014 under clause 7(ii) of EIA Notification, 2006 in accordance with OM J-11015/30/2004.IA.II(M) dated 19th December, 2012 exempting from public hearing.

(iv) Meanwhile, OM No. J-11015/224/2015-IA.II, dated 15/09/2017, was issued for production capacity expansion up to 40% of PH capacity without Public Hearing with certain conditions. On the basis of the above said OM this proposal has been submitted for grant of EC for expansion of Bhubaneshwari opencast coal mine from 25 MTPA to 28 MTPA without public hearing in the existing mine lease area of 638.341 ha.

(v) To verify the status of compliance of EC conditions for Bhubaneshwari opencast expansion project 25 MTPA, the Regional Office of MoEF&CC, Bhubaneswar has carried out the site inspection on 31.10.2017. The monitoring report has been forwarded to this Ministry vide their letter No. 101-980/EPE dated 24.11.2017, 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.

(vi) The latitude and longitude of the project are 22° 19" 00" to 22° 19" 30" North and 82° 42" 30" to 82° 44" 30" East respectively.

(vii) Joint Venture: No

(viii) Coal Linkage : Thermal Power Plant & Basket Linkage

(ix) Employment generated / to be generated: Direct employment already provided to 1002 persons further 51 employemnt are in process.

(x) Benefits of the project: (a) Improvement in Physical Infrastructure (b) Improvement in Social Infrastructure (c) Increase in employment potential (d) Contribution to the Exchequer (both

State and Central Govt.) (v) Post mining enhancement of Green Cover (e) Improvement of Electrical Power Generation and availability of electricity for 24x7 in rural areas (f) Overall economic growth of the country.

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

Pre-Mining:

	Type of Land	Area (Ha)
a.	Agriculture	445.030
b.	Forest	112.521
c.	Waste land	---
d.	Grazing	---
e.	Surface water bodies	---
f.	Others (specify)	80.790
	Total	638.341

Post- Mining:

Sl. No.	Category	Land use (in Ha)					Total
		Plant-ation	Water body	Dip side slope and haul road	Undisturbed	Built-up area	
1	Excavation (backfill)	355.517	31.000	55.741	--	--	442.258
2	Danger zone for blasting	83.150	--	--	-	--	83.150
3	External OB dumps	94.000	--	--	--	--	94.000
4	Railway siding	1.600	--	--	--	6.400	8.000
5	Infrastructure	0.850	--	--	--	10.083	10.933
6	Residential colony	6.400	--	--	--	25.600	32.000
7	Rehabilitation site	23.520	0.00	0.00	0.00	94.050	117.570
	Total	565.037	31.000	55.741	0.000	136.133	787.911

Core area:

Particulars	Existing		
	Forest	Non-Forest	Total
Quarry excavation	105.808	336.450	442.258
Blasting danger zone (excluding the part of OB dump)	--	83.150	83.150

OB dumps (external)	--	94.000	94.000
Railway siding	--	8.000	8.000
Infrastructure	6.713	4.220	10.933
Mine Lease Area	112.521	525.820	638.341*
Residential Colony	--	32.000	32.000
Rehabilitation site	--	117.570	117.570
Outside lease area	--	149.57	149.57
Total	112.521	675.39	787.911

*Out of the total Area of the project mining lease area of 658.724 ha, the project was granted EC for 638.341 Ha. Remainder forest land of 20.383 ha, falling in the excavation area, is non-diverted and the diversion proposal for the same is under progress. This Mining Plan is for the mining lease area of 638.341 Ha inclusive of the forest land 112.51 ha for which EC and FC is already granted. The total land area is 787.911 ha, initially.

(xii) The total geological reserve of the block is 741.09 MT. The minable reserve for the proposed project is 233.39 MT (in 638.314 Ha ML Area in Phase-I) & 259.45 MT (in 658.724 Ha ML Area in Phase- I+II) and extractable reserve is 233.39 MT (in 638.314 Ha ML Area in Phase-I) & 259.45 MT (in 658.724 Ha ML Area in Phase-I+II) (As on 01.04.2017). The percentage extraction would be 100 %.

(xiii) The coal grade is G-12 TO G-16. The stripping ratio is 0.71 Cum/tonne. The average Gradient is 4.5°. There will be 15 seams with thickness ranging (0.2 m to 40.90 m).

(xiv) The total estimated water requirement is 2423 m³/day.

(xv) The level of ground water ranges (0.80 m to 10.90 m bgl).

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

(xvii) There is three external OB dump with Quantity of 35.82 Mcum in an area of 94.00 ha with height of 52 meters above the surface level and one internal dump with Quantity of 212.87 Mcum in an area of 355.517 ha with height Up to ground level in major part, 10 m above ground level at some parts

(xviii) The final mine void would be in 31.00 Ha with depth 187.5 m and the total quarry area is 442.258. Backfilled quarry area of 355.517 Ha shall be reclaimed with plantation. A void of 31.00 ha with depth upto 187.5 m which is proposed to be converted into a water body

(xix) The life of mine is 9 Years as on 01.04.2017(Phase-I)

(xx) Transportation: Coal transportation from face to pit top: by trucks. surface to siding: by conveyor to silo ; siding to consumer : rail.

(xxi) There is R & R involved. There are 1111 PAFs.

(xxii) Total capital cost of the project is Rs. 490.10 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. 31.22 Crores. Environmental Management Cost Rs. 71.41 Cr.

(xxiii) BangaruJhor is flowing adjacent (North), Brahmani River is about 6.0 km (East); Nandira Jhor is located at 9.0 km (South), Singada Jhor is about 12.0 km (West).

(xxiv) Ground water clearance : Not applicable.

(xxv) Mining plan for the 28 MTPA was approved by MCL Board on 07.11.2017 & by MoC Vide letter no. 34011/36/2017-CPAM dated 20-11-2017. Mine closure plan is an integral part of mining plan.

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

(xxvii) Total forest land 112.521 ha in ML area of 638.341 Ha, Status of Forest clearance: Stage-II available vide letter no.8-18/2002-FC dt: 06-12-2004.

(xxviii) Total afforestation plan shall be implemented covering an area of 355.517 ha at the end of mining including green Belt over an area of 83.15 ha. Density of tree plantation 2500 trees/ ha of plants.

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

22.7.2.3 During deliberations, the EAC noted the following:-

The proposal is for environmental clearance to the project of expansion of Bhubaneswari Opencast coal mine from 25 MTPA to 28 MTPA in a total area of 787.911 ha of M/s Mahanadi Coalfields Ltd located in village Hensmul, District Angul (Odisha).

The total area includes 638.341 ha of mine lease area and the area outside mine lease is 149.57 ha. The total forest land involved is 112.521 ha in the mine lease area of 638.341 ha. Stage-1 Forest Clearance for the entire forest land has been obtained for its diversion for non-forestry purposes.

Mining plan for the proposed expansion from 25 MTPA to 28 MTPA was first approved by the Board of M/s MCL on 7th November, 2017 and then by Ministry of Coal on 20th November, 2017. Mine Closure Plan is an integral part of the mine plan.

Earlier, Bhubaneswari Opencast coal mine for its expansion from 10 MTPA to 20 MTPA in total area of 808.294 ha (includes mine lease area of 658.724 ha) was accorded environmental clearance vide letter dated 30th November, 2012 based on the public hearing held on 10th February, 2009. Main issues raised during the public hearing included concerns regarding filling up village ponds with coal dust, blasting, employment, drinking water supply, plantation in OB dumps and other areas and water sprinkling in peripheral roads. The present compliance status against each of these issues were found to be satisfactory.

Later, the environmental clearance for expansion from 20 MTPA to 25 MTPA in mine lease area of 638.341 ha (excluding 20.383 ha of non-diverted forest land) was granted on 19th February, 2014, exempting the project from the requirement of public hearing as per the provisions of this Ministry's OM dated 19th December, 2012. *The said OM provided for 25% expansion in the production capacity subject to a ceiling of 5 MTPA if the transportation is proposed by means of a conveyor and/or rail transport.*

The present proposal for expansion from 25 MTPA to 28 MTPA seeks environmental clearance without conducting the public hearing in view of this Ministry's OM dated 15th September, 2017. *The said OM provides for exemption from public hearing in cases where the expansion in production capacity up to 40% is envisaged in 2-3 phases, subject to fulfillment of certain*

parameters of environmental concern. In compliance of the said OM, the status is reported to be as under:-

S. No.	Condition in OM	Status
1.	Predicted air quality parameters are within the prescribed norms	<p>The AQIP modeling has been carried out for incremental capacity of 3.0 MTPA (i.e. from present capacity of 25.0 MTPA to capacity of 28.0 MTPA) using AERMOD software. The Ambient air quality within limit as per GSR742(E). Additional mitigative measures like</p> <ul style="list-style-type: none"> • Coal produced will be dispatched through conveyor and SILO system • One additional 34 KL tanker already deployed. • Green belt shall be developed
2.	Coal transportation is through conveyor system up to the silo and then loading to railway wagons, involving no transportation through roads.	The incremental coal produced is proposed to be transported through conveyor system up to the silo and then will be loaded to rail wagons. Construction of Conveyor line, SILO with RLS, LOA has been issued to M/s Larsen & Toubro. Commissioning & handover is expected by May-2019.
3.	Coal mining is done through deployment of surface miners, replacing three dust generating operations of the conventional mining system namely drilling, blasting and crushing in one go.	Coal production is by deployment of Surface Miners. The incremental coal production will also be done through deployment of surface miners.
4.	Public hearing already conducted for the total mine lease area involved and no more area is required for the proposed expansion.	Public hearing for 25 MTPA was conducted for the entire ML land area of 638.314 ha on 10.02.2009 and no additional land is required for proposed expansion.
5.	Compliance status of EC conditions monitored by the concerned Regional Office of this ministry is found to be satisfactory.	Compliance status of EC conditions monitored by the Regional Office, MoEF&CC, Bhubaneswar on 31-10-2017 & Report submitted vide letter no. 101-980/EPE dt: 24-11-2017.
6.	Other statutory requirements like Consent to Establish/Operate, Clearance from CGWA, approval of Mining Plan and the Mine Closure Plan, Mine Closure Status	Other statutory requirements such as Consent to Operate, CGWA Clearance, approved Mining Plan and Mine Closure Plan for 28.00 MTPA, Forest Clearance, etc. are fulfilled.

	Report as applicable, Forest Clearance, etc are satisfactorily fulfilled.	
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The air quality data for PM₁₀ was found varying from 162-242 ug/m³ (average values) in the work zone, whereas the incremental concentration due to the proposed expansion was reported to be between 6.2-21.9 ug/m³. With the proposed additional measures to control particulate emissions, predicted GLCs would be in the range of 184.1-255.40 ug/m³ and thus complying with the Work Zone Standards notified vide GSR742 (E) dated 25.09.2000 applicable for existing coal mines commenced their mining operations prior to 25th September, 2000. These additional control measures include, water sprinkling/mist spraying on haul roads and loading sites, long range misting/fogging arrangement, green belt, dust suppression arrangement at railway siding, etc. No air quality data for the locations outside the work zone was made available due to no monitoring station at such ambient locations.

Different works taken up under the CSR during last four years are reported to be as under:-

Sector	Financial Year			
	2013-14	2014-15	2015-16	2016-17
Safe Drinking Water	132.11	61.71	46.39	68.35
Ecological Balance	125.85	12.15	0.92	12.02
Construction of Road	118.9	145.91	163.91	7.49
Education	16.21	8.09	2.26	74.4
Electrification & Infrastructure Development	61.72	103.02	9.12	156.57
Health & Sanitation	7.14	15.36	272.25	17.45
Promotion of Sports	0.9	0.8	0.79	9.26
Others	0	2.36	4.56	0.86
Total Amount	462.84	349.40	500.02	346.40

Consent to Operate for the Bhubaneswari Opencast coal mine with its production capacity of 25 MTPA has been obtained from the Odisha State Pollution Control Board vide their letter dated 10th February, 2016. The same is presently valid up to 31st March, 2021.

The Regional Office of the Ministry at Bhubaneshwar has forwarded the monitoring report on compliance status of the conditions stipulated in the last EC dated 19th February, 2014 (based on the site visit carried out on 31st October, 2017), vide their letter dated 24th November, 2017. Many of the conditions were found to be complied with and/or yet to be complied with. The project proponent has informed the Committee about the actions taken in response to the observations of the Regional Office. The Committee desired that the action taken report should be submitted by the project proponent to the Regional Office for examination at their end, and then forwarded to the Ministry along with the comments.

22.7.2.4 *The EAC, after deliberations, recommended the project for grant of environmental clearance to the expansion of Bhubaneswari Opencast coal mine from 25 MTPA to 28 MTPA in a total area of 787.911 ha (ML area 638.341 ha) of M/s Mahanadi Coalfields Ltd located in Tehsil*

Talcher, District Angul (Odisha), subject to the compliance of terms and conditions as applicable, and the additional conditions as under:-

- (i) Adequate ambient air quality monitoring stations shall be established in consultation with the State Pollution Control Board, and regular monitoring shall be carried out for particulate emissions (both PM₁₀ & PM_{2.5}), SO₂ & NO_x. The monitoring results for the period during summer season (April - June, 2018) shall be submitted to the SPCB and the Regional Office of the Ministry.*
- (ii) The EAC shall review the compliance of the action taken on the observations of the Regional Office, before December, 2018 and make its recommendations for continuance of the project thereafter. Also, based on the monitoring results, the Committee shall examine efficacy and adequacy of the proposed control measures and its impact on the ambient air quality.*
- (iii) To control the of dust generation at source, the crusher and in-pit belt conveyors shall be provided with mist type sprinklers.*
- (iv) Mitigative measures shall be undertaken to control dust and other fugitive emissions all along the roads by providing sufficient numbers of water sprinklers. Adequate corrective measures shall be undertaken to control dust emissions as presented before the Committee, which would include mechanized sweeping, water sprinkling/mist spraying on haul roads and loading sites, long range misting/fogging arrangement, wind barrier wall and vertical greenery system, green belt, dust suppression arrangement at railway siding, etc.*
- (v) Thick green belt of 50 m width at the final boundary in the down wind direction of the project site shall be developed to mitigate/check the dust pollution.*
- (vi) Persons of nearby villages shall be given training for their livelihood and skill development.*
- (vii) To ensure health and welfare of nearby villages, regular medical camps shall be organized at least once in six months.*
- (viii) In view of the mining potential of the area and the prevailing environmental concerns, carrying capacity of the eco-system shall be studied through some expert agencies to assess optimal mining operations in the area with minimal impact on the environmental components.*
- (ix) The mine is surrounded by large opencast mines operated by M/s MCL and shall have a cascading impact on air pollution. Therefore, a stage wise response plan vis-a-vis varying level of air pollution level be prepared and implemented in the mine during its operation.*
- (x) A mechanism of inter- project environmental audit shall be devised and implemented with reporting to this ministry along-with half yearly reports.*

Item No.22.7.3

Standardization of EC conditions

The Committee was informed that a meeting was held in the Ministry on 21st November, 2017 with the major coal companies, representatives from the Ministry of Coal and Coal India Ltd, to streamline and rationalise the conditions being stipulated in the ECs relating to Opencast and Underground coal mining projects and the Coal washery. After taking note of the suggestions of all the stakeholders, the conditions have since been firmed up as annexed. The Committee, for the present, desired to circulate the same to all the members for their comments, if any, preferably within two weeks.

PARTICIPANTS IN 22nd EXPERT APPRAISAL COMMITTEE (EAC) (THERMAL & COAL MINING) MEETING HELD ON 27th NOVEMBER, 2017 ON COAL SECTOR PROJECTS

Sl. No.	List of Participants Expert Appraisal Committee EAC (Coal Mining)	
1.	Dr. Navin Chandra	Chairman
2.	Dr. Narmada Prasad Shukla	Member
3.	Shri N.Mohan Karnat	Member
4.	Dr. Jai Krishna Pandey	Member
5.	Dr. Gururaj P. Kundargi	Member
6.	Shri S D Vora	Member
7.	Prof S K Sinha	Member
8.	Dr. R.K.Giri	Member
9.	Shri S. K. Shrivastva	Member Secretary

PARTICIPANTS IN 22nd EXPERT APPRAISAL COMMITTEE (EAC) (THERMAL & COAL MINING) MEETING HELD ON 27th NOVEMBER, 2017 ON COAL SECTOR PROJECTS.

34.1 Amadand Open Cast Coal Mine Project by M/s South Eastern Coalfields Limited

34.2 Expansion of Gevra Opencast Coal Mine of M/s South Eastern Coalfields Limited

34.3 Expansion of Dipka Opencast Coal Mine of M/s South Eastern Coalfields Limited

1. Shri P.K.Sinha
2. Shri Subodh Srivastava
3. Shri Akshay.S.Bapat
4. Shri I. D. Narayan
5. Shri Praqveen Shrivastava
6. Shir J. G. Singh
7. Miss Yamini Singh
8. Shri S.K.Tripathi
9. Shri H.K.Gour
10. Shri D Shrinath
11. Shri Pradip Kumar
12. Shri Prakash Chandra Jha
13. Shri. B K Pandey
14. Shri. Anmol Kumar Panchal
15. Shri Rakesh Kumar
16. Shri A K Gupta
17. Shri U C Dumka
18. Ms. S J Hemlatha

34.4 Murpar Expansion UG Mine (Phase-I) by M/s Western Coalfields Limited Located.

1. Shri T N Jha
2. Shri Kaushik Chakraborty
3. Shri U S Shah
4. Shri M V Balakrishanan

34.5 Expansion of coal washery by M/s Spectrum Coal & Power Limited

1. Ms Durga
2. Shri I N Bagchi
3. Shri Tushar Ahlawat

34.6 Ananta OCP Expansion Project, Phase-III of M/s Mahanadi Coalfields Limited

22.7.3 Bhubaneshwari Open Cast Expansion of M/s Mahanadi Coalfields Ltd.

1. Shri O P Singh

2. Shri A K Samanth Raj
3. Shri N G Bhramhapurkar
4. Shri R C Sahoo
5. Shri P C Jha
6. Shri R K Das
7. Shri N P Bhati

34.7 Discussion on any other item.

22.7.1 Compliance of the directions of the National Green Tribunal (CZ) at Bhopal in OA No.117/2016

22.7.2 Standardization of EC conditions

Generic ToR for coal washery

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

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

GENERIC TOR FOR AN OPENCAST COALMINE PROJECT for EC

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

should be provided.

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

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

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

should also be shown in figures. Details of mine plan and mine closure plan approval of Competent Authority should be furnished for green field and expansion projects.

- (xvii) Details of mining methods, technology, equipment to be used, etc., rationale for selection of specified technology and equipment proposed to be used vis-à-vis the potential impacts should be provided.
- (xviii) Impact of mining on hydrology, modification of natural drainage, diversion and channeling of the existing rivers/water courses flowing through the ML and adjoining the lease/project and the impact on the existing users and impacts of mining operations thereon.
- (xix) Detailed water balance should be provided. The break-up of water requirement for the various mine operations should be given separately.
- (xx) Source of water for use in mine, sanction of the Competent Authority in the State Govt. and impacts vis-à-vis the competing users in the upstream and downstream of the project site. should be given.
- (xxi) Impact of mining and water abstraction from the mine on the hydrogeology and groundwater regime within the core zone and 10 km buffer zone including long-term monitoring measures should be provided. Details of rainwater harvesting and measures for recharge of groundwater should be reflected in case there is a declining trend of groundwater availability and/or if the area falls within dark/grey zone.
- (xxii) Impact of blasting, noise and vibrations should be given.
- (xxiii) Impacts of mining on the AAQ and predictions based on modeling using the ISCST-3 (Revised) or latest model should be provided.
- (xxiv) Impacts of mineral transportation within the mining area and outside the lease/project along with flow-chart indicating the specific areas generating fugitive emissions should be provided. Impacts of transportation, handling, transfer of mineral and waste on air quality, generation of effluents from workshop etc, management plan for maintenance of HEMM and other machinery/equipment should be given. Details of various facilities such as rest areas and canteen for workers and effluents/pollution load emanating from these activities should also be provided.
- (xxv) Effort be made to reduce/eliminate road transport of coal inside and outside mine and for mechanized loading of coal through CHP/ Silo into wagons and trucks/tippers.
- (xxvi) Details of waste OB and topsoil generated as per the approved calendar programme, and their management shown in figures as well explanatory notes tables giving progressive development and mine closure plan, green belt development, backfilling programme and conceptual post mining land use should be given. OB dump heights and terracing based on slope stability studies with a max of 28° angle as the ultimate slope should be given. Sections of final dumps (both longitudinal and cross section) with relation to the adjacent area should be shown.
- (xxvii) Efforts be made for maximising progressive internal dumping of O.B., sequential mining , external dump on coal bearing area and later rehandling into the mine void.--to reduce land degradation.
- (xxviii) Impact of change in land use due to mining operations and plan for restoration of the mined area to its original land use should be provided.
- (xxix) 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)									
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* 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.

05/12/2017

https://mail.gov.in/iwc_static/layout/shell.html?lang=en&3.0.1.2.0_15121607

Subject: **Finalized Minutes of 22nd Meeting**

Date: 12/04/17 01:43 PM

To: Srivastava Additional Director <sk.smree66@nic.in>,
"S.K Srivastava" <sk.smree66@gov.in>,
"sksmree@yahoo.co.in" <sksmree@yahoo.co.in>,
Purushottam Ramdas Sakhare <sakhare.pr@nic.in>

From: navin chandra <navinchandrarrl@yahoo.com>

Final MOM of 22nd EAC held on 27.11.2017 as on 30... (151kB)

04/12/2017

Dear Dr. Shrivastava Ji,

Thanks for the draft of the minutes of 22nd meeting of EAC (Coal). The finalized minutes are attached herewith for necessary action at your end.

Warm regards,
yours sincerely,

(NAVIN CHANDRA)

Dr. Navin Chandra,
Director General
M P Council of Science and Technology (MPCST),
Vigyan Bhawan, Nehru Nagar, Bhopal - 462003 (M.P.) India
Phone : 91-755- 2671800 (Office)
e-mail : dg@mpcost.nic.in
navinchandrarrl@yahoo.com, navinchandraampri@gmail.com

**22nd EAC (THERMAL & COAL MINING PROJECTS) MEETING
SCHEDULED FOR 27th November, 2017.**

AGENDA

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

[PI. 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 soft copies of all project-related documents that have been uploaded onto the MOEFCC website to EAC members by e-mail [indicating agenda item numbers] immediately upon receiving this communication, and send hard copies of the same 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. Please also provide a hard copy of presentation to the EAC Members during the meeting.**
- v. The Project Proponent (PP) should carry the KML/Shape Files of the mine lease area at the time of presentation before EAC and to present on the details of mine lease online to show the present status of mine lease**
- vi. The KML/Shape files should be emailed on the below mentioned email addresses at least 10 days prior to the meeting**
- vii. The PP to show the transportation route of minerals on maps during presentation.**
- viii. Without this information, EAC has discretion to invite the proponent for the meeting.**
- ix. 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

Time: 10.00 AM: Monday 27th November, 2017

- 22.1 Amadand Open Cast Coal Mine Project for production of 4 MTPA Normative/5 MTPA Peak in an mining Lease are of 1443.02 ha by M/s South Eastern Coalfields Limited located in District Anuppur (Madhya Pradesh) - For TOR [IA/MP/CMIN/70693/2017, F No. J-11015/96/2017-IA.II(M)]**
- 22.2 Expansion of Gevra Opencast Coal Mine from 41 MTPA to 49 MTPA in ML area of 4184.486 ha of M/s South Eastern Coalfields Limited at district Korba (Chhatishgarh) - For EC [IA/CG/CMIN/70412/2017, F.No. J-11015/85/2010-IA.II (M)]**

- 22.3 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 (Chhattisgarh) - For EC **[IA/CG/CMIN/70400/2017, F.No. J-11015/487/2007-IA.II (M)]**
- 22.4 Murpar Expansion UG Mine (Phase-I) for a sanctioned EC capacity of 0.28 MTPA with increase in Land Area from 325 ha to 482.09 ha by **M/s Western Coalfields Limited Located** in Tehsil Chimur, District Chandrapur of (Maharashtra) - EC under 7(ii) of EIA Notification 2006 **[IA/MH/CMIN/68529/2017, F.No. J-11015/25/2001-IA.II (M)]**
- 22.5 Expansion of coal washery at Talcher from 9.52 MTPA to 11.0 MTPA in an area of 36.95ha by **M/s Spectrum Coal & Power Limited** located in village Danara, District Angul (Odisha) - For Amendment in TOR (Reconsideration) **[IA/OR/CMIN/64656/2017, F.No.J-11015/55/2017-IA.II (M)]**
- 22.6 Ananta OCP Expansion Project, Phase-III (From 15 MTPA to 20 MTPA in the existing ML area of 1419.821 Ha (1181.968 Ha + 237.853 Ha) of **M/s Mahanadi Coalfields Limited**, Tehsil Talcher, Dist. Angul, Odisha- For dovetailing and correction in EC **[IA/OR/CMIN/70681/2014, F.No.J-11015/397/2008-IA.II (M)]**
- 22.7 **Discussion on any other item.**
- 22.7.2 Compliance of the directions of the National Green Tribunal (CZ) at Bhopal in OA No.117/2016
- 22.7.3 **Standardization of EC conditions**
- 22.7.4 Bhubaneshwari Open Cast Expansion from 25 MTPA to 28 MTPA in existing ML area of 638.341 ha of **M/s Mahanadi Coalfields Ltd.** Village Hensmul, District Angul (Odisha)- EC **[IA/OR/CMIN/71006/2017, F.No.J-11015/280/2013-IA.II (M)]**