

MINUTES OF 43rd MEETING OF THE EXPERT APPRAISAL COMMITTEE FOR ENVIRONMENT APPRAISAL OF COAL MINING PROJECTS HELD ON 24th APRIL, 2023 THROUGH PHYSICAL MODE.

Confirmation of the Minutes of 42nd Meeting of the EAC (Coal): The minutes of the 42nd Meeting of the EAC (Coal) held during 5th April, 2023 has been confirmed by the Chairman.

Opening Remarks of the Chairman: At the outset, the Chairman welcomed the Expert members & other participants and requested to start the proceeding as per the agenda adopted for this meeting.

Consideration of Proposals: The 43rd meeting of the Expert Appraisal Committee (EAC) for coal mining projects was held during 24th April, 2023 through video conferencing. The EAC considered proposals as per agenda adopted for the meeting. List of participant attended the meeting is annexed. The details of deliberations held & decisions taken in the meeting are as under.

Agenda No. 43.1

Chakla Opencast Coal Block Mine (North Karanpura Coalfield) with production capacity of 4.5 MTPA in ML area 863 ha of M/s Hindalco Industries Limited located at villages Chakla, Hariyatoli, Nawatoli, Amwatanr and Ambuatanr, Tehsil Chandwa, District Latehar (Jharkhand) - Environmental Clearance - reg.

[Online proposal number IA/JH/CMIN/424605/2023; File No. IA-J-11015/1072/2007-IA-II (M)]

43.1.1 The proposal is for Environmental Clearance of Chakla Opencast Coal Block Mine (North Karanpura Coalfield) with production capacity of 4.5 MTPA in ML area 863 ha of M/s Hindalco Industries Limited located at villages Chakla, Hariyatoli, Nawatoli, Amwatanr and Ambuatanr, Tehsil Chandwa, District Latehar (Jharkhand).

43.1.2 Details of the proposal, as ascertained from the proposal documents and as revealed from the discussions held during the meeting, are given as under:

- i. The project area is covered under Survey of India Topo Sheet No. F45G7, F45G8, F45G11 & F45G12 and is bounded by the geographical coordinates ranging from latitude 23°43'01"N to 23°44'55"N and longitude 84°47'11"E to 84°49'52"E.
- ii. Coal produced from this mine will be used for commercial purpose as well as for captive consumption to the end use plants.
- iii. Company is incorporated as Public Limited Company under Company's Act and no Joint venture cartel is formed.
- iv. Project does not fall in the Critically Polluted Area (CPA) where the MoEF&CC's vide its OM dated 13.01.2010 has imposed moratorium on grant of environment clearance.

- v. It is proposed to operate the Chakla Coal Mine by opencast method of mining for which there is a potential of direct employment (Departmental & contractual) of 150 persons in technical & non-technical categories. It is also expected that the project will generate indirect employment to about 1500 persons.
- vi. Socio-economic conditions of the nearby people will improve due to generation of direct-indirect employment besides opportunities/means as source of income. Infrastructure facilities i.e. Communication, transport etc will be improved. The mine shall be contributing to the State & Central Govt. exchequer by way of mining revenue (Royalty, DMF, NMET, Bid Premium etc.)
- vii. This is a Greenfield Coal Mining Project and process of obtaining EC is under process.
- viii. ToR Letter was issued by MoEF&CC, New Delhi on 11.10.2021 and Application for EC was submitted on 06.04.2023.
- ix. Total block area is 863 ha. Out of the total mine lease area, 503.578 ha is forest land, 79.903 ha is Govt. land and 279.519 ha is Pvt. Land. Mining Plan has been approved by the Ministry of Coal, Govt. of India, New Delhi vide letter no. 13016/32/2007-CA-I dated 10.06.2008 in favor of M/s. Essar Power Ltd. As per vesting order dated 03.03.2021 the Mining Plan was also transferred in favor of M/s. Hindalco Industries Ltd.
- x. The land usage pattern of the project is as follows:

a. Pre-Mining Land use details (Area in Ha)

S. No.	Land Use	Within Block Area (ha)	Outside Block Area (ha)	Total Land
1.	Agricultural Land	212.243	-	212.243
2.	Forest Land	503.578	-	503.578
3.	Waste Land	-	-	-
4.	Grazing Land	-	-	-
5.	Surface water bodies	6.06	-	6.06
6.	Settlements	31.46	-	31.46
7.	Other (Barren Land, Community, Road)	109.659	-	109.659
Total		863.0	-	863.0

b. Post Mining Land use details: (Area in Ha)

S. No.	Description	Land Use (In Ha)				Total
		Plantation	Water Body	Public Use	Undisturbed	
1.	Excavation	501.60	25.0	-	-	526.60
2.	Road	-	-	6.45	-	6.45
3.	Built-up Area	-	-	73.07	-	73.07
4.	Green Belt	61.85	-	-	-	61.85
5.	Nala Diversion	-	3.78	-	-	3.78

S. No.	Description	Land Use (In Ha)				
		Plantation	Water Body	Public Use	Undisturbed	Total
6.	Non-Mineralized zone	114.75	-	-	-	114.75
7.	Undisturbed area	-	-	-	76.50	76.50
Total		678.2	28.78	79.52	76.50	863

- xi. Coal mine spreads over an area of 863 ha. As per the initial exploration carried out, total geological reserves are 83.101 million tonnes and mineable reserves are about 75.51 million tonnes, out of which total extractable reserves 71.14 million tonnes.
- xii. There is total 4 no. of coal seams (1A, 1C, 1D & 1E) with maximum thickness 10.05 m in Seam 1E Grade of coal is G11. Average ratio of OB/Coal is 1:4.46 (Coal: overburden) (Tonnes/M³) while seam gradient is 1 in 10.
- xiii. Mining operations will be carried out by fully Mechanized Opencast Mining method. Use of surface miner technology is proposed for coal mining operation which is an environment friendly initiative as it eliminates drilling & blasting (use of explosive).
- xiv. Life of Mine is 20 years with proposed production capacity of 4.5 Million TPA.
- xv. At conceptual stage, total 317.41 Million CuM of waste will be generated, out of which initially upto 4 years 50.54 Million CuM will be dumped. After that from 8th year onwards to 18th year same quantity of waste (50.54 Million CuM) will be rehandled. Remaining 266.87 million CuM of waste will be used for backfilling purpose. Thus, total quantity of waste handling is about 367.95 Million CuM.
- xvi. Total quarry area 526.6 ha area will be excavated complete excavated area will be backfilled and reclaimed with plantation except for an area of 25 ha which will be left as void and converted into the water reservoir at the end of mine life.
- xvii. In the initial years of start of production, coal from pit to surface will be transported through 40 T dumpers via Road. Between 5th and 6th year of operation the mine will attend such shape and geometry that it would be technically feasible to deploy in-pit conveyor for conveying coal from pit to surface. From 6th year onwards coal from pit will be transported to surface through conveying system which will either directly feed in the silo for rail loading or will discharge the coal in surface coal stocks. HIL is planning to construct railway siding within the project area. Maximum transportation of the coal from mine to end use plant will be through railway siding, however, this being a commercial coal block transportation of coal through road or other nearby railway siding may be required by customer.
- xviii. At conceptual stage, total excavated area will be 526.6 ha; complete excavated area will be backfilled and reclaimed with plantation except for area of 25 ha which will be left as void and converted into the water reservoir at the end of mine life. Plantation will be carried out on 678.20 ha (Greenbelt along block boundary: 61.85 ha, Plantation on Non-Mineralized Area: 114.75 ha, Plantation over backfilled Area: 501.6 ha). Area under Built-up, Nallah Diversion

and Road is 73.07 ha, 3.78 ha & 6.45 ha respectively. Total 76.50 ha area will remain undisturbed.

- xix. Forest Diversion proposal for 503.578 ha land was submitted to DFO on 17.05.2022 and the same is under scrutiny. We undertake that the stage I forest clearance will be submitted within the stipulated time after grant of EC as per OM dated 19/06/2014 vide letter no. F.No. J - 11013/12/2013-IA-II (I) (part).
- xx. There is no National Park, Reserved Forest, wildlife sanctuaries and Eco-sensitive zones within 10 km boundary of the project. Around 50 Protected Forest & 17 water bodies viz. fall within 10 km radius of the study area.
- xxi. The list of flora and fauna duly authenticated separately for the core and study area has been mentioned in the report prepared by Environment Management Division Directorate of Extension, Indian Council of Forestry Research & Education, Dehradun. Based on the indirect evidences (IND -Indirect Evidence) 5 Schedule I species viz. 2 mammals -Asiatic Elephant (*Elephas maximus indicus*) & Sloth Bear (*Melursus ursinus*) and 3 birds Shikra (*Accipiter badius*), Black Kite (*Milvus migrans*), Black Shoulder Kite (*Elanus axillaris*) were recorded in the study area during field survey; as per (IWPA) Indian Wildlife Protection Act, 1972. (Ref. Chapter- 4, Terrestrial Floral and Faunal Diversity Status of Biodiversity Assessment, Impact and Mitigation Measures for Chakla Opencast Coal Block Mine). WLCP has been prepared and submitted to the DFO, Latehar. CWLW and PCCF- Ranchi dated 13.12.2022. Cost for the conservation plan is Rs. 2776.06 Lakh of total project cost & letters for the same is enclosed with EIA/EMP Report.
- xxii. The ground water level has been reported to be varying between 1.6 to 14.8 m bgl during pre-monsoon and between 0.3 to 9.8 m bgl during post-monsoon. Total water requirement for the project is 1100 KLD.
- xxiii. Total water requirement for the proposed coal mine will be 1100 KLD (Industrial 950 KLD + Domestic 150 KLD) which will be sourced from ground water (30 KLD), mine seepage (439 KLD) & from rain water harvesting (631 KLD). Ground water will be intersected and permission for ground water withdrawal (30 KLD) & intersection (439 KLD) has been obtained from Central Ground Water Authority vide NOC No. CGWA/NOC/MIN/ORIG/2022/15986, dated 14.07.2022 & same is valid up to 13.07.2024.
- xxiv. Public hearing for the project of 4.5 Million TPA was conducted on 29.06.2009 under the chairmanship of Mr. Peter Barwa: Additional District Collector, Latehar, Mr. Dilip Kumar, Regional Officer, JSPCB, Regional Office, Ranchi, Mr. Suresh Paswan, AFE, HQ, Ranchi. The three major concerns raised in public hearing (in 2009) were related to Environment (Air & Noise pollution, Dumping of Overburden, dust), CSR (hygienic drinking water and other facilities) R&R (resettlement plan, land cost etc.)
- xxv. According to written representations/issues received during the Previous Public Hearing, Action Plan & Physical Targets (Education facilities, Health Facilities, Infrastructure Development, Livelihood Enhancement & Environment Conservation etc.) has been prepared and incorporated in EIA/EMP Report. The ToR issued to HIL by MoEF&CC, New Delhi vide letter no. IA-J-11015/1072/2007-IA-II(M) dated 11.10.2021

As per the TOR Point 4 (Additional Condition - i) has been stipulated in ToR that “PP shall issue public notice in local media, newspapers (English, Hindi and local language Report through concerned SPCB in the concerned districts as per the provisions/procedure contained in the EIA Notification, 2006 for information of the stakeholders about the present coal mining operations inviting comments and their redressal”.

Advertisement for the Public Notice has been published in Prabhat Khabar & Hindustan (Hindi Newspaper) on 26.01.2023 and in Hindustan Times (English Newspaper) on 29.01.2023. Public Notice communication to MoEF & CC was done through MS-JSPCB Ranchi, dated 21.03.2023. Action plan & physical targets have been prepared on the basis of MoEF&CC, OM dated 30.09.2020 & 20.10.2020 and same is enclosed with this EIA/EMP Report.

- xxvi. Mahalania Nallah runs from North to South of lease area and exits the Chakla Coal Mine from SW to meet its natural course. This Nallah is proposed to be diverted along the Western and Southern boundaries of the mine after necessary approval from WRD (Water Resource Department), Govt of Jharkhand. Permission for diversion of Mahalania Nallah has been taken from the Chief Engineer, Water Resource Department, Medininagar dated 23.11.2022 & Chief Engineer–CDO, Ranchi dated 30.01.2023. Final Approval from Engineer-in-Chief/Secretary (WRD-Jharkhand) is awaiting.
- xxvii. Baseline Monitoring has been carried for Summer Season (March to May, 2021). The results of ambient air quality monitoring data were found within prescribed limits which can be attributed to the specific local conditions during the day of sampling. Regular monitoring of ambient air quality will be carried out on fortnightly basis. The documented report will be submitted to IRO, CPCB, JSPCB & also to MoEF&CC along with half yearly EC compliance report.
- xxviii. No Court cases, violation cases are pending against the project of the PP.
- xxix. The project does not involve violation of the EIA Notification, 2006 and amendment issued thereunder. The coal production will be started after obtaining Environment Clearance and other requisite consents from the concerned authorities.
- xxx. The project involves 537 PAFs and 265 PDFs. The compensation and other R&R benefits will be fixed as per the Right to Fair Compensation and Transparency in land acquisition, Rehabilitation and Resettlement Act, 2013 (RFCT LARR Act, 2013) which is applicable since 01.01.2014.
- xxxi. Total cost of the project is Rs. 1173 Crore. R & R Compensation including infrastructure cost is Rs. 125.30 Crore. Environment Management Cost is Capital cost: Rs. 23.78 Crore and recurring cost: 1.68 crore/annum.
- xxxii. Consent to operate will be obtained from concerned authorities after obtaining Environmental Clearances.
- xxxiii. It is a Greenfield mining project and production is yet to commence.
- xxxiv. Baseline Monitoring Status:

(i) Air quality: 12 Number of sampling location monitored

The result indicates that the maximum and minimum values of PM10 are in the range of 55.8 to 87.0 µg/m³, whereas the PM2.5 are in the range of 26.9 to 51.5 µg/m³. The SO₂ concentrations within the study area are in the range of 5.6 to 21.7 µg/m³ and the NO_x are in the range of 11.1 to 39.8 µg/m³. The incremental increase in the values was projected to be 6.66 for PM₁₀, 2.66 for PM_{2.5}, 2.51 for SO₂ and 2.18 for NO₂, which are found to be within norms of National Ambient Air Quality Standards of CPCB.

(ii) Surface water quality: Water samples were monitored at 3 locations. Surface water resources: Nallahs, Ponds, and River. The pH of collected water sample from sampling stations varies from 6.92 to 7.29 indicating slightly alkaline in nature. Total hardness (36.65 to 79.98 mg/l), Total dissolved solids (86 to 194 mg/l), Alkalinity (23.65 to 72.13 mg/l) and conductivity (136 to 293 µS/cm) were found to be within standards in water samples. BOD varies from 3.1 to 6.7 mg/l & COD varies from 8.9 to 23.6 mg/l.

43.1.3 The Committee during detail deliberation observed the followings:

- i. PP has obtained ToR on the project vide letter no J-11015/1072/2007-IA.II (M) dated 11.10.2021.
- ii. The Mine plan approved by Ministry of Coal vide letter no. 13016/32/2007-CA-I dated 10.06.2008 in favor of M/s. Essar Power Ltd. Further as per vesting order dated 03.03.2021 the Mining Plan was also transferred in favor of M/s. Hindalco Industries Ltd. Hence PP intends to execute the mining with mine of 2008.
- iii. Life of Mine is 20 years with proposed production capacity of 4.5 Million TPA.
- iv. Currently, PP has submitted the proposal for Stage- I Forest Clearance for Forest land of 503.578 ha to DFO on 17.05.2022.
- v. No National Park, Reserved Forest, wildlife sanctuaries and Eco-sensitive zones within 10 km boundary of the project. Around 50 Protected Forest & 17 water bodies viz. fall within 10 km radius of the study area. Certificate regarding mine does not fall under corridors of any National Park, Wildlife Sanctuary & does not involve any violation of forest and wild sanctuary obtained by DFO Latehar dated 2208.2022 also obtained from PCCF&CWW dated 27.01.2023.
- vi. PP has submitted the NOC of Central Ground Water Authority vide NOC No. CGWA/NOC/MIN/ORIG/2022/15986 dated 14.07.2022 and the same is valid up to 13.07.2024.
- vii. Earlier PP conducted the Public Hearing on 29.06.2009 for production capacity of 4.5 MTPA and now PP has published the advertisement for the Public Notice in Prabhat Khabar & Hindustan (Hindi Newspaper) on 26.01.2023 and in Hindustan Times (English Newspaper) on 29.01.2023.
- viii. PP has submitted the Action plan & physical targets on the basis of OM of MoEF&CC dated 30.09.2020 & 20.10.2020.
- ix. Baseline Monitoring has been carried for Summer Season (March to May, 2021).

43.1.4 *The EAC, after detailed deliberations observed that the instant proposal is a Greenfield project. The project was earlier considered and recommended by EAC in the year 2010 prior to order of Hon'ble Supreme Court wherein all coal blocks were cancelled. Since the Public Hearing (PH) was already conducted by prior allottee, and presently public hearing is exempted while grating ToR for this instant proposal but with issue of public notices to incorporate the any concerns of public. As per submissions of PP, EAC observed that no comments or feedback has been received after public notice by JSPCB for this project.*

Also, references are gathered from the past appraisal of this project wherein the said coal blocks were identified as No-Go Areas, however current status of the area is unavailable to the committee. It was observed that the peak production of coal mine is 4.5 MTPA involving total 503.578 ha of forest land involved for diversion, however forest clearance is presently under process at State level for Stage-I FC. Recognizing the fact that mine plan was prepared prior to Supreme court judgement dated 6th July, 2011 in WP No.202 of 1995 in the matter of T.N.Godavarman Thirumulpad Vs Union of India & others wherein order passed in cases where environmental clearance is required for a project on forest land, the forest clearance shall be obtained before the grant of the environment clearance.....These guidelines are required to be given so that fait accompli situations do not recur...' However, in the matter, it was realized that the project proponent has to submit the certificate from the District Magistrate/Collector for verification of the forest land involved under Forest Right Act, 2006, which will ensure the total coverage of forest land available for diversion that fall under the mine plan of 2008. Besides, the project proponent shall also submit authenticated reserves available below the forest area.

The Committee found that the protection measures for tributary no. 6 of Mahalania Nallah did not cover in the EIA Report as the ToR specific condition no. (iii), therefore it was advised to prepare protection plan showing impact on Ecosystem/Environment. The protection plan for stream to be prepared in such a way so that it will save the stream from dumping of Overburden and same plan to be incorporated in the Mining plan.

During the discussion, committee also found that the PP did not fulfill another important specific condition no. (xiii) i.e. "PP shall prepare a Damage assessment (likely due to mining activity) i.e. augmentation report on Natural resources including the carrying capacity of river and stream passing by with its catchment area, its mitigation measures". The report "Assessment Study for Diversion Of Nallah" submitted in compliance of ToR specific conditions did not cover the impact of diversion on the catchment area and Environment. The report concludes that the water from diverted channels to seep towards existing channels due to surface geology.

Further, study has been done based on theoretical data based on precipitation for last 50 and 100 years and no validated assessment of quantity with flowrate of water in the stream has been assessed. The likely impact should include on flowrate, volume of water being diverted and any whether there in major impact on habitation living there. Therefore, the committee opined that the project proponent to emphasis on proper estimation of impact and revisit the specific condition no. (iii), (iv) and (xiii) for submission of study which will cover the concerns of seepage from diverted

channel to existing as well as impact of diversion on the Ecosystem/Environment and the protection of tributary no. 6 of Mahalania Nallah.

With regard to transportation of coal from the mine through inpit conveyer system with silo loading system till railway siding has been committed to implement within 3 years of mine operation. No trucks will be passing through village road. Also PP has committed not to divert any forest land for any infrastructure or OB dump since all the forest land is coal bearing area. Also, committed to change the sequence of dumping of OB proposed near Chakla village i.e. moving away from village while dumping OB from the first year. The OB dumping shall be 200 mts away from the village and dense plantation with 8 ft to 10 ft trees shall be planted. As per ToR(vi), PP was to amend/revise the Mine Plan as per discussion held during Terms of References, However, PP has not submitted the Mine plan covering all conditions of TOR.

In view of the above, committee opined that the project proponent shall submit the above mentioned course of action: -

- i. Project Proponent to rework on proper estimation of impact due to diversion and revisit the specific condition no. (iii), (iv) and (xiii) for submission of study which will cover the concerns of seepage from diverted channel to existing as well as impact of diversion on the Ecosystem/Environment and the protection of tributary no. 6 of Mahalania Nallah. The study shall be redone accordingly.*
- ii. PP needs to submit certificate from the District Magistrate for verifying the existence of forest land covered under the Forest Right Act, 2006 and consequential forest land shall be required for diversion.*
- iii. PP needs to clarify from the documents of State Government that the area does not fall under No-Go Area category/zone.*
- iv. PP shall submit Letter of Intent in the name of PP from State Government regarding proposed mine lease area*
- v. PP needs to submit the coal reserves available below the forest land lying inside the Mine lease area.*
- vi. PP needs to submit the protection plan for villagers lying inside the mine lease area from the mining activities during overlapping period of mining and rehabilitation.*
- vii. PP needs to submit the coal evacuation plan considering the route should not pass through village area for the initial 3 years i.e. till implementation of railway siding.*
- viii. PP needs to revisit and conform that current mine plan is in compliance to discussion held during Terms of References i.e a per ToR(vi) covering all items prescribed in TOR. Therefore, PP shall submit the Mine Plan and Mine Closure Plan as per observation of EAC and latest guidelines of Ministry of Coal.*
- ix. The PP shall submit the progressive reclamation plan of mine in time bound manner and approved Standard Operating Procedure for handing over the land to land allottees and Forest Department.*

- x. *PP shall submit a detailed report on total carbon sink/absorption currently happening due to forest cover area and its loss after cutting of tress/forest and further, rate of carbon sequestration with progressive backfilling and plantation.*
- xi. *PP shall submit the detailed plan for implementation in form of CPM/PERT chart considering all eventuality involved for implementation of mechanized system.*

*In view of the above, the project was **deferred** for submission of observation.*

Agenda No. 43.2

Bandha Opencast Coal Mine of 5 MTPA capacity in mine lease area of 1850.94 ha of M/s EMIL Mines and Mineral Resources Limited (EMMRL) located at Village Bandha, Tenduha, Pidarwah, Deori & Pachaur, Tehsil Sarai, District Singrauli (Madhya Pradesh) - Environmental Clearance reg.

[Online proposal No. IA/MP/CMIN/425307/2023; File No. J-11015/54/2021-IA-II (M)]

43.2.1 The proposal is for Environmental Clearance for Bandha Opencast Coal Mine of 5 MTPA capacity in mine lease area of 1850.94 ha of M/s EMIL Mines and Mineral Resources Limited (EMMRL) located at Village Bandha, Tenduha, Pidarwah, Deori & Pachaur, Tehsil Sarai, District Singrauli (Madhya Pradesh).

43.2.2 Details of the proposal, as ascertained from the proposal documents and as revealed from the discussions held during the meeting, are given as under:-

- (i) The project area is covered under Survey of India Topo sheet No. 63 L/8 and is bounded by the geographical coordinates ranging from 24⁰04'17" N to 24⁰06'52" N and longitudes 82° 21' 39" E to 82° 24' 57" E.
- (ii) Coal linkage of the project is not applicable as the mine is commercial coal mine.
- (iii) Joint venture cartel has been formed - Not Applicable
- (iv) As per PP, project does not fall in the Critically Polluted Area (CPA), where the MoEF&CC's vide its OM dated 13th January, 2010 has imposed moratorium on grant of environment clearance.
- (v) Employment generation- Project will generate employment for about 1406 persons directly. In addition, more than 5000 people will be benefited indirectly.
- (vi) The project is reported to be beneficial in terms of energy security for the development of country.
- (vii) Terms of Reference granted on – (for EC proposals) - ToR was granted vide letter J-11015/54/2021-IA-II (M) dated 13.09.2021.
- (viii) Total mining lease area as per block allotment is 1850.94 ha. Mining plan & Mine Closure Plan was approved vide letter No. MPMP051/APP0063/2021 dated: 15.02.2022 by Ministry of Coal, Government of India.

(ix) The land usage pattern of the project is as follows:

Pre-mining land use details

S. No.	Type of land	Existing / Pre – Mining land Use	Area in Ha
1.	Tenancy Land	Agriculture	678.17
2.	Tenancy Land	Township	93.76
3.	Tenancy Land	Grazing	0.00
4.	Tenancy Land	Barren	0.00
5.	Tenancy Land	Water Bodies	2.03
6.	Tenancy Land	Road	0.00
7.	Tenancy Land	Commercial/ Other Use	2.13
	Sub Total		776.09
8.	Govt. Non-Forest Land	Agriculture	0.00
9.	Govt. Non-Forest Land	Residential	0.00
10.	Govt. Non-Forest Land	Township	0.00
11.	Govt. Non-Forest Land	Grazing	47.19
12.	Govt. Non-Forest Land	Barren	190.08
13.	Govt. Non-Forest Land	Water bodies	34.78
14.	Govt. Non-Forest Land	Road	7.00
15.	Govt. Non-Forest Land	Railway	0.68
16.	Govt. Non-Forest Land	Other use	9.63
	Sub Total		289.35
17.	Forest land	Revenue	3.55
18.	Forest land	Reserve	686.05
19.	Forest land	Protected	95.90
		Sub total	785.50
		Free hold	0.00
		Grand Total	1850.94

Post Mining land use details

Type	Land use (Proposed)	Land Use (End of Life)	Land Use (Post Closure)						Total
			Agricultural land	Plantation	Water Body	Public/Comp any Use	Forest Land (Returned)	Undisturbed	
Embankment									
Top Soil Dump									
External Dump	350	350		350					350.0000
Safety Zone	15	15					15		15.0000
Settling Pond	15	15			15				15.0000
Road And Infrastructure	85	85				85			85.0000

Area									
Rationalization Area	25.94	25.94		25.94					25.9400
Garland Drains	10	10				10			10.0000
Green Belt	15	15		15					15.0000
UG Entry	10	10				10			10.0000
Undisturbed OR Mining Right For UG	10	10						10	10.0000
Excavation Area	1315								
Backfilled Area		1200	295	905					1200.0000
Excavated Void		115				115			115.0000
Total	1850.94	1850.94	295.00	1295.94	15.00	220.00	0.00	25.00	1850.9400

- (x) Net Geological Reserve reported in the mine lease area is 560.3800 MT with 207.3500 MT Mineable Reserves by opencast mining. Out of total mineable reserve of 207.3500 MT, 197.00 MT are available for extraction. Percent of extraction is 35.1550%.
- (xi) Thickness of seams to be worked on: Opencast mining method is proposed for extraction of coal seam VIII and VII. The effective thickness of the coal seam VIII is varying from 1.5-2.5m (Avg.-1.85m) and of seam VII is varies from 11.00-14.00m (Avg.-12.30m). Grade of coal: Grade of seam VIII from G7 to G17 (Avg. G12) and Grade of the Seam VII varies from G7 to G12 (Avg. G9). The overall grade of reserve proposed to be extracted by Opencast is G-10. Stripping ratio: 9.76 m³/t, Average gradient: - Coal Seams gradient of 2⁰-8⁰, Maximum thickness of seams: Seam VIII varies from 1.5 to 2.5 m (Avg. – 1.85 m) and Seam VII varies from 11.00 to 14.00 m (Avg. – 12.30 m).
- (xii) Method of mining operations envisages by Opencast Mining: Opencast mining is proposed by shovel-dumper combination for OB excavation and Surface Miner for coal winning and loading by FE Loader (3.5 m³) in conjunction with 35 T & 100 T Rear Dumper.
- (xiii) Life of mine is 45 years (Based on the 5 MTPA) and 31 years (Based on the 7.5 MTPA Peak)
- (xiv) The project has 1 external OB dumps (temporary) in an area of 350 ha with 120 m height and 307.30 Mm³ of OB. 1 internal OB in an area of 1200 ha with 1619.20 mm³ of material is envisaged in the project.
- (xv) Total quarry area is 1315 ha out of which backfilling will be done in 1200 ha up to a level of 560 MRL while final mine void will be created in an area of 115 ha with a depth of 230m. Backfilled quarry area of 1200 ha shall be reclaimed with plantation. Final mine void will be converted water body.
- (xvi) Transportation of Coal:
- In pit: Initially through Dumpers & through In pit conveyor after few years
 - Surface to siding: By dumpers and other suitable transportation means
 - Siding to loading: Initially through Road, later through RLS

Coal Evacuation through road is proposed for first 3 to 4 years till completion of the proposed railway siding.

- (xvii) Reclamation has been Planned in an area of 1255 ha, comprising of Waste Dump and Backfilled Area and 30 ha in the safety zone & green belt. In addition to this, an area of 30 ha, included in the safety zone/rationalization area, has already been proposed for green belt development, as stated above.
- (xviii) .785.49 ha of forest land has been reported to be involved in the project. Application for Forest Clearance has been submitted vide Proposal no – FP/MP/MIN/144129/2021 on 29.06.2021. The application for diversion has been recommended by Conservator of Forests on 23.02.2023 and is pending for approval before the State Government.
- (xix) Please mention any National Parks, Wildlife Sanctuaries and Eco-Sensitive Zones fall within 10 km boundary of the project. - There are no National Park, eco-sensitive Zones, within 10 km radius.
- (xx) Wildlife conservation plan for schedule – I species has been submitted – There is no national park or wildlife sanctuary within the study area. However, due to presence of Schedule-1 Fauna, Wildlife Conservation Plan has been submitted to Forest Department for approval on 01.09.2022, Approval is awaited.
- (xxi) The ground water level has been reported to be varying between 7 m bgl to 9.6 m bgl during pre-monsoon and between 4 m bgl to 6.5 m bgl during post-monsoon. Total water requirement for the project is 1200 m³/day.
- (xxii) NOC for ground water withdrawal has been approved by the Central Ground Water Authority (CGWA) vide NOC no. CGWA/NOC/MIN/ORIG/2022/17071 on 18.11.2022.
- (xxiii) Public hearing for the project of 5.0 MTPA (7.5 MTPA peak capacity) capacity in an area of 1850.94 ha was conducted on 15.02.2023 at Gram Panchayat Bhawan Bandha Village, Tehsil: Sarai, Dist: Singrauli, Madhya Pradesh under the Chairmanship of Shree D.P. Barman, ADM, Singrauli. Major issues raised in the public hearing & appropriate action to address the issues raised in the Public Hearing have already been taken/proposed to be taken are given in the action plan prepared and mentioned in chapter 7 in EIA/EMP report.
- (xxiv) Consent to Operate for the proposed capacity to be submitted after environment clearance to State Pollution Control Board - Will be obtained after grant of EC
- (xxv) Bandha Nala and Kanchanmuda Nala passing through the site (Seasonal). No diversion of Bandha and Kanchanmuda Nala has been proposed.
- (xxvi) No court cases, violation cases are pending against the project of the PP.
- (xxvii) The project does not involve violation of the EIA Notification, 2006 and amendment issued thereunder. No excess production of coal from the sanctioned capacity has been realized since it is a Greenfield project.
- (xxviii) The project involves 966 PAF. R&R of the PAPs will be done as per prevailing laws.
- (xxix) Total cost of the project is Rs. 230000 Lakh. Cost of production is Rs 1400 per tonne, CSR cost will be 2% profit of last three years. R&R cost – 380 Crore. Environment Management Cost is: 10748.2 Lakh, Capital Rs 10642 Lakh; & Recurring Rs. 106.42 Lakh.
- (xxx) **Base line monitoring status:**

- (a) Mention the Period/ Season of baseline study carried out - March to May 2021 (Pre-Monsoon) & Oct to Dec 2021 (Post-Monsoon)
- (b) Whether the Laboratory has been accredited by the NABL/ MoEF&CC certification involved in analysis of water, air, noise & soil quality data, also providing its respective lab reports – Yes
- (c) Detail of Air quality and surface water quality
- i. Air quality: Number of sampling location monitored: 10 Location (Pre-monsoon) & 12 Location (Post-monsoon)

Pre-Monsoon result indicates that the maximum and minimum values of PM₁₀ are in the range of 60.1 to 89.6, whereas the PM_{2.5} is in the range of 24.1 to 53.7 µg/m³. The SO₂ concentrations within the study area are in the range of 10.1 to 15.3 and the NO_x are in the range of 18.1 to 27.5 µg/m³. The concentrations of CO were found between 0.5 to 1.4 mg/m³.

Post-Monsoon result indicates that the maximum and minimum values of PM₁₀ are in the range of 58.0 to 86.5, whereas the PM_{2.5} is in the range of 15.5 to 48.6 µg/m³. The SO₂ concentrations within the study area are in the range of 7.2 to 19.6 and the NO_x are in the range of 37.0 to 17.1 µg/m³. Maximum concentrations of CO was 1.01 mg/m³, the minimum concentration was found to be 0.47 mg/m³.

Air Pollution Impact Prediction - Pre-Monsoon – The incremental increase in the values were projected to be 4.60037 µg/m³ for PM₁₀, 2.78162 µg/m³ for PM_{2.5}, 0.36509 µg/m³ for SO₂, 0.30425 µg/m³ for NO_x, and for CO 0.000107 mg/m³. The value of Total GLC is 94.20037 µg/m³ for PM₁₀, 56.48162 µg/m³ for PM_{2.5}, 15.66509 µg/m³ for SO₂, and 27.80425 µg/m³ for NO_x, and 1.400107 mg/m³ for CO are predicted during March to May 2021.

The observed pollutant levels were compared with CPCB National Ambient Air Quality Standards and found to be within the permissible limit.

Air Pollution Impact Prediction - Post-Monsoon - The incremental increase in the values were projected to be 4.9586 µg/m³ for PM₁₀, 2.99823 µg/m³ for PM_{2.5}, 0.25334 µg/m³ for SO₂, and 0.29912 µg/m³ for NO_x and for CO 0.000 mg/m³. The value of Total GLC is 91.4586 µg/m³ for PM₁₀, 52.49823 µg/m³ for PM_{2.5}, 19.85334 µg/m³ for SO₂, and 35.29912 µg/m³ for NO_x and 1.01009 mg/m³ for CO are predicted during October to December 2021. The observed pollutant levels were compared with CPCB National Ambient Air Quality Standards and found to be within the permissible limit.

ii. **Surface water quality: 8 Location**

Name of the source of surface water monitoring: Kanchan N Near Phulwari, Pond Near Pachur, Pond Near Suhira, Confluence of Bandha N & Mahan N, Mahan N Near Lamidah, Rampa River Near Karsua, Bandha N Naear Ujaini and Pond Near Singahi.

SURFACE WATER

All the Parameters for **pre-monsoon** like pH varies from 7.3 to 7.82, Total Hardness varies from 231.45 to 460.5 mg/L, Total Dissolved Solids varies from 378 to 795 mg/L, Dissolved Oxygen – 4.8 mg/l to 6.4 mg/l etc. are found within the permissible limits.

All the Parameters for **post-monsoon** Like pH varies from 7.61 to 7.88, Total Hardness varies from 641 to 756 mg/L, Total Dissolved Solids varies from 788 to 1074 mg/L, Dissolved Oxygen – 5.1 mg/l to 6.9 mg/l etc. are found within the permissible limits.

(d) Soil quality: 10 Location

All the Parameters for **pre-monsoon** Like pH varies from 6.98 to 8.02, Organic matter varies from 0.47% to 0.8 %, Available Nitrogen varies from 190 to 260 kg/ha etc. are found within the permissible limits.

All the Parameters for **post-monsoon** Like pH varies from 7.48 to 7.88, Organic matter varies from 0.44% to 0.74%, Available Nitrogen varies from 136 to 214.61 kg/ha etc. are found within the permissible limits.

(e) Noise Quality: 10 Location

Stations	Name	Distance (km)	Direction
N1	Project Site (Tenduha)	--	--
N2	Project Site (Bandha)	--	--
N3	Badanmara	0.7	E
N4	Tendudol	1.2	NW
N5	Budheri	5.4	S
N6	Jamgari	5.5	WSW
N7	Amilia	3.7	SSE
N8	Chophaijhariya	0.6	E
N9	Ujaini	5.9	N
N10	Mohanban RF	1.3	N

For the pre-monsoon the Leq value for day and night time was observed to be 53.24 and 42.38 dB (A).

For the post-monsoon the Leq value at this location for day and night time was observed to be 73.20 and 65.05 dB (A). The noise levels recorded at all locations were within the NAAQS limits.

43.2.3 The Committee during deliberation observed the following:

- (i) PP has obtained the Terms of Reference vide letter no. J-11015/54/2021-IA-II (M) dated 13.09.2021 with public consultation.
- (ii) Baseline data collected for period from March to May 2021 & October to December 2021.
- (iii) Mining plan & Mine Closure Plan obtained vide letter No. MPMP051/APP0063/2021 dated 15.02.2022 by Ministry of Coal, Government of India.
- (iv) Life of mine for period of 45 years (based on the 5 MTPA) and 31 years (Based on the 7.5 MTPA Peak).

- (v) 785.49 ha of forest land involved in the mine lease area of 1850.94 ha. Application for FC has been submitted vide Proposal no. FP/MP/MIN/144129/2021 on 29.06.2021. The application for diversion has been recommended by Conservator of Forests on 23.02.2023 and is pending for approval before the State Government.
- (vi) No National Park, eco-sensitive Zones, within 10 km radius i.e. within the study area.
- (vii) Due to presence of Schedule-1 species, Wildlife Conservation Plan has been prepared and submitted to Forest Department for approval on 01.09.2022, Approval is awaited.
- (viii) NOC for withdrawal of ground water has been approved by the Central Ground Water Authority (CGWA) vide NOC no. CGWA/NOC/MIN/ORIG/2022/17071 on 18.11.2022.
- (ix) Public hearing for the project was conducted on 15.02.2023 for 5.0 MTPA (7.5 MTPA peak capacity) in an area of 1850.94 ha. Issues raised in the public hearing & appropriate action to address the issues raised in the Public Hearing have already been taken/proposed to be taken are given in the action plan prepared and mentioned in chapter 7 in EIA/EMP report.
- (x) Bandha Nala and Kanchanmuda Nala passing through the site (Seasonal). No diversion of Bandha and Kanchanmuda Nala has been proposed.

43.2.4 *The Committee observed that the instant proposal is a Greenfield project having production capacity 5 MTPA. The project involves total 785.49 ha of forest land involved for diversion on which forest clearance is presently pending for Stage-I FC.*

It was opined that as the Mine lease area falls near to the polluted area of Singrauli (Madhya Pradesh), therefore PP is required to submit clarification whether project falls in CPA or out of the CPA from State pollution control board. PP shall inform to the Ministry that whether the Agro-forestry field lying inside the mine lease will be disturbed as per the approved mining plan or not. In this case, PP must prepare compensation plan. PP shall provide tabulated information upon the number of trees (species-wise) available in the existing forest land. The coal reserves available below the existing forest area shall also be submitted. The PP shall submit the progressive reclamation plan of mine in time bound manner. The committee highlighted the issues of R&R and their livelihood on which the committee desired to submit the road map particularly with the issues and their solution. During the discussion committee placed their concerned about the forest land allocated to the tribal persons (if any). PP shall submit the certificate from district collector for forest land under Forest Right Act, 2006.

The Committee also noted that the high stripping ratio and dense forest area but PP undermined the scope of underground mining which should have been planned in mining plan to save the complete bio-diversity of the mine lease area. The PP shall also compare the cost of Opencast mine with Underground mine for extracting 1 Million tonnes of coal. The committee while reviewing the proposal, found that the Mining plan was not prepared based on the Terms of Reference issued by the Ministry. Therefore, the committee suggests to relook the Mining plan and submit it according to the ToR issued.

Finding that majority of area fall under forest cover, the committee opined to have a detailed

report on total carbon sink/absorption currently happening due to forest cover area and its loss after cutting of tress/forest and further, rate of carbon sequestration with progressive backfilling and plantation.

In view of the above, the committee opined that the project proponent must complete the following course of action and submit the following documents: -

- i. PP shall submit the clarification regarding the Forest land involved under Forest Right Acts, 2006 from the District Collector of Singrauli district and accordingly work out the land for diversion and protection strategy, if any tribal population fall within forest.*
- ii. PP shall submit Letter of Intent from State Government for the proposed mine lease area.*
- iii. PP shall submit the clarification whether project falls within critically polluted area or outside the area from State Pollution Control Board.*
- iv. PP shall submit justification why can't alternate mining methodology be exercised to extract coal as presently opencast the coal extraction method able to produce only 35.15% of coal from available reserve, causing consequential deforestation in 782 ha of forest land along with impact on catchment area. CMPDI needs to rework the basic work with data being involved in mine planning and submit the availability of coal reserves below the forest land.*
- v. PP with CMPDI to submit the cost benefit analysis after comparing the cost of Opencast mine with Underground mine for extracting 1 Million tonnes of coal.*
- vi. PP with CMPDI shall submit the compliance status of Mine plan w.r.t. conditions of Terms of Reference issued on 13.09.2021. Proper referencing with page number should be done in this regard.*
- vii. PP shall submit the details related to the destruction of the Agro-forestry area lying inside the Mine lease area as per the approved mine plan. PP must submit the alternatives in terms of compensation (in Rs.) and in terms of Agriculture land.*
- viii. PP shall provide tabulated information upon the number of trees (species-wise) available in the existing forest land.*
- ix. PP shall submit the progressive mine reclamation plan in time bound manner.*
- x. PP shall submit the road map to resolve the R&R issues particularly for the persons completely dependent on the Forest.*
- xi. PP shall submit the detailed plan for implementation in form of CPM/PERT chart for implementation of mechanized system within FY 2029.*
- xii. PP to submit the detailed report on total carbon sink/absorption currently happening due to forest cover area and its loss after cutting of tress/forest and further, rate of carbon sequestration with progressive backfilling and plantation.*
- xiii. The PP shall submit the progressive reclamation plan of mine in time bound manner and approved Standard Operating Procedure for handing over the land to land allottees and Forest Department.*
- xiv. PP shall submit the detailed justification for diversion of streams namely Kanchanmuda nala being proposed to be diverted.*
- xv. PP shall submit the number of trees to be cut in non-forest area and steps/SOP to protect these*

trees.

In view of the above, the project was **deferred** for submission of observation.

Agenda No. 43.3

Dhori Coking Coal Washery of 3 MTPA capacity in project area 12.06 Ha of M/s Central Coalfields Limited located at Village Tarmi & Turio Block Chandrapura, District Bokaro, Jharkhand - For Terms of Reference reg.

[Online proposal number IA/JH/CMIN/417074/2023; File no. J-11015/1/2023-IA-II (M)]

43.3.1 The proposal is for Terms of Reference for Dhori Coking Coal Washery of 3 MTPA capacity in project area 12.06 Ha of M/s Central Coalfields Limited located at Village Tarmi & Turio Block Chandrapura, District Bokaro, Jharkhand.

43.3.2 Details of the proposal, as ascertained from the proposal documents and as revealed from the discussions held during the meeting, are given as under:

- i. The project is covered in Survey of India toposheet no. F45C1 and is bounded by co-ordinates 23° 45' 29" to 23° 45' 47" and 86° 03' 07" & 85° 03' 24".
- ii. Coal linkage is proposed through existing coal mines of CCL that are Amlo OCP & Tarmi-Kalyani-SDOCM.
- iii. No Joint venture cartel has been formed for the project.
- iv. Project does not fall in Critically Polluted Area (CPA), where the MoEF&CC vide its OM dated 13th January 2010 has imposed moratorium on grant of environment clearance.
- v. Employment generation, about 220 permanent & 800 in-direct employment will be provided from the project.
- vi. The project is reported to be beneficial in terms of employment opportunities both for skilled and semi-skilled persons in the area. Business opportunity in secondary & Tertiary sectors will increase. The proposed project will also bring about enhanced socio-economic benefits to local population due to expenditure in CSR activities, post-mining enhancement of green cover, contribution to exchequer etc.
- vii. Total project area is 12.06 Ha. The pre-feasibility report of the washery has been approved by CCL Board in its 520th (No. 11 of 2022) meeting of Board of Director held on 10.10.2022.
- viii. The land use of the project is as follows:

Pre-mining Land Use:

Description	Within ML Area	Outside ML Area	Total
Forest Land	12.06	0	12.06
Total Project Area	12.06	0	12.06

Post-Mining Land Use:

Land Use	Plantation	Water body	Public Use	Un-disturbed	Total Area in Ha.
Main Plant & Allied infrastructure	5.66	-	-	-	5.66
Stock pile and loading bunker	0.60	-	-	-	0.60
Reject Dumping area	1.15	-	-	-	1.15
Slurry Pond	0.50	-	-	-	0.50
Green Belt	4.15	-	-	-	4.15
Total Area	12.06	-	-	-	12.06

- ix. The washery has been envisaged to produce three products viz. metallurgical clean coal for use in steel plants, middlings for use in thermal power stations and rejects (Tertiary Product). It has been envisaged to crush entire coal down to (-) 13mm. Treatment of 13-0.5mm coal in two-stage HM cyclone and beneficiation of -0.5mm size fraction by froth flotation have been envisaged.
- x. The life of the proposed washery is proposed to be 21 years including construction period being 36 months
- xi. Transportation of ROM coal has been proposed by road from Amlo (-100 mm) and through belt conveyor/road from Tarmi, Selected Dhori & Kalyani (-100 mm). Clean coal and Washed Power coal will be loaded into Railway wagons through two numbers Rapid Loading System (3600 tph capacity each) for onward transportation to consumers. The rejects will be conveyed by belt conveyor to Reject hopper/Temporary Reject Storage site within the washery premises.
- xii. 12.06 ha of forestland has been reported to be involved in the project. Approval under the Forest (Conservation) Act, 1980 for diversion of 12.06 Ha of forestland for non-forestry purposes has been obtained vide MoEF&CC letter No. 5JHC068/2008-BHU dated: 14.05.2010.
- xiii. No National Parks, Wildlife Sanctuaries and Eco-Sensitive Zones fall within 10 km boundary of the project.
- xiv. Total water requirement for the project is 1400 KLD. Water is proposed to be sourced from old quarry of Tarmi OC (2-3 KM) and other nearby water filled mining pits.
- xv. NOC from CGWA will not be required as stored mine water is proposed to be utilized for the project.
- xvi. Consent to operate (CTO) will be obtained from the State Pollution Control Board after issuance of EC.
- xvii. The drainage of the block is controlled by two nallahs flowing from North to South and located in the western & central parts of the block. The nallahs join river Damodar in the South.

- xviii. Regular monitoring of ambient air quality will be carried out for the project on fortnightly basis. The documented report will be submitted to JSPCB & MOEF&C with six monthly compliance report.
- xix. No court cases, violation cases are pending against the project of the PP.
- xx. The project does not involve violation of the EIA Notification, 2006 and amendment issued there under as it is a Greenfield project.
- xxi. The project involves No R & R as the entire land is Forest land.
- xxii. Total capital cost of the project is Rs. 390 Crores. Operating Cost per tonne of raw coal is Rs. 365/Tonne. The fund for the CSR is allocated based on 2% of the average net profit of the Company for the three immediately preceding financial years.
- xxiii. Consent to operate (CTO) will be obtained from the State Pollution Control Board after issuance of EC.
- xxiv. Past Production details comparison with existing EC: Not applicable as it is a greenfield washery project.
- xxv. Baseline Monitoring Status:
 - a) Environmental sensitivity within 10 km buffer zone with distance & direction form the project site like Forest, water bodies, other mines, other washeries, power plants, industries, highways, railway stations, hospitals, schools, colleges etc.

S. No.	Areas	Details of areas
1	Forest	The core zone of the area consists of entirely of forest land of 12.06 Ha. In addition, the buffer area also contains majorly of Forest land.
2	National Park	No national Park exists within 10 KM from the project boundary. Nearest national park is at Hazaribagh which is situated at a distance of 117 KM.
3	Wild life Sanctuary	No wildlife sanctuary exists within 10 KM from the project boundary. Nearest wild life sanctuary is at Hazaribagh which is situated at a distance of 117 KM.
4	Eco-Sensitive Areas/Zones	No Eco-Sensitive Areas/Zone exists within 10 KM from the project boundary. Dalma Wildlife sanctuary is located at a distance of 143 KM from the proposed site.
5	Water Bodies	Damodar River – 0.7 KM (South Direction), Tenughat Reservoir – 24 KM (South Direction)
6	CRZ	CRZ is not applicable
7	Notified Industrial Area	The present project doesn't fall under any notified industrial area.
8	Highway	NH 320 - 12 KM
9	Power Plants	Chandrapura Thermal Power Plant – 10 KM (Aerial)
10	Railway Stations	Bhandaridah (1 KM)

- b) Period/Season of Baseline Study: Pre - Monsoon season of 2023 (under progress)

- c) Whether the Laboratory has been accredited by the NABL/ MoEF&CC certification involved in analysis of water, air, noise & soil quality data, also providing its respective lab reports: Yes
- d) Detail of Air quality and surface water quality:
 - 1. Number of sampling location monitored: 08
- e) Surface water quality:
 - 1. Number of sampling location monitored: 3
 - 2. Name of the source of surface water monitoring: a) Damodar Nadi Upstream b) Damodar Nadi Downstream c) Selected Dhori Mine void

43.3.3 The Committee during deliberations noted the following:

- i. The project of coal washery is for Terms of Reference wherein 12.06 ha of land is fully covered with forest. PP informed that Forest Clearance (FC) has been obtained vide MoEF&CC letter No. 5-JHC068/2008-BHU dated 14.05.2010.
- ii. As per the FC letter dated 14.05.2010 the diversion of forest land has been given to new Kargil Washery of CCL, whereas the current proposal is for Dhori Coking Coal Washery.
- iii. No National Parks, Wildlife Sanctuaries and Eco-Sensitive Zones fall within 10 km boundary of the project.

43.3.4 *The EAC, after detailed deliberation noted that the instant proposal is a Greenfield coal washery's project. The committee noted that whole site i.e 12.06 ha covered under forest land and PP has obtained FC on 14.05.2010 for non-forestry activity w.r.t other name Kargali Washery of CCL. EAC while deliberation examined the Kml file and observed that proposed site is having dense forest, while PP had different opinion of having no major trees. For setting up the coal washery, PP had conducted site analysis with respect to transportation i.e logistic point of view however, no emphasis was given to environment/biodiversity damage and hence cost benefit analysis was not done on forest point of view and cost involved w.r.t. carbon sink damage. The committee also noted that reclaimed mine area or settled OB dump in the adjoining mines of M/s CCL has not been considered for coal washery rather forest land is justified for washery. The Committee opined that coal washery is not site specific and can be located anywhere in non forest area near or away from coal mine. The committee finally concluded that entire forest area has to be cleared for this coal washery which is not justifiable, therefore the committee emphasized to select a different place in view of protecting the natural forest and its biodiversity already exists.*

The committee asked the proponent to re-visit proposal and carry out alternate site study in order to save the forest. The project location may be chosen in a way which will ensure delivery to consumer by road/rail with whom the memorandum of understanding was signed. The PP shall submit the real time aerial footage and video of the project area made through drone with a special focus on the forest area.

PP shall conduct the study upon carbon sink in order calculate the amount of Oxygen currently released into the atmosphere and the time needed to restore the same conditions for the release of the same amount of oxygen.

In view of the above, committee opined that the project proponent shall qualify its proposal in view of already obtained FC and should re-visit the proposal with alternate site study in order to save the dense forest land. Finally, the instant proposal of Terms of Reference was not agreed by the Committee in present form.

*In view of the above, the project was **deferred** for the submission of above observation.*

Agenda No. 43.4

Expansion of Dipka Opencast Coal Mine project from 35 MTPA to 37.5 MTPA (increase of 10% w.r.t 25 MTPA) in an ML area of 1999.293 ha of M/s South Eastern Coal Fields Limited, located at village Dipka, Tahsil Katghora, District Korba, (Chhattisgarh) – For Reconsideration of Environmental Clearance under OM vide no. F. No. IA3 - 22/10/2022-IA.III dated 07.05.2022 [Availing total 50% relaxation of OM dealing with exemption of public hearing under clause 7 (ii) of EIA notification]

[Online proposal number IA/CG/CMIN/420565/2023; File no. J-11015/487/2007-IA-II (M)]

43.4.1 The proposal is for appraisal of Environmental Clearance issued under OM dated 07.05.2022 which has availed 50% relaxation for Dipka Opencast Coal Mine project with increase in production capacity from 35 MTPA to 37.5 MTPA (increase of 10% w.r.t 3.5 MTPA) in the mining lease area of 1999.293 ha by M/s South Eastern Coal Fields Limited located at village Dipka, Tahsil Katghora, District Korba, (Chhattisgarh).

43.4.2 Details of the proposal, as ascertained from the proposal documents and as revealed from the discussions held during the meeting, are given as under:

- i. The project area is covered under Survey of India Topo Sheet No. 64 J /11, Scale- 1:50000 and is bounded by the geographical coordinates ranging from 22⁰18'59" to 22⁰19'43" N and 82⁰30'47" to 82⁰33'34" E.
- ii. Coal linkage of the project is proposed for NTPC and Various thermal power plants.
- iii. Employment generation - 122 (proposed), employment to 3380 persons (existing-3258) will be provided from the project.
- iv. Environmental Clearance of Dipka opencast was accorded Vide J-11015/487/2007-IA.II (M) dated 05.09.2022 for Expansion of Dipka Opencast Coal Mine from 35 MTPA to 37.50 MTPA (increase of 10% w.r.t 25 MTPA) in the Mine Lease Area of 1999.293 Ha. of M/s South Eastern Coalfields Limited, located at village Dipka, Tahsil Katghora, District Korba, (Chhattisgarh) - Environment Clearance under OM vide F. No. IA3-22/10/2022-IA.III (E177258) Dt: 07.05.2022- (Availing total 50% relaxation of OM dealing with exemption of public hearing under clause 7 (ii) of EIA notification).

- v. Total Mine lease areas per block allotment is 1999.293 Ha. Mining plan for 37.50 MTPA was approved by SECL Board on 07th July 2022 in its 128th meeting. Mine closure plan is an integral part of mining plan.
- vi. The land usage pattern of the project is as follow

Pre-mining Land Usage:

S. No.	Land Use	Within ML Area (Ha.)	Outside ML Area (Ha.)	Total (Ha.)
1	Agricultural land	1266.328	0	1266.328
2	Forest land	409.056	0	409.056
3	Waste Land	0.00	0	0.00
4	Grazing Land	0.00	0	0.00
5	Surface Water Bodies	9.080	0	9.080
6	Settlements	142.916	0	142.916
7	Others (Specify) Govt. Land	171.913	0	171.913
	TOTAL	1999.293	0	1999.293

Post Mining:

S No	Pattern of utilization	Area (ha)
1	Reclaimed External and Internal dumps	986.000
2	Green belt	23.000
3	Final void /Water body	222.053
4	Built up area (Infrastructure, colony, roads, R & R site)	637.874
5	Safety zone: Undisturbed area	130.366
	Total	1999.293

- vii. Total Mineable reserve within 1999.293 Ha (as on 01.04.2023) is 132.781 MT. Percent of extraction is 100%.
- viii. 03 nos. seams with thickness ranging from 2.19 m – 70.15 m are workable. Grade of coal is G 10/G-11, stripping ratio 1:1.80, while gradient is 1 in 9 to 1 in 17
- ix. Method of mining operations envisages by Open cast mining with Surface Miner and Shovel-Dumper combination.
- x. Life of mine is 04 years.
- xi. The project has 03 nos. external OB dumps in an area of 206.00 ha with 90 m height and 81.00 Mm³ of OB. 03 nos. internal OB in an area of 780.00 ha with 534.00 Mm³ of OB is envisaged in the project.
- xii. Total quarry area is 1002.053 ha out of which backfilling will be done in 780.00ha while final mine void will be created in an area of 222.053 ha with a depth of 30 m. Backfilled quarry area of 780.00 ha shall be reclaimed with plantation. Final mine void will be converted to water body.
- xiii. Transportation of coal has been proposed from face to in-pit crusher is by trucks, from in-pit crusher to surface Ground bunker is by conveyor system, from Ground Bunker to Silos is by belt conveyor & finally from Silos to consumers: By Rail, MGR. & Road
- xiv. Reclamation Plan in an area of 1139.366 ha, comprising of 206 ha of external dump, 780.00 ha

of internal dump and 23.00 ha of green belt. In addition to this an area of 130.366 ha included in Safety Zone has also been proposed for green belt development.

- xv. 409.056 ha of forest land has been reported to be involved in the project. The status of diversion of forest land for non - forestry purposes is as under:-

Area (ha)	Stage-I issued vide MoEF&CC letter no. & date	Validity period of FC
148.866	F. No. 8-78/2006-FC, dated 20/10/2006	Coterminous with the Mining Lease or 20 years (Stage-II FC obtained for 133.707 Ha on 31.01.2022)
206.638	F. No. 8-80/2006-FC, dated 20/10/2006	Coterminous with the Mining Lease or 20 years
33.840	F. No. 8-8/2006-FC, dated 03/03/2010	20 years
16.794	8C/6/591/98-FCW/78, dated 11.01.2001	Coterminous with the Mining Lease
2.918	F No. 8B/115/2001-FCW/869, dated 03.04.2002.	Coterminous with the Mining Lease
409.056	Total forest land for which Stage-I Forestry Clearance obtained	

- xvi. No National Parks, Wildlife Sanctuaries and Eco-Sensitive Zones have been reported with 10 km boundary of the project.
- xvii. Wildlife conservation plan for Schedule I species has been submitted to state forest department and approved on 04.11.2022. Rs.15.47 Crores has been paid to CAMPA for implementation of the plan.
- xviii. The ground water level has been reported to be varying between 2.30 m to 6.95 m in post-monsoon and 5.76 to 12.07 m in pre-monsoon season. Total water requirement for the project is 6337 m³/day.
- xix. Obtained NOC from CGWA for withdrawal of 6337 m³/day vide NOC no. CGWA/NOC/MIN/1/2021/6545, valid from 26.02.2021 to 25.02.2023. Application for renewal of NOC was uploaded in NOCAP on 25.02.2023 and was accepted on 09.03.2023.(Application no: 21-4/673/CT/MIN/2017)
- xx. Public hearing for the project of 25 MTPA capacity was conducted on 05.09.2008. Major issues raised in the public hearing include compensation, Rehabilitation & resettlement, Facilities at R&R sites, pollution control etc. Appropriate action to address the issues raised in the Public Hearing have already been taken.
- xxi. Public Hearing have already been taken/proposed to be taken under: Not applicable
- xxii. Consent to Establish cum Operate for capacity (37.50 MTPA) was obtained from the Chhattisgarh Environment Conservation Board, Raipur on 15.03.2023 and valid for one year.

- xxiii. Lilagar River flows through the study area of project.
- xxiv. Regular monitoring of ambient air quality is being carried out with frequency of twice a week. The documented report is submitted to APCCF, MoEFCC, Integrated Regional Office, Raipur, Member Secretary, Paryavas Bhavan, Raipur and RO CECB, Korba along with half yearly EC compliance report. In general, the results of ambient air quality monitoring data were found within prescribed limits except few aberrations which can be attributed to the specific local conditions during the day of sampling.
- xxv. There are 03 court cases pending with the project proponent as per the following details:-
- a) **Case No: 826/2021** civil appeal was filed in the Hon'ble Supreme Court of India under section 22 of the National Green Tribunal Act, 2010 against the final order dt: 25.08.2020 of the National Green Tribunal, Principal Bench at New Delhi in appeal no. 79 of 2018 titled Laxmi Chauhan vs UOI & others. The case is under sub-judice at the Hon'ble Supreme Court of India
 - b) **Case No: 1217/2007** was filed in the court of CJM Korba by CECB against SECL and CGM, Dipka Area against excess production during 2001-2002 without CTO. A petition CRMP 515/2011 was filed by SECL in Chhattisgarh High Court against the case. The SECL petition was dismissed by High Court vide order dated:18.06.2019. The case is under subjudice at the court of CJM, Korba.
 - c) **Case No: 26/2009** was filed in the court of Judicial Magistrate First Class, Katghora by CECB against SECL and Shri Debasis Chatterjee (Ex. CGM, Dipka Area). Judgement was conferred on 14.07.2014 in favor of SECL by acquitting from all charges. A petition CRMP 859/2014 was filed by CECB in Chhattisgarh High Court against the issued order. The case is under subjudice at High Court.
- xi. At present, the project does not involve violation of the EIA Notification, 2006 and amendment issued there under. However, the details of violation beyond EC capacity in the past is provided under point no. xxxiv.
- xii. The project involves 1690 project affected families. R&R of the PAPs will be done as per CIL R&R Policy, whereas Compensation are being done as per CG R&R Policy.
- xiii. Total cost of the project is Rs. 2129.09 Crores. Cost of production is Rs. 769.04 per tonne, 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 is Rs. 76.96 crores. Environment Management Cost is Rs.578 lakhs (capital) & Rs.3857 lakhs (recurring).
- xiv. Consent to Establish cum Operate for capacity (37.50 MTPA) was obtained from the Chhattisgarh Environment Conservation Board, Raipur on 15.03.2023 and valid for one year.
- xv. Past Production details comparison with existing EC:

Year Wise Coal Production since Inception

S. No.	Financial Year	Sanctioned Capacity as per EC (MTPA)	Actual Production	Excess Production Beyond the EC Sanctioned Capacity (MTPA)
(1.)	1988-89	-	0.41	0
(2.)	1989-90	-	1.49	0
(3.)	1990-91	-	2.12	0
(4.)	1991-92	-	2.22	0
(5.)	1992-93	-	2.43	0
(6.)	1993-94	10	3.55	0
(7.)	1994-95	10	4.18	0
(8.)	1995-96	10	4.63	0
(9.)	1996-97	10	5.03	0
(10.)	1997-98	10	5.44	0
(11.)	1998-99	10	6.99	0
(12.)	1999-00	10	8.20	0
(13.)	2000-01	10	9.11	0
(14.)	2001-02	10	11.95	1.95
(15.)	2002-03	10	12.68	2.68
(16.)	2003-04	10	13.66	3.66
(17.)	2004-05	20	15.39	0
(18.)	2005-06	20	17.94	0
(19.)	2006-07	20	19.08	0
(20.)	2007-08	20	21.50	1.50
(21.)	2008-09	20	22.809	2.809
(22.)	2009-10	25	24.09	0
(23.)	2010-11	25	25.00	0
(24.)	2011-12	25	25.00	0
(25.)	2012-13	30	29.13	0
(26.)	2013-14	30	29.20	0
(27.)	2014-15	31	31.00	0
(28.)	2015-16	31	31.00	0
(29.)	2016-17	31	31.00	0
(30.)	2017-18	35	34.35	0
(31.)	2018-19	35	35.00	0
(32.)	2019-20	35	25.18	0
(33.)	2020-21	35	34.36	0
(34.)	2021-22	35	34.37	0
(35.)	2022-23	37.5	32.149	0

xvi. Base line monitoring status:

a) Mention the Period/ Season of baseline study carried out: October 2022-December 2022

b) Whether the Laboratory has been accredited by the NABL/ MoEF&CC certification involved in analysis of water, air, noise & soil quality data, also providing its respective lab reports: Yes, Accredited by QCI- NABET - Certificate No: NABET/EIA/2124/RA 0258 dated 03.10.2022.

c) Detail of Air quality and surface water quality

i. Air quality: Number of sampling location monitored: 09 stations

Monitoring Location	Criteria Pollutant	Unit	Observed Value		Mean Value	Prescribed Standard
			From	To		
Core Zone	PM10	in µg/m ³	106.5	131.6	120	300
	PM2.5	in µg/m ³	60.6	76.5	68.6	-
	SO ₂	in µg/m ³	28.2	35.6	32.8	120
	NO ₂	in µg/m ³	22.5	32.0	27.6	120
Buffer Zone	PM10	in µg/m ³	48.1	83.0	63.7	100
	PM2.5	in µg/m ³	22.4	51.5	34.9	60
	SO ₂	in µg/m ³	6.7	23.8	16.4	80
	NO ₂	in µg/m ³	5.3	21.1	12.9	80

ii. Surface water quality: Number of sampling location monitored: 06 stations

Monitoring Location	Criteria Pollutant Standard	Unit [mg/L]	Observed Value		Standards per IS: 2296-1982	CPCB Waterr Quality Criteria	
			From	To		Class	Standard
Core Zone	pH	-	7.16	7.44	6.5 to 8.5	C	6.5 to 8.5
	TSS	mg/L	15.0	20.0	-	C	-
	TDS	mg/L	502	570	1500	C	1500
	Total Hardness	mg/L	316.0	356.0	-	C	-
	Chlorides	mg/L	69.98	77.98	600	C	600
	Fluoride	mg/L	0.6	0.7	1.5	C	1.5
	DO	mg/L	5.6	5.9	Min, 4	C	Min, 4
	BOD	mg/L	2.6	2.9	3	C	3
	COD	mg/L	20.0	25.0	-	C	-
(Hg)	mg/L	BQL(QL=0.001)	BQL(QL=0.001)	-	C	-	
Buffer Zone	pH	-	7.16	7.90	6.5 to 8.5	C	6.5 to 8.5
	TSS	mg/L	7.0	27.0	-	C	-
	TDS	mg/L	160.0	518.0	1500	C	1500
	Total Hardness	mg/L	73.0	304.0	-	C	-
	Chlorides	mg/L	16.99	103.97	600	C	600
	Fluoride	mg/L	0.02	0.69	1.5	C	1.5
	DO	mg/L	6.40	7.5	Min, 4	C	Min, 4
	BOD	mg/L	BQL(QL=2)	2.7	3	C	3

	COD	mg/L	BQL(QL=5)	15.0	-	C	-
	Total Coliform	mg/L	13	42	5000	C	5000
	Heavy Metal (Hg)	mg/L	BQL(QL=0.001)	BQL(QL=0.001)	-	C	-

43.4.3 The committee during the deliberation noted the following:

- i. The Life of mine is 04 years.
- ii. PP has obtained the EC for Dipka opencast vide letter No. J-11015/487/2007-IA.II (M) dated 05.09.2022 for Expansion of Dipka Opencast Coal Mine from 35 MTPA to 37.50 (increase of 10% w.r.t 25 MTPA).
- iii. PP has obtained NOC for withdrawal of Ground water from CGWA for 6337 m³/day vides NOC no. CGWA/NOC/MIN/1/2021/6545 which is valid from 26.02.2021 to 25.02.2023. The PP has applied for the renewal of NOC vides its application no. 21-4/673/CT/MIN/2017.
- iv. PP has conducted the Public hearing on 05.09.2008 for the capacity 25 MTPA. Major issues raised in the public hearing include compensation, Rehabilitation & resettlement, Facilities at R&R sites, pollution control etc. Appropriate action to address the issues raised in the Public Hearing has already been taken.
- v. There are 03 court cases pending with the project proponent as per the following details:-
 - a) **Case No: 826/2021** civil appeal was filed in the Hon'ble Supreme Court of India under section 22 of the National Green Tribunal Act, 2010 against the final order dt: 25.08.2020 of the National Green Tribunal, Principal Bench at New Delhi in appeal no. 79 of 2018 titled Laxmi Chauhan vs UOI & others. The case is under subjudice at the Hon'ble Supreme Court of India. Affidavit was filed by MoEF&CC.
 - b) **Case No: 1217/2007** was filed in the court of CJM Korba by CECB against SECL and CGM, Dipka Area against excess production during 2001-2002 without CTO. A petition CRMP 515/2011 was filed by SECL in Chhattisgarh High Court against the case. The SECL petition was dismissed by High Court vide order dated:18.06.2019. The case is under sub-judice at the court of CJM, Korba.
 - c) **Case No: 26/2009** was filed in the court of Judicial Magistrate First Class, Katghora by CECB against SECL and Shri Debasis Chatterjee (Ex.CGM, Dipka Area). Judgement was conferred on 14.07.2014 in favour of SECL by acquitting from all charges. A petition CRMP 859/2014 was filed by CECB in Chhattisgarh High Court against the issued order. The case is under sub-judice at High Court.
- vi. Consent to Establish cum Operate for capacity (37.50 MTPA) was obtained from the Chhattisgarh Environment Conservation Board, Raipur on 15.03.2023 and valid for one year.

43.4.4 *The EAC, after deliberations observed that the instant project has been submitted in compliance of Ministry's OM dated 7th May, 2022 wherein expansion in capacity was granted in advance (10% beyond 40% from the existing capacity) subject certain conditions related to*

submission of EIA-EMP report and compliances of existing EC conditions within six months along with other statutory requirements. This EC was granted on 05th September, 2022 by MoEF&CC due to shortage of coal in the country and as per the condition contained therein. The committee noted that proposal was submitted by delay of more than two months beyond the prescribed time limit of six months.

Earlier, Ministry had issued the EC and Expansion of EC vide Ministry's letter dated 03.06.2009, 12.02.2013, 06.02.2015, 20.02.2018, 20.03.2019, 09.03.2020 and 05.09.2022. The PP has submitted the baseline data for period from October 2022 to December 2022.

The Committee noted that the project proponent has not submitted the compliance status of already issued ECs. As per the IRO report dated 22.08.2022 the PP has submitted the compliance of EC letters for dates i.e 20.02.2018 and 09.03.2020 wherein many non-compliance was noted by EAC. The committee emphasized that in compliance of the specific condition no. (vii) of the EC letter dated 05th September, 2022 the PP has to submit the compliance of previous EC dated 03.06.2009, 12.02.2013, 06.02.2015 and all non-compliance of the EC dated 20.02.2018 and 09.03.2020. As per the IRO report dated 22.08.2022, non-compliances were noted on (i) lack of construct wind barrier wall, maintenance of check/garland drains and siltation ponds, non-submission of physical and financial targets and the action plan for conservation and protection of endangered flora/fauna, non-submission of action plan of the expenditure incurred on issues raised during the public hearing, expenditure for CSR activities and action plan for R&R.

During the discussion, Committee observed that currently 15 MTPA is being evacuated through conveyor and silo loading system and PP is implementing another 25 MTPA evacuation with in-pit conveyor and silo loading system till railway siding. It was emphasized that the PP shall complete the mechanized system for another 25 MTPA before the committed timeline of September 2023 other committee has no option to withdraw this EC which has been granted by Ministry under Reforms with certain condition including condition of mechanized system

In view of the above, the committee opined that the project proponent must complete the following course of action and submit the following documents:-

- i. PP shall submit the updated report on the implementation of fully automated system for 20 MTPA i.e in-pit conveyor and silo loading system till railway siding.*
- ii. PP shall submit the current status on reclamation and progressive mine closure of the mine with incurred expenditure.*
- iii. PP shall submit the expenditure status of already allocated budget in the Public Hearing. Along with the expenditure status for the activities involved in EMP and R&R.*
- iv. PP shall submit the status of expenditure spent for CSR activities.*
- v. PP shall complete the construction of wind barrier wall as per the EC condition along the railway siding.*
- vi. PP shall maintain the check/garland drains and siltation ponds.*
- vii. PP shall submit the status of implementation of the action plan for conservation and protection of endangered flora/fauna from Forest Department*

viii. PP has to submit the IRO certified compliance report for the Ministry's letter dated 03.06.2009, 12.02.2013, 06.02.2015, 20.02.2018, 20.03.2019, 09.03.2020 and 05.09.2022.

In view of the above, the project was **deferred** for the submission of above observation by August 2023.

Agenda No. 43.5

Gangaramchak & Gangaramchak - Bhadulia Opencast Coal Mine for production capacity of 1.20 MTPA to 3.0 MTPA with total project area of 186.42 ha (Mine Lease Area is 150 ha) by M/s The West Bengal Power Development Corporation Limited located at village Bastabpur, Tehsil Khoyrasole, District Birbhum (West Bengal) - For Amendment of Terms of Reference dated 29.11.2022 reg.

[Online proposal No. IA/WB/CMIN/425068/2023; File No. J-11015/375/2006-IA-II (M)]

43.5.1 The proposal for amendment of Terms of Reference for Gangaramchak & Gangaramchak - Bhadulia Opencast Coal Mine for production capacity of 1.20 MTPA to 3.0 MTPA with total project area of 186.42 ha (Mine Lease Area is 150 ha) by M/s The West Bengal Power Development Corporation Limited located at village Bastabpur, Tehsil Khoyrasole, District Birbhum (West Bengal).

The PP vide letter dated 06.04.2023 requested to the Ministry for amendment of ToR dated 29.11.2022 for change in production capacity from 1.2 MTPA to 3.0 MTPA.

43.5.2 The EAC during deliberations noted the following:

- The instant project has been submitted for amendment in ToR. Standard ToR for the project was granted by Ministry on 29.11.2022.
- Earlier, PP has obtained Environmental Clearance for production capacity of 1.0 MTPA vide letter no. J-11015/375/2006-IA-II (M), dated 17th May 2007.
 - i. The EC was transferred from M/s Bengal Emta Coal Mines Ltd to M/s West Bengal Power Development Corporation limited.
 - ii. The PP has obtained expansion in EC for production capacity from 1.0 to 1.2 MTPA vide MOEF & CC's letter no. J-11015/375/2006-IA-II (M) dated 27th December, 2022 under OM dated 11.04.2022.
 - iii. The PP has obtained Mine plan approval for 3 MTPA capacity on 16.11.2022 by Coal Controller Organization, Ministry of Coal.
 - iv. The Life of mine is 3 years.

The proposal for amendment in ToR has been submitted by Project Proponent since there is change in initial production figures i.e. from 1 MTPA to 1.2 MTPA. This change is due to PP obtaining EC for expansion in capacity under Ministry's OM dated 11th April, 2022 as applicable. Accordingly, PP has requested to amend the ToR dated 29.11.2022 for administrative purpose.

43.5.3 *The EAC, after deliberations noted that the instant project is a brown field project and requested for amendment for correction of records in standard terms of reference granted vide Ministry's letter dated 29.11.2022. The initial capacity of the project has changed from 1 MTPA to 1.2 MTPA under OM dated 11.04.2022 . Prior to this expansion PP had obtained the TOR for expansion of capacity from 1 MTPA to 3 MTPA. Accordingly, Committee found that the proposal is only for rectification of records wherein amendment is desired in existing TOR for change in production capacity from 1.2 MTPA to 3.0 MTPA in place of 1.0 MTPA to 3.0 MTPA.*

*Based on the above discussion the committee **recommended** the proposal for amendment in standard ToR dated 29.11.2022 for Gangaramchak & Gangaramchak - Bhadulia Opencast Coal Mine for production capacity from 1.20 MTPA to 3.0 MTPA with total project area of 186.42 ha (Mine Lease Area is 150 ha) by M/s The West Bengal Power Development Corporation Limited under EIA Notification, 2006 and subsequent amendments/circulars.*

Annexure-I

Standard EC Conditions for Coal Mining Project (Opencast mining):

All the projects recommended for grant of environmental clearance by the EAC shall also comply with the following Standard EC conditions as per Ministry's circular issued from time to time:

(a) Statutory compliance

- (i) The project proponent shall obtain forest clearance under the provisions of Forest (Conservation) Act, 1986, in case of the diversion of forest land for non-forest purpose involved in the project.
- (ii) The project proponent shall obtain clearance from the National Board for Wildlife, if applicable.
- (iii) The project proponent shall prepare a Site-Specific Conservation Plan / Wildlife Management Plan and approved by the Chief Wildlife Warden. The recommendations of the approved Site-Specific Conservation Plan/Wildlife Management Plan shall be implemented in consultation with the State Forest Department. The implementation report shall be furnished along with the six-monthly compliance report (in case of the presence of Schedule-I species in the study area).
- (iv) The project proponent shall obtain Consent to Establish/Operate under the provisions of Air (Prevention & Control of Pollution) Act, 1981 and the Water (Prevention & Control of Pollution) Act, 1974 from the concerned State Pollution Control Board/ Committee.
- (v) The project proponent shall obtain the necessary permission from the Central Ground Water Authority.
- (vi) Solid/hazardous waste generated in the mines needs to be addressed in accordance to the Solid Waste Management Rules, 2016/Hazardous & Other Waste Management Rules, 2016.

(b) Air quality monitoring and preservation

- (i) Continuous ambient air quality monitoring stations as prescribed in the statute be established in the core zone as well as in the buffer zone for monitoring of pollutants, namely PM₁₀, PM_{2.5}, SO₂ and NO_x. Location of the stations shall be decided based on the meteorological data, topographical features and environmentally and ecologically sensitive targets in consultation with the State Pollution Control Board. Online ambient air quality monitoring stations may also be installed in addition to the regular monitoring stations as per their requirement and/or in consultation with the SPCB. Monitoring of heavy metals such as Hg, As, Ni, Cd, Cr, etc to be carried out at least once in six months.
- (ii) The Ambient Air Quality monitoring in the core zone shall be carried out to ensure the Coal Industry Standards notified vide GSR 742 (E) dated 25th September, 2000 and as amended from time to time by the Central Pollution Control Board. Data on ambient air quality and heavy metals such as Hg, As, Ni, Cd, Cr and other monitoring data shall be regularly reported to the Ministry/Regional Office and to the CPCB/SPCB.
- (iii) Transportation of coal, to the extent permitted by road, shall be carried out by covered

trucks/conveyors. Effective control measures such as regular water/mist sprinkling/rain gun etc shall be carried out in critical areas prone to air pollution (with higher values of PM10/PM2.5) such as haul road, loading/unloading and transfer points. Fugitive dust emissions from all sources shall be controlled regularly. It shall be ensured that the Ambient Air Quality parameters conform to the norms prescribed by the Central/State Pollution Control Board.

- (iv) The transportation of coal shall be carried out as per the provisions and route envisaged in the approved Mining Plan or environment monitoring plan. Transportation of the coal through the existing road passing through any village shall be avoided. In case, it is proposed to construct a 'bypass' road, it should be so constructed so that the impact of sound, dust and accidents could be appropriately mitigated.
- (v) Vehicular emissions shall be kept under control and regularly monitored. All the vehicles engaged in mining and allied activities shall operate only after obtaining 'PUC' certificate from the authorized pollution testing centres.
- (vi) Coal stock pile/crusher/feeder and breaker material transfer points shall invariably be provided with dust suppression system. Belt-conveyors shall be fully covered to avoid airborne dust. Side cladding all along the conveyor gantry should be made to avoid airborne dust. Drills shall be wet operated or fitted with dust extractors.
- (vii) Coal handling plant shall be operated with effective control measures w.r.t. various environmental parameters. Environmental friendly sustainable technology should be implemented for mitigating such parameters.

(c) Water quality monitoring and preservation

- (i) The effluent discharge (mine waste water, workshop effluent) shall be monitored in terms of the parameters notified under the Water Act, 1974 Coal Industry Standards vide GSR 742 (E) dated 25th September, 2000 and as amended from time to time by the Central Pollution Control Board.
- (ii) The monitoring data shall be uploaded on the company's website and displayed at the project site at a suitable location. The circular No. J- 20012/1/2006-1A.11 (M) dated 27th May, 2009 issued by Ministry of Environment, Forest and Climate Change shall also be referred in this regard for its compliance.
- (iii) Regular monitoring of ground water level and quality shall be carried out in and around the mine lease area by establishing a network of existing wells and constructing new piezometers during the mining operations. The monitoring of ground water levels shall be carried out four times a year i.e. pre-monsoon, monsoon, post-monsoon and winter. The ground water quality shall be monitored once a year, and the data thus collected shall be sent regularly to MOEFCC/RO.
- (iv) Monitoring of water quality upstream and downstream of water bodies shall be carried out once in six months and record of monitoring data shall be maintained and submitted to the Ministry of Environment, Forest and Climate Change/Regional Office.
- (v) Ground water, excluding mine water, shall not be used for mining operations. Rainwater harvesting shall be implemented for conservation and augmentation of ground water

resources.

- (vi) Catch and/or garland drains and siltation ponds in adequate numbers and appropriate size shall be constructed around the mine working, coal heaps & OB dumps to prevent run off of water and flow of sediments directly into the river and water bodies. Further, dump material shall be properly consolidated/compacted and accumulation of water over dumps shall be avoided by providing adequate channels for flow of silt into the drains. The drains/ponds so constructed shall be regularly de-silted particularly before onset of monsoon and maintained properly. Sump capacity should provide adequate retention period to allow proper settling of silt material. The water so collected in the sump shall be utilised for dust suppression and green belt development and other industrial use. Dimension of the retaining wall constructed, if any, at the toe of the OB dumps within the mine to check run-off and siltation should be based on the rainfall data. The plantation of native species to be made between toe of the dump and adjacent field/habitation/water bodies.
 - (vii) Adequate groundwater recharge measures shall be taken up for augmentation of ground water. The project authorities shall meet water requirement of nearby village(s) after due treatment conforming to the specific requirement(standards).
 - (viii) Industrial waste water generated from CHP, workshop and other waste water, shall be properly collected and treated so as to conform to the standards prescribed under the standards prescribed under Water Act 1974 and Environment (Protection) Act, 1986 and the Rules made there under, and as amended from time to time. Adequate ETP /STP needs to be provided.
 - (ix) The water pumped out from the mine, after siltation, shall be utilized for industrial purposive. watering the mine area, roads, green belt development etc. The drains shall be regularly desilted particularly after monsoon and maintained properly.
 - (x) The surface drainage plan including surface water conservation plan for the area of influence affected by the said mining operations, considering the presence of river/rivulet/pond/lake etc, shall be prepared and implemented by the project proponent. The surface drainage plan and/or any diversion of natural water courses shall be as per the approved Mining Plan/EIA/EMP report and with due approval of the concerned State/GoI Authority. The construction of embankment to prevent any danger against inrush of surface water into the mine should be as per the approved Mining Plan and as per the permission of DGMS or any other authority as prescribed by the law.
 - (xi) The project proponent shall take all precautionary measures to ensure riverine/riparian ecosystem in and around the coal mine up to a distance of 5 km. A riverine/riparian ecosystem conservation and management plan should be prepared and implemented in consultation with the irrigation / water resource department in the state government.
- (d) Noise and Vibration monitoring and prevention**
- (i) Adequate measures shall be taken for control of noise levels as per Noise Pollution Rules, 2016 in the work environment. Workers engaged in blasting and drilling operations, operation of HEMM, etc shall be provided with personal protective equipments (PPE) like ear plugs/muffs in conformity with the prescribed norms and guidelines in this regard.

Adequate awareness programme for users to be conducted. Progress in usage of such accessories to be monitored.

- (ii) Controlled blasting techniques shall be practiced in order to mitigate ground vibrations, fly rocks, noise and air blast etc., as per the guidelines prescribed by the DGMS.
- (i) The noise level survey shall be carried out as per the prescribed guidelines to assess noise exposure of the workmen at vulnerable points in the mine premises, and report in this regard shall be submitted to the Ministry/RO on six-monthly basis.

(e) Mining Plan

- (i) Mining shall be carried out under strict adherence to provisions of the Mines Act 1952 and subordinate legislations made there-under as applicable.
- (ii) Mining shall be carried out as per the approved mining plan (including Mine Closure Plan) abiding by mining laws related to coal mining and the relevant circulars issued by Directorate General Mines Safety (DGMS).
- (iii) No mining shall be carried out in forest land without obtaining Forestry Clearance as per Forest (Conservation) Act, 1980.
- (ii) Efforts should be made to reduce energy and fuel consumption by conservation, efficiency improvements and use of renewable energy.

(f) Land reclamation

- (i) Digital Survey of entire lease hold area/core zone using Satellite Remote Sensing survey shall be carried out at least once in three years for monitoring land use pattern and report in 1:50,000 scale or as notified by Ministry of Environment, Forest and Climate Change (MOEFCC) from time to time shall be submitted to MOEFCC/Regional Office (RO).
- (ii) The final mine void depth should preferably be as per the approved Mine Closure Plan, and in case it exceeds 40 m, adequate engineering interventions shall be provided for sustenance of aquatic life therein. The remaining area shall be backfilled and covered with thick and alive top soil. Post-mining land be rendered usable for agricultural/forestry purposes and shall be diverted. Further action will be treated as specified in the guidelines for Preparation of Mine Closure Plan issued by the Ministry of Coal dated 27th August, 2009 and subsequent amendments.
- (iii) The entire excavated area, backfilling, external OB dumping (including top soil) and afforestation plan shall be in conformity with the “during mining”/“post mining” land-use pattern, which is an integral part of the approved Mining Plan and the EIA/EMP submitted to this Ministry. Progressive compliance status vis-a-vis the post mining land use pattern shall be submitted to the MOEFCC/RO.
- (iv) Fly ash shall be used for external dump of overburden, backfilling or stowing of mine as per provisions contained in clause (i) and (ii) of subparagraph (8) of fly ash notification issued vide SO 2804 (E) dated 3rd November, 2009 as amended from time to time. Efforts shall be made to utilize gypsum generated from Flue Gas Desulfurization (FGD), if any, along with fly ash for external dump of overburden, backfilling of mines. Compliance report shall be submitted to Regional Office of MoEF&CC, CPCB and SPCB.

- (v) Further, it may be ensured that as per the time schedule specified in mine closure plan it should remain live till the point of utilization. The topsoil shall temporarily be stored at earmarked site(s) only and shall not be kept unutilized. The top soil shall be used for land reclamation and plantation purposes. Active OB dumps shall be stabilised with native grass species to prevent erosion and surface run off. The other overburden dumps shall be vegetated with native flora species. The excavated area shall be backfilled and afforested in line with the approved Mine Closure Plan. Monitoring and management of rehabilitated areas shall continue until the vegetation becomes self-sustaining. Compliance status shall be submitted to the Ministry of Environment, Forest and Climate Change/ Regional Office.
- (vi) The project proponent shall make necessary alternative arrangements, if grazing land is involved in core zone, in consultation with the State government to provide alternate areas for livestock grazing, if any. In this context, the project proponent shall implement the directions of Hon'ble Supreme Court with regard to acquiring grazing land.
- (g) Green Belt**
 - (i) The project proponent shall take all precautionary measures during mining operation for conservation and protection of endangered/endemic flora/fauna, if any, spotted/reported in the study area. The Action plan in this regard, if any, shall be prepared and implemented in consultation with the State Forest and Wildlife Department.
 - (ii) Greenbelt consisting of 3-tier plantation of width not less than 7.5 m shall be developed all along the mine lease area as soon as possible. The green belt comprising a mix of native species (endemic species should be given priority) shall be developed all along the major approach/ coal transportation roads.
- (h) Public hearing and Human health issues**
 - (i) Adequate illumination shall be ensured in all mine locations (as per DGMS standards) and monitored weekly. The report on the same shall be submitted to this ministry & its RO on six-monthly basis.
 - (ii) The project proponent shall undertake occupational health survey for initial and periodical medical examination of the personnel engaged in the project and maintain records accordingly as per the provisions of the Mines Rules, 1955 and DGMS circulars. Besides regular periodic health check-up, 20% of the personnel identified from workforce engaged in active mining operations shall be subjected to health check-up for occupational diseases and hearing impairment, if any, as amended time to time.
 - (iii) Personnel (including outsourced employees) working in core zone shall wear protective respiratory devices and shall also be provided with adequate training and information on safety and health aspects.
 - (iv) Implementation of the action plan on the issues raised during the public hearing shall be ensured. The project proponent shall undertake all the tasks/measures as per the action plan submitted with budgetary provisions during the public hearing. Land oustees shall be compensated as per the norms laid down in the R&R policy of the company/State Government/Central Government, as applicable.
 - (v) The project proponent shall follow the mitigation measures provided in this Ministry's

OMNo.Z-11013/5712014-IA.II (M) dated 29th October, 2014, titled 'Impact of mining activities on habitations-issues related to the mining projects wherein habitations and villages are the part of mine lease areas or habitations and villages are surrounded by the mine lease area'.

(i) Corporate Environment Responsibility

- (i) The project proponent shall comply with the provisions contained in this Ministry's OM vide F.No.22-65/2017-IA.III dated 1st May 2018, as applicable, regarding Corporate Environment Responsibility.
- (ii) The company shall have a well laid down environmental policy duly approved by the Board of Directors. The environmental policy should prescribe for standard operating procedures to have proper checks and balances and to bring into focus any infringements/deviation/violation of the environmental/forest/wildlife norms/conditions. The company shall have defined system of reporting infringements/deviation/violation of the environmental/forest/wildlife norms/conditions and/or shareholders/stake holders.
- (iii) A separate Environmental Cell both at the project and company head quarter level, with qualified personnel shall be set up under the control of senior Executive, who will directly to the head of the organization.
- (iv) Action plan for implementing EMP and environmental conditions along with responsibility matrix of the company shall be prepared and shall be duly approved by competent authority. The year wise funds earmarked for environmental protection measures shall be kept in separate account and not to be diverted for any other purpose. Year wise progress of implementation of action plan shall be reported to the Ministry/Regional Office along with the Six Monthly Compliance Report.
- (v) Self-environmental audit shall be conducted annually. Every three years third party environmental audit shall be carried out.

(j) Miscellaneous

- (i) The project proponent shall make public the environmental clearance granted for their project along with the environmental conditions and safeguards at their cost by prominently advertising it at least in two local newspapers of the District or State, of which one shall be in the vernacular language within seven days and in addition this shall also be displayed in the project proponent's website permanently.
- (ii) The copies of the environmental clearance shall be submitted by the project proponents to the Heads of local bodies, Panchayats and Municipal Bodies in addition to the relevant offices of the Government who in turn has to display the same for 30 days from the date of receipt.
- (iii) The project proponent shall upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and update the same on half-yearly basis.
- (iv) The project proponent shall monitor the criteria pollutants level namely; PM₁₀, SO₂, NO_x(ambient levels) or critical sectoral parameters, indicated for the projects and display the same at a convenient location for disclosure to the public and put on the website of the

company.

- (v) The project proponent shall submit six-monthly reports on the status of the compliance of the stipulated environmental conditions on the website of the ministry of Environment, Forest and Climate Change at environment clearance portal.
- (vi) The project proponent shall follow the mitigation measures provided in this Ministry's OMNo.Z-11013/5712014-IA.II (M) dated 29th October, 2014, titled 'Impact of mining activities on habitations-issues related to the mining projects wherein habitations and villages are the part of mine lease areas or habitations and villages are surrounded by the mine lease area'.
- (vii) The project proponent shall submit the environmental statement for each financial year in Form-V to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently and put on the website of the company.
- (viii) The project authorities shall inform to the Regional Office of the MOEFCC regarding commencement of mining operations.
- (ix) The project authorities must strictly adhere to the stipulations made by the State Pollution Control Board and the State Government.
- (x) The project proponent shall abide by all the commitments and recommendations made in the EIA/EMP report, commitment made during Public Hearing and also that during their presentation to the Expert Appraisal Committee.
- (xi) No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment, Forests and Climate Change.
- (xii) Concealing factual data or submission of false/fabricated data may result in revocation of this environmental clearance and attract action under the provisions of Environment (Protection) Act, 1986.
- (xiii) The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.
- (xiv) The Ministry reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions.
- (xv) The Regional Office of this Ministry shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the officer (s) of the Regional Office by furnishing the requisite data / information/monitoring reports.
- (xvi) The above conditions shall be enforced, inter-alia under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986, Hazardous and Other Wastes (Management and Trans-boundary Movement) Rules, 2016 and the Public Liability Insurance Act, 1991 along with their amendments and Rules and any other orders passed by the Hon'ble Supreme Court of India / High Courts and any other Court of Law relating to the subject matter.

Annexure-II

Standard EC Conditions for Coal Mining Project (Underground mining):

All the projects recommended for grant of environmental clearance by the EAC shall also comply with the following Standard EC conditions as per Ministry's circular issued from time to time:

I. Statutory compliance:

- (i) The Environmental clearance shall be subject to orders of Hon'ble Supreme Court of India, Hon'ble High Courts, NGT and any other Court of Law, from time to time, and as applicable to the project
- (ii) The project proponent shall obtain forest clearance under the provisions of Forest (Conservation) Act, 1986, in case of the diversion of forest land for non-forest purpose involved in the project.
- (iii) The project proponent shall obtain clearance from the National Board for Wildlife, if applicable.
- (iv) The project proponent shall prepare a Site-Specific Conservation Plan / Wildlife Management Plan and approved by the Chief Wildlife Warden. The recommendations of the approved Site-Specific Conservation Plan / Wildlife Management Plan shall be implemented in consultation with the State Forest Department. The implementation report shall be furnished along with the six-monthly compliance report. (in case of the presence of schedule-I species in the study area)
- (v) The project proponent shall obtain Consent to Establish / Operate under the provisions of Air (Prevention & Control of Pollution) Act, 1981 and the Water (Prevention & Control of Pollution) Act, 1974 from the concerned State Pollution Control Board/ Committee.
- (vi) The project proponent shall obtain the necessary permission from the Central Ground Water Authority.
- (vii) Solid waste/hazardous waste generated in the mines needs to be addressed in accordance to the Solid Waste Management Rules, 2016 / Hazardous & Other Waste Management Rules, 2016

II. Air quality monitoring and preservation

- i. Adequate ambient air quality monitoring stations shall be established in the core zone as well as in the buffer zone for monitoring of pollutants, namely particulates, SO₂ and NO_x. Location of the stations shall be decided based on the meteorological data, topographical features and environmentally and ecologically sensitive receptors in consultation with the State Pollution Control Board. Monitoring of heavy metals such as Hg, As, Ni, Cd, Cr, etc. to be carried out at least once in six months. Online ambient air quality monitoring station/stations may also be installed in addition to the regular air monitoring stations as per the requirement and/or in consultation with the SPCB
- ii. The Ambient Air Quality monitoring in the core zone shall be carried out to ensure the Coal Industry Standards notified vide GSR 742 (E) dated 25.9.2000 and as amended from

time to time by the Central Pollution Control Board. Data on ambient air quality and heavy metals such as Hg, As, Ni, Cd, Cr and other monitoring data shall be regularly reported to the Ministry/Regional Office and to the CPCB/SPCB.

- iii. Transportation of coal, to the extent permitted by road, shall be carried out by covered trucks/conveyors. Effective control measures such as regular water sprinkling/rain gun/mist sprinkling etc., shall be carried out in critical areas prone to air pollution with higher level of particulate matter all through the coal transport roads, loading/unloading and transfer points. Fugitive dust emissions from all sources shall be controlled regularly. It shall be ensured that the ambient air quality parameters conform to the norms prescribed by the Central/State Pollution Control Board.
- iv. Major approach roads shall be black topped and properly maintained.
- v. The transportation of coal shall be carried out as per the provisions and route proposed in the approved mining plan. Transportation of the coal through the existing road passing through any village shall be avoided. In case, it is proposed to construct a 'bypass' road, it should be so constructed that the impact of sound, dust and accidents could be appropriately mitigated.
- vi. Vehicular emissions shall be kept under control and regularly monitored. All the vehicles engaged in mining and allied activities shall operate only after obtaining 'PUC' certificate from the authorized pollution testing centres.
- vii. Coal stock pile/crusher/feeder and breaker material transfer points shall invariably be provided with dust suppression system. Belt-conveyors shall be fully covered to avoid airborne dust. Side cladding all along the conveyor gantry should be made to avoid air borne dust. Drills shall be wet operated or fitted with dust extractors.
- viii. Coal handling plant shall be operated with effective control measures w.r.t. various environmental parameters. Environmental friendly sustainable technology should be implemented for mitigating such parameters.

III. Water quality monitoring and preservation

- i. The effluent discharge (mine waste water, workshop effluent) shall be monitored in terms of the parameters notified under the Water Act, 1974 Coal Industry Standards vide GSR 742 (E) dated 25.9.2000 and as amended from time to time by the Central Pollution Control Board.
- ii. The monitoring data shall be uploaded on the company's website and displayed at the project site at a suitable location. The circular No. J- 20012/1/2006-1A.11 (M) dated 27.05.2009 issued by Ministry of Environment, Forest and Climate Change shall also be referred in this regard for its compliance.
- iii. Regular monitoring of ground water level and quality shall be carried out in and around the mine lease area by establishing a network of existing wells and constructing new piezometers during the mining operations. The monitoring of ground water levels shall be carried out four times a year i.e. pre-monsoon, monsoon, post-monsoon and winter. The ground water quality shall be monitored once a year, and the data thus collected shall be sent regularly to MOEFCC/RO.
- iv. Monitoring of water quality upstream and downstream of water bodies shall be carried out

once in six months and record of monitoring data shall be maintained and submitted to the Ministry of Environment, Forest and Climate Change/Regional Office.

- v. Ground water, excluding mine water, shall not be used for mining operations. Rainwater harvesting shall be implemented for conservation and augmentation of ground water resources.
- vi. The project proponent shall not alter major water channels around the site. Appropriate embankment shall be provided along the side of the river/nallah flowing near or adjacent to the mine. The embankment constructed along the river/nallah boundary shall be of suitable dimensions and critical patches shall be strengthened by stone pitching on the river front side, stabilized with plantation so as to withstand the peak water pressure preventing any chance of mine inundation.
- vii. Garland drains (of suitable size, gradient and length) around the critical areas
i.e. mine shaft and low lying areas, shall be designed keeping at least 50% safety margin over and above the peak sudden rainfall and maximum discharge in the area adjoining the mine sites. The sump capacity shall also provide adequate retention period to allow proper settling of silt material of the surface runoff
- viii. The water pumped out from the mine, after siltation, shall be utilized for industrial purposive. watering the mine area, roads, green belt development etc. The drains shall be regularly desilted particularly after monsoon and maintained properly.
- ix. Industrial waste water from coal handling plant and mine water shall be properly collected and treated so as to conform to the standards prescribed under the Environment (Protection) Act, 1986 and the Rules made thereunder, and as amended from time to time. Oil and grease trap shall be installed before discharge of workshop effluent. Sewage treatment plant of adequate capacity shall be installed for treatment of domestic waste water.
- x. Adequate groundwater recharge measures shall be taken up for augmentation of ground water. The project authorities shall meet water requirement of nearby village(s) in case the village wells go dry due to dewatering of mine.
- xi. The surface drainage plan including surface water conservation plan for the area of influence affected by the said mining operations shall be prepared, considering the presence of any river/rivulet/pond/lake etc., with impact of mining activities on it, and implemented by the project proponent. The surface drainage plan and/or any diversion of natural water courses shall be as per the provisions of the approved Mining Plan/ EIA-EMP submitted to this Ministry and the same should be done with due approval of the concerned State/GoI Authority. The construction of embankment to prevent any danger against inrush of surface water into the mine should be as per the approved mining plan and as per the permission of DGMS.
- xii. The project proponent shall take all precautionary measures to ensure reverian/ riparian ecosystem in and around the coal mine upto a distance of 5 km. A reverian /riparian ecosystem conservation and management plan should be prepared and implemented in consultation with the irrigation / water resource department in the state government.

IV. Noise and Vibration monitoring and prevention

- i. Adequate measures shall be taken for control of noise levels below 85 dB(A) in the work environment. Workers engaged in underground mining operations, operation of HEMM, etc. shall be provided with personal protective equipments (PPE) like ear plugs/muffs in conformity with the prescribed norms/guidelines in this regard. Progress in usage of such accessories to be monitored. Adequate awareness programme for users to be conducted.
- ii. The noise level survey shall be carried out as per the prescribed guidelines to assess noise exposure of the workmen at vulnerable points in the mine premises, and report in this regard shall be submitted to the Ministry/RO on six-monthly basis.

V. Mining Plan

- i. Mining shall be carried out under strict adherence to provisions of the Mines Act 1952 and subordinate legislations made there-under as applicable.
- ii. No change in mining method i.e. UG to OC, calendar programme and scope of work shall be made without obtaining prior approval of the Ministry of Environment, Forests and Climate Change (MoEFCC).
- iii. Mining shall be carried out as per the approved mining plan (including mine closure plan) abiding by mining laws related to coal mining and the relevant circulars issued by Directorate General Mines Safety (DGMS).
- iv. Underground work place environmental conditions shall be rendered ergonomic and air breathable with adequate illumination in conformance with DGMS standards.
- v. No mining activity shall be carried out in forest land without obtaining Forestry Clearance as per Forest (Conservation) Act, 1980 and also adhering to The Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006 read with provisions of Indian Forest Act, 1927.
- vi. Efforts should be made to reduce energy and fuel consumption by conservation, efficiency improvements and use of renewable energy.

VI. Land reclamation

- i. Digital Survey of entire lease hold area/core zone using Satellite Remote Sensing survey shall be carried out at least once in three years for monitoring land use pattern and report in 1:50,000 scale or as notified by Ministry of Environment, Forest and Climate Change (MOEFCC) from time to time shall be submitted to MOEFCC/Regional Office (RO).
- ii. Post-mining land be rendered usable for agricultural/forestry purposes and shall be handed over to the respective State Government, as specified in the Guidelines for Preparation of Mine Closure Plan, issued by the Ministry of Coal dated 27th August, 2009 and subsequent amendments.
- iii. Regular monitoring of subsidence movement on the surface over and around the working areas and its impact on natural drainage pattern, water bodies, vegetation, structure, roads and surroundings shall be continued till movement ceases completely. In case of observation of any high rate of subsidence beyond the limit prescribed, appropriate effective mitigation measures shall be taken to avoid loss of life and materials. Cracks should be effectively plugged in with ballast and clay soil/suitable material.
- iv. Fly ash shall be used for external dump of overburden, backfilling or stowing of mine as per

provisions contained in clause (i) and (ii) of subparagraph (8) of fly ash notification issued vide SO 2804 (E) dated 3rd November, 2009 as amended from time to time. Efforts shall be made to utilize gypsum generated from Flue Gas Desulfurization (FGD), if any, along with fly ash for external dump of overburden, backfilling or stowing of mines. Compliance report shall be submitted to Regional Office of MoEF&CC, CPCB and SPCB.

- v. A separate team for subsidence monitoring and surface mitigation measures shall be constituted and continuous monitoring & implementation of mitigation measures be carried out.
- vi. Thorough inspection of the mine lease area for any cracks developed at the surface due to mining activities below ground shall be carried out to prevent inrush of water in the mine.
- vii. Native tree species shall be selected and planted over areas affected by subsidence.
- viii. The project proponent shall make necessary alternative arrangements, if grazing land is involved in core zone, in consultation with the State government to provide alternate areas for livestock grazing, if any. In this context, the project proponent shall implement the directions of Hon'ble Supreme Court with regard to acquiring grazing land.

VII. Green Belt

- i. The project proponent shall take all precautionary measures during mining operation for conservation and protection of endangered flora/fauna, if any, spotted/reported in the study area. Action plan, in this regard, if any, shall be prepared and implemented in consultation with the State Forest and Wildlife

Department.

- ii. Greenbelt, consisting of three-tier plantation, of width not less than 7.5 m, shall be developed all along the mine lease area in a phased manner. The greenbelt comprising of a mix of native species shall be developed all along the major approach roads/ coal transportation roads.

VIII. Public hearing and Human health issues

- i. Adequate illumination shall be ensured in all mine locations (as per DGMS standards) and monitored.
- ii. The Project Proponent shall undertake Occupational Health survey for initial and Periodical medical examination of the workers engaged in the Project and maintain records accordingly as per the provisions of the Mines Rules, 1955 and DGMS Circulars. Besides carrying out regular periodic health check-up of their workers, 20% of the workers engaged in active mining operations shall be subjected to health check-up for occupational diseases and hearing impairment, if any.
- iii. Personnel (including outsourcing employees) working in dusty areas shall wear protective respiratory devices and shall also be provided with adequate training and information on safety and health aspects.
- iv. Skill training as per safety norms specified by DGMS shall be provided to all workmen including the outsourcing employees to ensure high safety standards in mines.
- v. Effective arrangement shall be made to provide and maintain at suitable points conveniently situated, a sufficient supply of drinking water for all the persons employed.
- vi. Implementation of Action Plan on the issues raised during the Public Hearing shall be

ensured. The Project Proponent shall undertake all the tasks as per the Action Plan submitted with budgetary provisions during the Public Hearing. Land oustees shall be compensated as per the norms laid out R&R Policy of the Company/ or the National R&R Policy/ R&R Policy of the State Government, as applicable

- vii. The project proponent shall follow the mitigation measures provided in this Ministry's OM No. Z-11013/5712014-IA.II (M) dated 29th October, 2014, titled 'Impact of mining activities on habitations-issues related to the mining projects wherein habitations and villages are the part of mine lease areas or habitations and villages are surrounded by the mine lease area'.

IX. Corporate Environment Responsibility

- i. The project proponent shall comply with the provisions contained in this Ministry's OM vide F.No. 22-65/2017-IA.III dated 1st May 2018, as applicable, regarding Corporate Environment Responsibility.
- ii. The company shall have a well laid down environmental policy duly approved by the Board of Directors. The environmental policy should prescribe for standard operating procedures to have proper checks and balances and to bring into focus any infringements/deviation/violation of the environmental / forest / wildlife norms / conditions. The company shall have defined system of reporting infringements / deviation/ violation of the environmental / forest / wildlife norms / conditions and / or shareholders / stake holders. The copy of the board resolution in this regard shall be submitted to the MoEF&CC as a part of six-monthly report.
- iii. A separate Environmental Cell both at the project and company head quarter level, with qualified personnel shall be set up under the control of senior Executive, who will directly to the head of the organization.
- iv. Action plan for implementing EMP and environmental conditions along with responsibility matrix of the company shall be prepared and shall be duly approved by competent authority. The year wise funds earmarked for environmental protection measures shall be kept in separate account and not to be diverted for any other purpose. Year wise progress of implementation of action plan shall be reported to the Ministry/Regional Office along with the Six Monthly Compliance Report.
- v. Self-environmental audit shall be conducted annually. Every three years third party environmental audit shall be carried out.

X. Miscellaneous

- i. The project proponent shall make public the environmental clearance granted for their project along with the environmental conditions and safeguards at their cost by prominently advertising it at least in two local newspapers of the District or State, of which one shall be in the vernacular language within seven days and in addition this shall also be displayed in the project proponent's website permanently.
- ii. The copies of the environmental clearance shall be submitted by the project proponents to the Heads of local bodies, Panchayats and Municipal Bodies in addition to the relevant offices of the Government who in turn has to display the same for 30 days from the date of receipt.

- iii. The project proponent shall upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and update the same on half-yearly basis.
- iv. The project proponent shall submit six-monthly reports on the status of the compliance of the stipulated environmental conditions on the website of the ministry of Environment, Forest and Climate Change at environmentclearanceportal.
- v. The project proponent shall submit the environmental statement for each financial year in Form-V to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently and put on the website of the company.
- vi. The project authorities shall inform to the Regional Office of the MOEFCC regarding commencement of mining operations.
- vii. The project authorities must strictly adhere to the stipulations made by the State Pollution Control Board and the State Government.
- viii. The project proponent shall abide by all the commitments and recommendations made in the EIA/EMP report, commitment made during Public Hearing and also that during their presentation to the Expert Appraisal Committee.
- ix. No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment, Forests and Climate Change (MoEF&CC).
- x. Concealing factual data or submission of false/fabricated data may result in revocation of this environmental clearance and attract action under the provisions of Environment (Protection) Act, 1986.
- xi. The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.
- xii. The Ministry reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions.
- xiii. The Regional Office of this Ministry shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the officer (s) of the Regional Office by furnishing the requisite data / information/monitoring reports.
- xiv. The above conditions shall be enforced, inter-alia under the provisions of the Water(Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986, Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 and the Public Liability Insurance Act, 1991 along with their amendments and Rules and any other orders passed by the Hon'ble Supreme Court of India / High Courts and any other Court of Law relating to the subject matter.
- xv. Any appeal against this EC shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.

Standard EC Conditions for Coal Washery Project

I. Statutory compliance:

- (i) The project proponent shall obtain forest clearance under the provisions of Forest (Conservation) Act, 1986, in case of the diversion of forest land for non-forest purpose involved in the project.
- (ii) The project proponent shall obtain clearance from the National Board for Wildlife, if applicable.
- (iii) The project proponent shall prepare a Site-Specific Conservation Plan / Wildlife Management Plan and approved by the Chief Wildlife Warden. The recommendations of the approved Site-Specific Conservation Plan / Wildlife Management Plan shall be implemented in consultation with the State Forest Department. The implementation report shall be furnished along with the six-monthly compliance report. (incase of the presence of schedule-I species in the study area)
- (iv) The project proponent shall obtain Consent to Establish / Operate under the provisions of Air (Prevention & Control of Pollution) Act, 1981 and the Water (Prevention & Control of Pollution) Act, 1974 from the concerned State pollution Control Board/ Committee.
- (v) The project proponent shall obtain the necessary permission from the Central Ground Water Authority.
- (vi) Solid waste/hazardous waste generated in the washery needs to be addressed in accordance to the Solid Waste Management Rules, 2016 / Hazardous & Other Waste Management Rules, 2016.
- (vii) Coal beneficiation practices shall be carried out under strict adherence to provisions of the Factories Act, 1957 and subordinate legislations made there under.

II. Air quality monitoring and preservation

- i. Adequate ambient air quality monitoring stations shall be established in the core zone as well as in the buffer zone for monitoring of pollutants, namely particulates, SO₂ and NO_x. Location of the stations shall be decided based on the meteorological data, topographical features and environmentally and ecologically sensitive receptors in consultation with the State Pollution Control Board. Monitoring of heavy metals such as Hg, As, Ni, Cd, Cr, etc. carried out at least once in six months.
- ii. Continuous ambient air quality monitoring stations as prescribed in the statute be established in the core zone as well as in the buffer zone for monitoring of pollutants, namely PM₁₀, PM_{2.5}, SO₂ and NO_x. Location of the stations shall be decided based on the meteorological data, topographical features and environmentally and ecologically sensitive targets in consultation with the State Pollution Control Board. Online ambient air quality monitoring stations may also be installed in addition to the regular monitoring stations as per the requirement and/or in consultation with the SPCB. Monitoring of heavy metals such as Hg, As, Ni, Cd, Cr, etc to be carried out at least once in six months.

- iii. Transportation of coal by road shall be carried out by covered trucks/conveyors. The transportation of clean coal and rejects shall be by rail with wagon loading through silo. Effective measures such as regular water sprinkling shall be carried out in critical areas prone to air pollution and having high levels of particulates such as roads, belt conveyors, loading/unloading and transfer points. Fugitive dust emissions from all sources shall be controlled at source. It shall be ensured that the ambient air quality parameters conform to the norms prescribed by the Central/State Pollution Control Board
- iv. All approach roads shall be black topped and internal roads shall be concreted. The roads shall be regularly cleaned. Coal transportation shall be carried out by covered trucks.
- v. Covered trucks shall be engaged for mineral transportation outside the washery up to the railway siding, shall be optimally loaded to avoid spillage en-route. Trucks shall be adequately maintained and emissions shall be below notified limits.
- vi. Facilities for parking of trucks carrying raw material from linked mine shall be created within the unit.
- vii. Vehicular emissions shall be kept under control and regularly monitored. The vehicles having 'PUC' certificate from authorized pollution testing centres shall be deployed for washery operations.
- viii. Hoppers of the coal crushing unit and other washery units shall be fitted with high efficiency bag filters/mist spray water sprinkling system shall be installed and operated effectively at all times of operation to check fugitive emissions from crushing operations, transfer points of closed belt conveyor systems and from transportation roads.
- ix. The raw coal, washed coal and coal wastes (rejects) shall be stacked properly at earmarked site (s) within stockyards fitted with wind breakers/shields. Adequate measures shall be taken to ensure that the stored mineral does not catch fire.
- x. The temporary reject sites should be appropriately planned and designed to avoid air and water pollution from such sites.

III. Water quality monitoring and preservation

- i. The effluent discharge (mine waste water, workshop effluent) shall be monitored in terms of the parameters notified under the Water Act, 1974 Coal Industry Standards vide GSR 742 (E) dated 25.9.2000 and as amended from time to time by the Central Pollution Control Board.
- ii. The monitoring data shall be uploaded on the company's website and displayed at the project site at a suitable location. The circular No. J- 20012/1/2006-1A.11 (M) dated 27.05.2009 issued by Ministry of Environment, Forest and Climate Change shall also be referred in this regard for compliance.
- iii. Industrial waste water shall be properly collected and treated so as to conform to the standards prescribed under the Environment (Protection) Act, 1986 and the Rules made there under, and as amended from time to time.
- iv. The project proponent shall not alter major water channels around the site. Appropriate embankment shall be provided along the side of the river/nallah flowing near or adjacent to the washery. The embankment constructed along the river/nallah boundary shall be of

suitable dimensions and critical patches shall be strengthened by stone pitching on the riverfront side stabilised with plantation so as to withstand the peak water pressure preventing any chance of inundation.

- v. Heavy metal content in raw coal and washed coal shall be analysed once in a year and records maintained thereof.
- vi. The rejects should preferably be utilized in FBC power plant or disposed off through sale for its gainful utilization. If the coal washery rejects are to be disposed off, it should be done in a safe and sustainable manner with adequate compaction and post closure arrangement to avoid water pollution due to leachate from rejects and surface run off from reject dumping sites.
- vii. An Integrated Surface Water Management Plan for the washery area up to its buffer zone considering the presence of any river/rivulet/pond/lake etc. with impact of coal washing activities on it, shall be prepared, submitted to MoEFCC and implemented.
- viii. Waste Water shall be effectively treated and recycled completely either for washery operations or maintenance of green belt around the plant.
- ix. Rainwater harvesting in the washery premises shall be implemented for conservation and augmentation of ground water resources in consultation with Central Ground Water Board.
- x. No ground water shall be used for coal washing unless otherwise permitted in writing by competent authority (CGWA) or MoEFCC. The make-up water requirement of washery should not exceed 1.5 m³/tonne of raw coal.
- xi. Regular monitoring of ground water level and quality shall be carried out in and around the mine lease area by establishing a network of existing wells and constructing new piezometers during the mining operations. The monitoring of ground water levels shall be carried out four times a year i.e. pre-monsoon, monsoon, post-monsoon and winter. The ground water quality shall be monitored once a year, and the data thus collected shall be sent regularly to MOEFCC/RO. Monitoring of water quality upstream and downstream of water bodies shall be carried out once in six months and record of monitoring data shall be maintained and submitted to the Ministry of Environment, Forest and Climate Change/Regional Office.
- xii. The project proponent shall take all precautionary measures to ensure riverine/ riparian ecosystem in and around the coal mine up to a distance of 5 km. A riverine/riparian ecosystem conservation and management plan should be prepared and implemented in consultation with the irrigation / water resource department in the state government

IV. Noise and Vibration monitoring and prevention

- i. The noise level survey shall be carried out as per the prescribed guidelines to assess noise exposure of the workmen at vulnerable points in the mine premises, and report in this regard shall be submitted to the Ministry/RO on six-monthly basis
- ii. Adequate measures shall be taken for control of noise levels as per noise pollution Rules, 2016 in the work environment. Workers engaged in blasting and drilling operations, operation of HEMM, etc shall be provided with personal protective equipments (PPE) like ear plugs/muffs in conformity with the prescribed norms and guidelines in this regard. Adequate awareness programme for users to be conducted. Progress in usage of such

accessories to be monitored.

V. Coal beneficiation

- i. Coal stacking plan shall be prepared separately for raw coal, clean coal, middling and rejects.
- ii. Efforts should be made to reduce energy consumption by conservation, efficiency improvements and use of renewable energy.

VI. Green Belt

- i. Three tier greenbelt comprising of a mix of native species, of minimum 30 m width shall be developed all along the washery area to check fugitive dust emissions and to render aesthetic to neighbouring stakeholders. A 3-tier green belt comprising of a mix of native species or tree species with thick leaves shall be developed along vacant areas, storage yards, loading/transfer points and also along internal roads/main approach roads.
- ii. The project proponent shall make necessary alternative arrangements, if grazing land is involved in core zone, in consultation with the State government to provide alternate areas for livestock grazing, if any. In this context, the project proponent shall implement the directions of Hon'ble Supreme Court with regard to acquiring grazing land.

VII. Public hearing and Human health issues

- i. Adequate illumination shall be ensured in all mine locations (as per DGMS standards) and monitored weekly. The report on the same shall be submitted to this ministry & its RO on six-monthly basis. The project proponent shall undertake occupational health survey for initial and periodical medical examination of the personnel engaged in the project and maintain records accordingly as per the provisions of the Mines Rules, 1955 and DGMS circulars. Besides regular periodic health check-up, 20% of the personnel identified from workforce engaged in active mining operations shall be subjected to health check-up for occupational diseases and hearing impairment, if any, as amended time to time.
- ii. Personnel (including outsourced employees) working in core zone shall wear protective respiratory devices and shall also be provided with adequate training and information on safety and health aspects.
- iii. Implementation of the action plan on the issues raised during the public hearing shall be ensured. The project proponent shall undertake all the tasks/measures as per the action plan submitted with budgetary provisions during the public hearing. Land oustees shall be compensated as per the norms laid down in the R&R policy of the company/State Government/Central Government, as applicable.
- iv. The project proponent shall follow the mitigation measures provided in this Ministry's OM No.Z-11013/5712014-IA.II (M) dated 29th October, 2014, titled 'Impact of mining activities on habitations-issues related to the mining projects wherein habitations and villages are the part of mine lease areas or habitations and villages are surrounded by the mine lease area'.

VIII. Corporate Environment Responsibility

- i. The project proponent shall comply with the provisions contained in this Ministry's OM vide F.No. 22-65/2017-IA.III dated 1st May 2018, as applicable, regarding Corporate Environment Responsibility.

- ii. The company shall have a well laid down environmental policy duly approved by the Board of Directors. The environmental policy should prescribe for standard operating procedures to have proper checks and balances and to bring into focus any infringements/deviation/violation of the environmental / forest / wildlife norms / conditions. The company shall have defined system of reporting infringements / deviation / violation of the environmental / forest / wildlife norms / conditions and / or shareholders / stakeholders. The copy of the board resolution in this regard shall be submitted to the MoEF&CC as a part of six-monthly report.
- iii. A separate Environmental Cell both at the project and company head quarter level, with qualified personnel shall be set up under the control of senior Executive, who will directly report to the head of the organization.
- iv. Action plan for implementing EMP and environmental conditions along with responsibility matrix of the company shall be prepared and shall be duly approved by competent authority. The year wise funds earmarked for environmental protection measures shall be kept in separate account and not to be diverted for any other purpose. Year wise progress of implementation of action plan shall be reported to the Ministry/Regional Office along with the Six Monthly Compliance Report.
- v. Self-environmental audit shall be conducted annually. Every three years third party environmental audit shall be carried out.

IX. Miscellaneous

- i. The project proponent shall make public the environmental clearance granted for their project along with the environmental conditions and safeguards at their cost by prominently advertising it at least in two local newspapers of the District or State, of which one shall be in the vernacular language within seven days and in addition this shall also be displayed in the project proponent's website permanently.
- ii. The copies of the environmental clearance shall be submitted by the project proponents to the Heads of local bodies, Panchayats and Municipal Bodies in addition to the relevant offices of the Government who in turn has to display the same for 30 days from the date of receipt.
- iii. The project proponent shall upload the status of compliance of the stipulated environmental clearance conditions, including results of monitored data on their website and update the same on half-yearly basis.
- iv. The project proponent shall monitor the criteria pollutants level namely; PM₁₀, SO₂, NO_x (ambient levels) or critical sectoral parameters, indicated for the projects and display the same at a convenient location for disclosure to the public and put on the website of the company.
- v. The project proponent shall submit six-monthly reports on the status of the compliance of the stipulated environmental conditions on the website of the ministry of Environment, Forest and Climate Change at environment clearance portal.

- vii. The project proponent shall submit the environmental statement for each financial year in form-V to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently and put on the website of the company.
- viii. The project authorities shall inform to the Regional Office of the MOEFCC regarding commencement of mining operations.
- ix. The project authorities must strictly adhere to the stipulations made by the State Pollution Control Board and the State Government.
- x. The project proponent shall abide by all the commitments and recommendations made in the EIA/EMP report, commitment made during Public Hearing and also that during their presentation to the Expert Appraisal Committee.
- xi. No change in coal beneficiation process and scope of work shall be made without obtaining prior approval of the Ministry of Environment, Forests and Climate Change (MoEFCC) with such conditions mentioned therein. No change in the maximum quantum of raw material feed per annum against the approved washery capacity shall be made
- xii. Concealing factual data or submission of false/fabricated data may result in revocation of this environmental clearance and attract action under the provisions of Environment (Protection) Act, 1986.
- xiii. The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.
- xiv. The Ministry reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions.
- xv. The Regional Office of this Ministry shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the officer (s) of the Regional Office by furnishing the requisite data / information/monitoring reports.
- xvi. The above conditions shall be enforced, inter-alia under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986, Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 and the Public Liability Insurance Act, 1991 along with their amendments and Rules and any other orders passed by the Hon'ble Supreme Court of India / High Courts and any other Court of Law relating to the subject matter.
- xvii. Any appeal against this EC shall lie with the National Green Tribunal, if preferred, within period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.

ANNEXURE-IV

Generic ToR for coal washery

- i. Siting of washery is critical considering 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 washer preferably through closed conveyor 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 along with a layout, the specific technology used and the source of coal should be provided.
- vi. The EIA-EMP Report should cover the impacts and management plan for the project of the capacity for which EC is sought and the impacts of specific activities, including the technology used and coal used, on the environment of the area (within 10km radius), and the environmental quality of air, water, land, biotic community, etc. through collection of data and information, generation of data on impacts for the rated capacity. Cumulative impacts for air and water should be a part of EIA in case coal mine, TPP and other washeries are located within 10km radius. The EIA should also include mitigative measures needed to minimize adverse environmental impacts.
- vii. A Study Area Map of the core zone as well as the 10km area of buffer zone showing major industries/mines and other polluting sources should be submitted. These maps shall also indicate the migratory corridors of fauna, if any and areas of endangered fauna; plants of medicinal and economic importance; any ecologically sensitive areas within the 10 km buffer zone; the shortest distance from the National Park/WL Sanctuary Tiger Reserve, etc. along with 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, PM2.5, 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 along with Action Plan.
- xiv. O.M.no.J-11013/25/2014-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. Therejects should be used in TPP located close to the washery as far as possible. If TPP is within a reasonable distance (10 km), transportation should be by conveyer belt. If it is far away, the transportation should be by rail as far as possible.
- xviii. Copies of MOU/Agreement with linkages (for stand-alone washery) for the capacity for which EC is being sought should be submitted.
- xix. Corporate Environment Responsibility:
 - a) The Company must have a well laid down Environment Policy approved by the Board of Directors.
 - b) The Environment Policy must prescribe for standard operating process/procedures to bring into focus any infringements/deviation/violation of the environmental or forest norms/conditions.
 - c) The hierarchical system or Administrative Order of the company to deal with environmental issues and for ensuring compliance with the environmental clearance conditions must be furnished.
 - d) To have proper checks and balances, the company should have a well laid down system of reporting of non-compliances/violations of environmental norms to the Board of Directors of the company and/or shareholders or stakeholders at large.
- xx. A detailed action Plan for Corporate Social Responsibility for the project affected people and people living in and around the project area should be provided.

- xxi. Permission of drawl of water shall be pre-requisite for consideration of EC.
- xxii. Wastewater /effluent should confirm to the effluent standards as prescribed under Environment (Protection) Act, 1986
- xxiii. Details of washed coal, middling and rejects along with the MoU with the end-users should be submitted.

GENERIC TOR FOR AN OPENCAST COALMINE PROJECT for EC

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

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

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

- (xii) Break-up of lease/project area as per mining plan should be provided.
- (xiii) Impact of changes in the land use due to the project if the land is predominantly agricultural land/forestland/grazing land, should be provided.
- (xiv) One-season (other than monsoon) primary baseline data on environmental quality - air (PM10, PM2.5, SO_x, NO_x and heavy metals such as Hg, Pb, Cr, As, etc), noise, water (surface and groundwater), soil - along with one-season met data coinciding with the same season for AAQ collection period should be provided.
- (xv) Map (1: 50, 000 scale) of the study area (core and buffer zone) showing the location of various sampling stations superimposed with location of habitats,

other industries/mines, polluting sources, should be provided. The number and location of the sampling stations in both core and buffer zones should be selected on the basis of size of lease/project area, the proposed impacts in the downwind (air)/downstream (surface water)/groundwater regime (based on flow). One station should be in the upwind/upstream/non-impact/non-polluting area as a control station. The monitoring should be as per CPCB guidelines and parameters for water testing for both ground water and surface water as per ISI standards and CPCB classification wherever applicable. Observed values should be provided along with the specified standards.

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

- (xxii) Impact of mining and water abstraction from the mine on the hydrogeology and groundwater regime within the core zone and 10 km buffer zone including long-term monitoring measures should be provided. Details of rainwater harvesting and measures for recharge of groundwater should be reflected in case there is a declining trend of groundwater availability and/or if the area falls within dark/grey zone.
- (xxiii) Impact of blasting, noise and vibrations should be given.
- (xxiv) Impacts of mining on the AAQ and predictions based on modeling using the ISCST-3 (Revised) or latest model should be provided.
- (xxv) 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.
- (xxvi) 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.
- (xxvii) 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.
- (xxviii) Efforts be made for maximizing 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.
- (xxix) 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.
- (xxx) 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 Land use 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. No.	YEAR*	Green Belt	External Dump	Backfilled Area	Others(Undisturbed Area/etc)	TOTAL
1.	1 st year					
2.	3 rd year					
3.	5 th year					
4.	10 th year					
5.	15 th year					
6.	20 th year					
7.	25 th year					
8.	30 th year					
9.	34 th year (end of mine life)					
10.	34-37 th Year (Post-mining)					

* As a representative example

(xxxix) 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					

(xxxii) 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.

(xxxiii) 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.

(xxxiv) Risk Assessment and Disaster Preparedness and Management Plan should be provided.

(xxxv) Integration of the Env. Management Plan with measures for minimizing use of natural resources - water, land, energy, etc. should be carried out.

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

(xxxvii) 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.

(xxxviii) 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.

(xxxix) 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.
- (xl) 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.
- (xli) In built mechanism of self-monitoring of compliance of environmental regulations should be indicated.
- (xlii) Status of any litigations/ court cases filed/pending on the project should be provided.
- (xliii) 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.
- (xliv) 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 AND (ha)	Date of FC	Extent of forestland	Balance area for which FC is yet to be obtained	Status of appl for. diversion of forest land

		If more than, provide details of each FC			
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ANNEXURE -VI

GENERIC TORs FOR AN UNDERGROUND COAL MINE 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/waterbodies) 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 breakup 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 /Project (ha)	ML Area	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			

ANNEXURE-VII

GENERIC TORs FOR AN OPENCAST -CUM UNDERGROUND COAL MINE PROJECT

- (i) An EIA-EMP Report would be prepared for a combined peak capacity of.....MTPA for OC-cum-UG project which consists of... MTPA in an ML/project area of ha for OC and MTPA for UG in an ML/project area of ha based on the generic structure specified in Appendix III of the EIA Notification 2006.
 - (ii) An EIA-EMP Report would be prepared for MTPA rated capacity to cover the impacts and environment management plan for the project specific activities on the environment of the region, and the environmental quality encompassing air, water, land, biotic community, etc. through collection of data and information, generation of data on impacts including prediction modeling for MTPA of coal production based on approved project/Mining Plan for MTPA. Baseline data collection can be for any season (three months) except monsoon.
 - (iii) The ToRs prescribed for both opencast and underground mining are applicable for opencast – cum underground mining.
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**LIST OF PARTICIPANTS OF EAC (COAL) IN 43rd MEETING HELD DURING
24th APRIL, 2023 THROUGH VIDEO CONFERENCING**

1.	Shri G.P Kundargi			1- DAY
		-	Chairman	P
2.	Dr. N. P. Shukla	-	Member	P
3.	Shri Suramya Dolarray Vora, IFS (Retd)	-	Member	P
4.	Dr. Umesh Jagannathrao Kahalekar	-	Member	P
5.	Shri K.B. Biswas	-	Member	P
6.	Dr. Nandini.N	-	Member	P
7.	Dr. Unmesh Patnaik	-	Member	A
8.	Professor S S Rai, Representative of IIT/ISM Dhanbad	-	Member	P
9.	Shri M.P Singh, Representative of CEA	-	Member	P
10.	Dr. Santosh Kumar Hampannavar	-	Member	P
11.	Prof R.K. Giri Representative of IMD	-	Member	A
12.	Dr. Nazimuddin Representative of Central Pollution Control Board	-	Member	P
13.	Shri Lalit Bokolia, Director, MoEFCC	-	Member Secretary	P