

MINUTES OF 3rd MEETING OF THE EXPERT APPRAISAL COMMITTEE FOR ENVIRONMENT APPRAISAL OF COAL MINING PROJECTS HELD ON 16th & 17th NOVEMBER 2023 THROUGH HYBRID MODE.

Confirmation of the Minutes of 2nd Meeting of the EAC (Coal): - The minutes of the 2nd Meeting of the EAC (Coal) held on 30th October 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 3rd meeting of the Expert Appraisal Committee (EAC) for coal mining projects was held on 16th & 17th November 2023 through Video Conferencing/**Hybrid**. The EAC considered proposals as per agenda adopted for the meeting incorporated for discussion with chair. List of participant attended the meeting is annexed. The details of deliberations held & decisions taken in the meeting are as under.

Agenda No. 3.1

West Bokaro Coking Coal Washery of 10 MTPA production capacity in an area 11.40 ha of M/s Tata Steel Ltd. (West Bokaro Division) Located in village Duni, Sarubera, Atna, Bhadwa & Sondiha, Tehsil Mandu, District Ramgarh (Jharkhand) – For Environmental Clearances - reg.

[Online Proposal No. IA/JH/CMIN/442132/2023; File No. IA-J-11015/10/2022-IA-II (M)]

3.1.1 The proposal is for Environmental Clearance for West Bokaro Coking Coal Washery of 10 MTPA production capacity in an area 11.40 ha of M/s Tata Steel Ltd. (West Bokaro Division) Located in village Duni, Sarubera, Atna, Bhadwa & Sondiha, Tehsil Mandu, District Ramgarh (Jharkhand).

*The project proponent did not attend the meeting and made the request for deferment vide email dated 09.11.2023. Accordingly, EAC, accordingly, **deferred** the proposal for later consideration based on merits of submission with other proposals.*

Agenda No. 3.2

Subhadra Open Cast Mine with production capacity of 25 MTPA in mine lease area of 1111.85 ha of M/s Mahanadi Coalfield Limited located at Village Gopal Prasad, Kumuda, Nisha, Kankarei, Rajjharan, Nisha P.S Angul, Tehsil Tachler Sadar and Chhendipada, District Angul (Odisha) - For Environmental Clearance – reg.

[Online proposal No. IA/OR/CMIN/445297/2023; File No. IA-J-11015/72/2021- IA-II(M)]

3.2.1 The proposal is for Environmental Clearance for Subhadra Open Cast Mine with production capacity of 25 MTPA in mine lease area of 1111.85 ha of M/s Mahanadi Coalfield Limited located at Village Gopal Prasad, Kumuda, Nisha, Kankarei, Rajjharan, Nisha P.S Angul, Tehsil Tachler Sadar and Chhendipada, District Angul (Odisha).

3.2.2 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. LOCATON OF PROJECT

- (i) The project area is covered under Survey of India Topo sheet No.F45S13 & F45T1 (RF 1:50000) and is bounded by the geographical coordinates ranging from 20°55’56.225” N and 20°58’47.344” N and longitudes 84°58’42.383” E and 85°0’50.476” E.
- (ii) Coal linkage of the project is proposal for commercial Use for various end users.
- (iii) Joint venture cartel has been formed- Not Applicable
- (iv) Project does not fall in the Critically Polluted Area (CPA), where the MoEF&CC’s vide its OM dated 13thJanuary, 2010 has imposed moratorium on grant of environment clearance
- (v) Employment Generation-Proposed coal mine shall provide an opportunity of direct employment to 2108 persons and total indirect employment of approx. 5000 persons.
- (vi) The project is reported to be beneficial in terms of energy security for the development of country.
- (vii) Terms of References (ToR) granted vide letter J-11015/72/2021-IA-II(M)] dated: 22.11.2021, Amendment to Terms of References (ToR) granted vide letter IA-J-11015/72/2021-IA-II(M)] dated: 28.02.2022.
- (viii) Total Mining Lease Area as per block allotment is 1111. 85 ha. Mining Plan for coal mine has been prepared by CMPDI for production of 25 MTPA coal. Mining Plan (including Progressive Mine Closure Plan) has been approved by the MCL Board vide letter no. MCL/SBP/CS/BD-257/Exct/2023/13262 dt- 13.05.2023.

II. LAND USE DETAILS OF MINE

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

Pre-mining land use details

S. No	Type of Land	Within ML Area (Ha.)	Outside ML Area (Ha)	Total (Ha)
1.	Agricultural	800.50	Nil	800.50
2.	Forest	125.24	Nil	125.24
3.	Wasteland	NA	NA	NA
4.	Grazing land	58.67	Nil	58.67
5.	Water bodies	6.28	Nil	6.28
6.	Settlements	NA	NA	NA
7.	Others (Specify)			
	Old Excavation Area (East Quarry)	NA	NA	NA
	Old Excavation Area (West Quarry)	NA	NA	NA
	Old OB Dumps	NA	NA	NA

	Roads	0.25	Nil	0.25
	R & R Colony	NA	NA	NA
	Staff Colony	NA	NA	NA
	Green Belt	NA	NA	NA
	Balance Area	NA	NA	NA
	Barren land**	92.64	Nil	92.64
	Township**	Nil	Nil	Nil
	Community/others use area**	28.27	Nil	28.27
	Total Project Area	1111.85	Nil	1111.85

**** (As per the above table the total land use area is 1111.85 Ha. The other land use types are Barren land of 92.64, Community/others use area of 28.27 Ha.)**

Post Mining

S. No.	Land Use	Land Use (End of Life)	Land Use (ha)				Total
			Plantation	Water Body	Public use	Undisturbed	
1.	External OB Dump	24.17	0	0	0	0	24.17
2.	Top Soil Dump	8.97	0	0	0	0	8.97
3.	Excavation	881.28	0	0	0	0	
4.	Roads, buildings Infrastructure	Roads: 15.72	0	0	15.72	0	118.16
		Township: 27.12	1.26	0	25.86	0	
		Infra: 75.32	0	0	0	0	
5.	Green Belt	6.89	0	0	0	0	6.89
6.	Undisturbed Area	0	0	0	0	0	0
7.	Safety Zone	11.79	11.79	0	0	0	11.79
8.	Rationalization Area	25.34	25.34	0	0	0	25.34
9.	Diversion / Below River / Nala /Canal	8.42	0	0	8.42	0	8.42
10.	Water Harvesting	35.36	0	35.36	0	0	35.36
11.	Staff Colony		0	0	0	0	
12.	Backfilled Area**	715.24	182.52	0	0	0	715.24
13.	Excavated Void Without Plantation**	130.68	0	0	0	0	130.68
14.	Coal Stock Yard**	9.76	0	0	0	0	9.76
15.	Embankment**	11.49	0	0	11.49	0	11.49
16.	Explosive Magazine**	5.58	0	0	0	0	5.58

Total Area	1111.85	220.91	35.36	61.49	0	1111.85
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**** (As per the above table the total land use area is 1111.85 Ha. The other land use types are Backfilled Area of 715.24 Ha., Excavated Void without Plantation of 130.68 Ha., Coal Stock Yard of 9.76 Ha., Embankment of 11.49 Ha., and Explosive Magazine of 5.58 Ha.)**

- (x) Total Geological Reserve reported in the mine lease area is 1142.67MT with 790.95MT Mineable Reserves by opencast mining. Out of total mineable reserve of 790.95MT, 768.83 MT are available for extraction. Percent of extraction is 67 %.
- (xi) Thickness of seams to be worked on: Opencast mining method is proposed for extraction of coal seam XI to IID. The effective thickness of the seams XI to IID is varying from 0.06m to 75.90m.
- (xii) Grade of coal: Wt. Avg. G-13 (GCV – 3690 Kcal/Kg), Stripping Ratio: Only In-situ: 0.80 With Re-handling: 0.93, Average gradient: - 3.48⁰(1 in 16.44), Maximum thickness of seams: Seam XI to IID varies from 0.06m to 75.90 m
- (xiii) Method of Mining operations envisaged by opencast method.
- (xiv) Life of mine is 36 years (including 2 year of construction)
- (xv) The project has 1 external OB dumps (temporary) in an area of 24.17 ha with 88m height and 103.72Mm³ of OB. 1 internal OB dump in an area of 715.24ha with 613.18 Mm³ (Insitu) 103.72 Mm³ (Rehandling) of material is envisaged in the project.
- (xvi) Total quarry area is 881.52 ha out of which backfilling will be done in 715.24 ha up to 30m while final mine void will be created in an area of 130.68 ha with a depth of 160 m RL and 35.36 ha water body. Backfilled quarry area 182.52 ha shall be reclaimed with plantation, 495.27 ha agriculture land and 37.45 ha will be returned as forest land.

III. TRANSPORTATION OF COAL

- (xvii) Transportation of coal:
 - In pit: Initially through Dumper and in Pit Conveyor after few years.
 - Surface to siding: From surface hopper (20 No.) by belt conveyor (18 Nos.)
 - Siding to loading: Through two Rapid Loading System (RLS) (02 Nos) Capacity: 5000 tonne each
 - Quantity being transported by Road/Rail/Conveyor: As per approved mining plan
 - Proposed change in transportation means if any, give details: No change proposed, transportation will be carried out as per Approved Mining Plan.
- (xviii) Reclamation has been planned in an area of 965.45ha, comprising of 538.17 ha Agricultural use, 220.91 ha Plantation, 35.36 ha Water Body & 125.24 ha Forest Land return Area, Nala diversion, Township & Embankment. & 130.68 ha of final void area will be left unplanted.
- (xix) 125.24ha (Reserve Forest Land: 0.75 ha, Govt. Revenue Forest area: 124.49 ha) of forest land have been reported to be involved in the project. Applications for Forest Clearance has been submitted vide Proposal No. FP/OR/MIN/150133/2021 dt. 25.01.2022. Stage I FC has been recommended in the FAC meeting held on 20.10.2023. Stage I FC letter is awaited.
- (xx) There are no National Park, Wildlife Sanctuaries and eco-sensitive Zones, within 10 km radius.
- (xxi) Wildlife conservation plan for schedule –I species has been submitted
- (xxii) The ground water level has been reported to be : Pre Monsoon - Core zone: Ranges from 5.2mbgl

to 7.1mbgl, Buffer Zone: Ranges from 4.5mbgl to 8.1mbgl. Post Monsoon - Core zone: Ranges from 3.1mbgl to 4.6mbgl Buffer Zone: Ranges from 2.5 mbgl to 4.9mbgl

(xxiii) ... Total Water requirement for the project is 5.11 MLD.

(xxiv) Application for Permission to Dewater Ground water for Mining has been submitted vide application no. 21-4/4746/OR/MIN/2023 dated 13.02.2023. Recommended by CGWA for NoC.

IV. DETAILS OF PUBLIC HEARING & RELATED ISSUES

(xxv) Public hearing for the project of 25 MTPA capacity in an area of 1111.85ha was conducted on 25.08.2023 at Ground near Pirakhaman Primary school under Kankarei gram Panchayat of Chhendipada Tehsil of Angul District under the Chairmanship of Shree Pratap Pritimaya, O.A.S. (S) ADM, Angul. 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 Final EIA/EMP report.

(xxvi) Commitment made by the Project Proponent to address the Public Hearing concerns in lieu of Corporate Environment Responsibility (CER) to be mentioned in the following table:

S. No.	Particulars	Location (Name of School / Village / Area)	Year -1	Year -2	Year -3	Year -4	Year -5	Total
			(In Lakhs)	(In Lakhs)	(In Lakhs)	(In Lakhs)	(In Lakhs)	(In Lakhs)
1.	Infrastructure creation for Drinking Water supply	Drinking Water Supply and Construction hand pumps and tube wells and de-silting of nearby villages ponds within the 5km radius	15	15	15	15	15	75
2.	Sanitation	Nearby villages within the 5km radius	15	15	15	15	15	75
3.	Education	Skill Development Training, Support to schools and other educational institutions	15	15	15	15	15	75
4.	Avenue plantation	Avenue plantation within 5 kms radius in villages namely	2.5	2.5	2.5	5	5	17.5

		Nisha, Balichandrapur						
5.	Plantation in community areas	Community plantation within 5 kms radius in villages namely Nisha, Balichandrapur, Ambapala.	2.5	2.5	2.5	5	5	17.5
6.	Infrastructur e	Construction of Kendriya Vidyalaya, Police Station, Bank, Post Office, Market Complex, Solar Street lights within township for public use	50	50	50	50	50	250
7.	Health	Health Care and vaccination, awareness camp, mobile medical camp, Immunization, medicine etc. to villagers within 5 kms radius	25	25	25	25	25	125
8.	Air & Water Pollution Control measures**	Utilization of mobile water sprinklers at the transportation road, fixed sprinklers on the permanent roadways, fog canon at transfer points	60	60	60	60	60	300
9.	Livelihood		15	15	15	15	15	75
10.	Agricultural programme	-	-	-	-	-	-	-
Total			200	200	200	205	205	1010

(As per the above table, Total Public Hearing concerns in lieu of CER budget are 1010 Lakhs. Out of total budget, 300 Lakhs will be spent on Air & Water Pollution Control measures.)**

- (xxvii) 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
- (xxviii) Diversion of Ghurudia Stream is proposed while Singhada Jhor stream will be straightened.
- (xxix) No court cases, violation cases are pending against the project of the PP.

V. BENEFITS OF THE PROJECTS

- (xxx) The project involves 1853 PAF.R&R of the PAPs will be done as per prevailing laws.
- (xxxi) Total cost of the project is Rs. 3955.65 Crore. Cost of production is Rs 678 per tonne. Fund for the CSR will be allocated based on 2% of the average net profit of the Company for the three immediate preceding financial years or Rs. 2.0 per tonne of coal production of previous year whichever is higher. Different peripheral development and community development works will be taken up. R&R cost – 405.46 Crore. Environment Management Cost is: Capital Rs 1205 Lakh; & Recurring Rs. 178 Lakh

VI. CONTROL OF POLLUTION: (A) AIR & (B) WATER

(xxxii) Base line monitoring status:

- a) Environmental sensitivity within 10 km buffer zone with distance & direction from the project site like Forest, water bodies, other mines, other washeries, power plants, industries, highways, railway stations, hospitals, schools, colleges etc (To be mentioned in PFR & EIA/EMP report also).
- b) Mention the Period/ Season of baseline study carried out - Oct to Dec 2022 (Post-Monsoon).
- 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

M/s Vardan EnviroNet, Gurgaon has prepared the EIA/EMP report after the award of the Terms of Reference. Yes, M/s Vardan EnviroNet, Gurgaon is accredited by QCI/NABET and NABL, Certificate No. QCI/NABET/EIA/2326/RA 0284, Valid up to 04.05.2026.

d) Detail of Air quality and surface water quality

i. Air quality: 8 Location for Post-monsoon and the detail mentioned below:

The result indicates that the maximum and minimum values of PM₁₀ are in the range of 51.2 to 74.6 µg/m³, whereas the PM_{2.5} is in the range of 28.1 to 51.9 µg/m³. The SO₂ concentrations within the study area are in the range of 21.2 to 46.9 µg/m³ and the NO_x are in the range of 20.5 to 41.2 µg/m³. The CO concentrations within the study area are in the range of 0.5 to 1.19 mg/m³ and the O₃ are in the range of 15.1 to 29.6 µg/m³. The NH₃ concentrations within the study area are in the range of 25.2 to 39.1 µg/m³.

Air Pollution Impact Prediction - Post-Monsoon - The incremental increase in the values were projected to be 15.6168 µg/m³ for PM₁₀, 8.9239 µg/m³ for PM_{2.5}, 0.44623 µg/m³ for SO₂, and 0.33468 µg/m³ for NO_x and for CO, 0.000223 mg/m³. The value of Total GLC is 88.2168 µg/m³

for PM₁₀, 55.7239 µg/m³ for PM_{2.5}, 45.04623 µg/m³ for SO₂, and 38.93468 µg/m³ for NO_x and 1.100223 mg/m³ for CO are predicted during October to December 2022.

- ii. **Surface water quality: 8 Location for Post-monsoon and detail mentioned below** - All the Parameters for post-monsoon like pH varies from 7.39 to 7.82, Total Hardness varies from 186.25 to 493 mg/L, Total Dissolved Solids varies from 240 to 899 mg/L, Dissolved Oxygen – 5.6 mg/l to 6.7 mg/l.
- iii. **Ground water quality: 8 Location for Post-monsoon** - All the Parameters for post-monsoon Like pH varies from 7.54 to 7.93, Total Hardness varies from 215.26 to 329.43 mg/L, Total Dissolved Solids varies from 225 to 300 mg/L, Chloride varies from – 56.84 mg/l to 79.24 mg/l etc. are found within the permissible limits.
- iv. **Soil quality: 8 Location for Post-monsoon** - All the Parameters for post-monsoon Like pH varies from 7.31 to 7.56, Organic matter varies from 0.76% to 0.88%, Available Nitrogen varies from 152.66 to 192.18 kg/ha etc. are found within the permissible limits.
- v. **Noise Quality: 7 Location for Post-monsoon** - The Leq values for day time was observed to be 49.88 to 54.06 dB (A) in residential area, while during night time 40.34 to 43.96 dB (A). The Leq values for day time and night time at industrial area was 69.5 and 64.52 dB (A).

3.2.3 The Committee during detail deliberation noted following:

- i. Terms of Reference for instant greenfield opencast coal mine was granted on 22.11.2021 and their subsequent amendment in ToR on 28.02.2022.
- ii. Mining Plan (including Progressive Mine Closure Plan) has been approved on 13.05.2023 for 1144.90 ha.
- iii. 125.24 ha of forest land has been involved in total ML area of 1111.85 ha. Applications for Forest Clearance has been submitted vide Proposal No. FP/OR/MIN/150133/2021 dated 25.01.2022.
- iv. Life of mine is 36 years (including 2 year of construction).
- v. Application for withdrawal of Ground water has been submitted vide application no. 21-4/4746/OR/MIN/2023 dated 13.02.2023.
- vi. Public hearing was conducted on 25.08.2023 for the project of 25 MTPA capacity in an area of 1111.85 ha at Ground Near Pirakaman Primary School under Kankarei Gram Panchayat of Chhendipada Tehsil, Angul on 25.08.2023 at 11:00 AM, under Chairmanship of Sri Pratap Pritimaya, O.A.S. (S), Additional District Magistrate, Angul in the presence of Er. Ramesh Kumar Ekka, Regional Officer, State Pollution Control Board, Angul, Odisha
- vii. Public hearing issues such as employment to local people, loss of land and its adequate compensation, proper R&R, providing medical facilities, mitigation of dust pollution, plantation, pollution in Pirakhaman village due to Hingula mine, reclamation of mine by levelling to ground level, water and sound pollution management, opening of Talcher Medical College and Hospital at the earliest for benefit of the people staying in this area, facility for kidney dialysis, granting 01 year time to dismantle their respective house contrary to existing policy of provision of employment after demolition of house.
- viii. Baseline data has been collected during the Period/ Season of October to December 2022 (Post-Monsoon).

- ix. Subhadra Open cast mine project is combination of Utkal A and west of Gopalprasad West Block.
- x. The area does not fall under corridors of any National Parks, Sanctuaries, Biosphere Reserves, Wildlife Sanctuary, Tiger/Elephant reserves, nor do the same exist within 10 km of the Mining Lease Area. The Map stating absence of above areas and showing the distance of various protected areas has been approved from the PCCF, Odisha vide Letter No 6190/CWLWFDWC-FD- 0011-2023 dated 29.05.2023
- xi. As per list of The Indian Wildlife (Protection) Act, 1972, there are two Mammals i.e Elephant, & Pangolin, two reptiles i.e Bengal Monitor Lizard, Python and two birds i.e Indian Peafowl, King Vulture, Schedule-I species present in the study area

3.2.4 *The Committee after detail deliberation observed that the instant proposal is a Greenfield opencast coal mine project. An application for Stage-I Forest Clearance has been submitted and yet to be granted by Ministry. As visible through Drone Video, most of land in the project area is agricultural land i.e. about 800 ha.*

From discussions it is noted that Ghurudia Nallah and Singhada Jhor flowing within the ML area, which are required to be diverted at different time interval based on mining plan. The committee observed that the length of 8.9 Km of Ghurudia Nallah has been proposed to be diverted from south at the beginning of mining, while Singhada Jhor Nallah will be straightened for 1080 mtr. It was desired that no stream diversion shall be done upto 15 years for south side whereon mining shall progress on that time. The committee emphasized that the hydrogeological study for diversion shall be made in proper manner by avoiding the formation of right-angle bend so as to have uninterrupted flow and considering the safety zone of 7.5m all along the mine boundary alongwith.

Public Hearing was conducted on 25.08.2023 under the chairmanship of Additional District Magistrate (Angul) as per provisions of EIA Notifications, 2006. The issues raised during public hearing has been addressed, however the Committee desired to have adequate budgetary allocation to meet public demand particularly on health establishment with regard to kidney treatment as raised by local people. The committee noted the discrepancy in the figures of land use pattern submitted for pre-mining and post-mining.

Subsequently committee highlighted that in order to minimise coal transportation through road PP shall submit the strict timeline for completion of Belt-conveyor system in commensurate with production level. Committee asked the project proponent to submit the status of all necessary approvals pending at different stages.

In view of the above, the Committee desired that the project proponent shall submit the following documents: -

- i. *Project proponent to submit the status of all necessary approvals pending at different stages including status of FC involved in total ML area of 1111.85 ha.*
- ii. *PP shall submit the R&R approval from the concerned District Administration along with their preparedness.*

- iii. *PP shall submit the compliance of ToR condition no. xi, xii, xx, xxi, xxvi, xxx and Amended ToR no. (iv) & (vii) and (xxvii).*
- iv. *PP shall provide details of the alternate land w.r.t grazing land and water bodies as per pre-mining activity land use (as per ToR condition viii).*
- v. *PP shall provide adequate details w.r.t. mitigation measures by changing catchment area hydrology from stream diversion and submit the protection measures of south nala which is proposed for diversion in 15 years by leaving 100 mts distance.*
- vi. *PP shall submit the adequate water conservation plan for water bodies lying inside and outside the ML area.*
- vii. *Detailed Action Plan w.r.t. for completion of in-pit Belt-conveyor system and silo loading system till railway siding shall be submitted. Beside till construction of the same, PP to furnish adequate safety measures to be adopted for coal transportation through road (as per ToR condition xiii & xvii)*
- viii. *PP shall social impact study for farmers being affected due to mining operation lying inside the ML area.*
- ix. *PP shall submit the detail revised EMP budget (with capital and recurring cost) by increasing the mitigation measures in order to reduce the air pollution and water pollution.*
- x. *PP shall submit the activity-wise public hearing budget (with capital and recurring cost) by complying all issues recorded in the Minutes of Public Hearing, particularly with respect to health issues.*
- xi. *PP shall submit the Skill development programs (SDP) aligned with National Skill Development Center (NSDC) for local people as part of CERs. Further, air pollution mitigation plan shall be submitted till the villages are not displaced in the mine lease area.*
- xii. *As raised in public hearing, PP shall submit the proof of documents from State Forest Department that there is no human-elephant issue in the buffer and mine lease area. If so what is mitigation plan.*
- xiii. *PP shall submit details of Site-Specific Wildlife Conservation Plan and difference of schedule I species as in Wildlife Protection Act (WPA), 1972 and Amendment of WPA, 2022.*
- xiv. *PP shall submit the correct figures of the land usage pattern of the project during pre-mining and post-mining purpose.*

*In view of the above, the project was **deferred** to submit the above observation.*

Agenda No. 3.3

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 No. IA/JH/CMIN/417074/2023; File No. J-11015/1/2023-IA-II (M)]

3.3.1 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.

3.3.2 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 (3600tph 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 from 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:
- i. Number of sampling location monitored: 08
- e) Surface water quality:
- i. Number of sampling location monitored: 3

xxvi. Name of the source of surface water monitoring:

- a) Damodar Nadi Upstream
- b) Damodar Nadi Downstream
- c) Selected Dhori Mine void.

3.3.3 The Committee during deliberations noted the following:

- i. The instant proposal of Terms of Reference to greenfield Coal washery was earlier considered by EAC in its 43rd EAC meeting dated 24.04.2023 wherein the committee had deferred the proposal for the submission of observation.
- ii. The Project proponent had submitted the information/reply of observation raised earlier on PARIVESH Portal and the same are as follows:

S. No.	Observation of committee	Reply by PP

1.	Carry out alternate site studies in order to save the forest	<p>a) Alternate Site Studies at Six Sites were carried out by IIT(ISM) Dhanbad. These sites are selected and assessed based on the basis of Carbon emission & Carbon sink damage, Cost of operation, impact on air quality, habitation and ecology. The copy of Study report is attached herewith.</p> <p>b) As per the studies carried out, Site-3 was found to be most suitable for setting up of the proposed washery.</p>
2.	Consideration of Reclaimed mine area or settled OB dump	<p>a) Out of the Six potential sites, Site 5 is on external OB Dump of Tarmi OCP area on the top of the dump, though reclaimed, not fully settled/compact and at places remains unconsolidated to bear the heavy loads of the CHP infrastructure with serious safety and serviceability concerns.</p> <p>b) As such, the existing OB Dump was found not suitable for construction of and it is recommended that such permanent and heavy structures having static and dynamic loading should instead be placed on firm ground.</p>
3.	Conduct a carbon sink study & Cost Benefit Analysis	<p>a) The detailed carbon sink study & cost benefit analysis in case of all Six Sites carried out. The comparative analysis at each site in respect of Net CO₂ (tons CO₂ Equiv.) & Net Cost is enclosed.</p> <p>b) It can be seen that the Net Co₂ Emission (tons of Co₂ equivalent) & net cost is found to be minimum at Site-3.</p>
4.	Submit aerial footage and drone video with a special focus on the forest area.	The video footage has been carried out and will be presented during the EAC meeting.

- iii. The project area lies in 12.06 ha of land which 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.
- iv. The project is also located near railway siding and coal mine and the same will be used for raw feed in the washery and transportation through railway siding.

3.3.4 *The committee after detail deliberations observed that the instant project for Terms of Reference is a Greenfield coal washery's project (for project area of 12.06 ha). The entire project area is covered under forest and for which FC has been obtained on 14.05.2010 for non-forestry activity w.r.t other name Kargali Washery of CCL (as informed by project proponent during deliberation).*

As earlier enquired by the then Committee, the PP has conducted the detailed alternate sites study on the basis of Carbon emission, cost of operation, Impact on air, Habitation & ecology which

determines best site as 'Site 3 i.e. near to Tarmi village due to proximity to railway siding from minimum distance for coal transportation.

During the discussions, the Committee asked PP to develop 2-times compensating forest w.r.t. annual carbon emission recorded as 6,044.94 tons CO₂ equivalent. The EAC emphasized to develop the layout of Washery in a manner so that minimum tree to be cut. Further to this, out of 12.06 ha project area, PP shall not deforest 30-40% of tree and accordingly layout plant that will be approved by the Board of the M/s CCL and EIA-EMP shall be prepared based on this condition.

Based on the above, EAC **recommended** the proposal for grant of Terms of Reference to 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) with the following specific conditions under the provisions of EIA Notification, 2006 and its amendments:

Specific condition: -

- i. Public Consultation, including public hearing, shall be conducted through concerned SPCB as per the provisions/procedure contained in the EIA Notification, 2006 for information of the stakeholders about the proposed project inviting comments and their redressal
- ii. PP shall install Coal washery with infrastructure in such a way so that 30-40 % trees to conserve the existing trees in the project area of 12.06 ha and accordingly layout of the plant will be approved by the Board of the M/s CCL. EIA- EMP shall be prepared based on the effective area as mentioned in this condition. Accordingly, three Tier Green belt developments all along the boundary in with time bound action plan in EIA/EMP report.
- iii. PP shall develop forest for compensating 12089.88 tons CO₂ equivalent (2 times of annual carbon emission i.e. 6044.94 tons CO₂ Eq.) in order to maintain pollution free environment.
- iv. As proposed by PP, equal amount of land shall be acquired for afforestation or reforestation purpose in order to develop dense forest prior to grant of EC and excluding the CA land already identified under FC Act, 1980. At the time of appraisal of EC PP has to submit status of growth rate of saplings planted in the acquired land.
- v. As proposed by PP, only mine water shall be proposed to be used for washery operation and there shall be no usage of ground water.
- vi. PP should submit the complete water balance cycle need to be submitted considering only surface water usage for washery operations. In addition to this PP should submit a detailed plan for rain water harvesting measures to be taken. The PP should submit the year wise target for reduction in consumption of the ground water by developing alternative source of water through rain water harvesting measures. The capital and recurring expenditure to be incurred needs to be submitted.
- vii. PP should submit the real time aerial footage and video of the Coal Washery and acquired land for afforestation made through drone vis-a vis with layout plan.
- viii. PP shall furnish the MoU for its rejects/middling for its utilization as per Ministry's notification (to be used on power plant only).
- ix. Mode of transportation should be clearly spelled for raw coal, rejects and washed coal as the project is located near to the railway line. PP shall propose to implement conveyor system from railway siding for raw coal, washed coal and rejects till coal washery plant.

- x. *PP shall submit design details of all Air Pollution control equipment (APCEs) to be implemented as part of Environment Management Plan vis-à-vis reduction in concentration of emission for each APCEs.*
- xi. *For proper baseline air quality assessment, Wind rose pattern in the area should be reviewed and accordingly location of AAQMS shall be planned by the collection of air quality data by adequate monitoring stations in the downwind areas. Monitoring location for collecting baseline data should cover overall the 10 km buffer zone i.e. dispersed in 10 km buffer area.*
- xii. *Project proponent to prepare Environmental Cost Benefit Analysis for the project in EIA/EMP Report.*
- xiii. *Heavy metals including other parameters in surface water quality shall be analyzed and provided in EIA Report Sulphur content.*
- xiv. *The parameters Arsenic, Lead and Silica shall also be analyzed in ambient air quality.*
- xv. *All internal road and connecting road to washery shall be proposed to be constructed of Concrete*
- xvi. *Clarification from The Principal Chief Conservator of Forests (PCCF) that washery does not fall under corridors of any National Park and Wildlife Sanctuary and submit the authenticated list of species (separately for schedule I species) from State Forest Department.*
- xvii. *PP shall submit wildlife mitigation plan prepared in consultation with the wildlife department.*
- xviii. *PP shall prepare green belt development plan in consultation with the forest department over an area of 33 %*

Agenda No. 3.4

Expansion of Block-B Opencast Coal Mine from 5.47 MTPA to 8 MTPA/ 10 MTPA (Normative/Peak) in mine leases area of 2257.17 ha by M/s Northern Coalfields Limited at village Naudhiya, P.O.- Gorbi, Tehsil Chitrangi, District Singrouli, (Madhya Pradesh) - Regarding the Amendment of terms of reference dated 18.11.2020

[Online proposal No. IA/MP/CMIN/427806/2023; File No. J-11015/80/2013-IA-II(M)]

3.4.1 The proposal is for amendment in Terms of Reference dated 18.11.2020 for Block-B Opencast Coal Mine from 5.47 MTPA to 8 MTPA/ 10 MTPA (Normative/Peak) in mine leases area of 2257.17 ha by M/s Northern Coalfields Limited at village Naudhiya, P.O.- Gorbi, Tehsil Chitrangi, District Singrouli, (Madhya Pradesh).

3.4.2 *PP did not attend the meeting and informed vide email dated 10th November, 2023 that the proposal may not processed. In its letter, PP also mentioned that:*

“Due to rejection of the proposal of Forest Clearance (Stage I) of 631.39 ha forest land for Expansion of Block-B OCP by MoEF&CC on 29.06.2022, the proposal for Amendment of TOR was submitted for revised total land area of 1756.77 ha considering reduced forest land of 139.86 ha. Now, the proposal of Forest Clearance (Stage I) of 139.86 ha forest land was put up for consideration in the FAC meeting held 20.10.2023. As per minutes of FAC meeting, the proposal has been recommended to MoEF&CC

by FAC for rejection citing that the proposal in its present form is not site specific as more than 66% of the reserve forest area which involves about 46,571 trees is proposed for dumping the overburden, which could be done over non-forest land”.

In view of the above, the proposal is **deferred** and shall be reconsidered as and when requested by PP.

Agenda No. 3.5

Integrated project for Expansion of coal washery in the Cluster XI group of mines (5.08 MTPA with a peak capacity of 6.604 MTPA) in a combined ML area of 3447.14 ha (3527.58 ha- 80.44 ha of forest land), Moonidih Washery (1.6 MTPA peak capacity) and additional/new coal washery of 2.5 MTPA of M/s Bharat Coking Coal Limited located in Jharia Coalfields, Village Gopinathdih, District Dhanbad (Jharkhand) – Reconsideration of Environmental Clearance – reg.

[Online Proposal no. IA/JH/CMIN/436050/2023; File No. J-11015/77/2011-IA.II (M)]

3.5.1 The proposal is for Environmental clearance for Integrated project for Expansion of coal washery in the Cluster XI group of mines (5.08 MTPA with a peak capacity of 6.604 MTPA) in a combined ML area of 3447.14 ha (3527.58 ha- 80.44 ha of forest land), Moonidih Washery (1.6 MTPA peak capacity) and additional/new coal washery of 2.5 MTPA of M/s Bharat Coking Coal Limited located in Jharia Coalfields, Village Gopinathdih, District Dhanbad (Jharkhand).

3.5.2 The EAC during deliberations noted the following:

- Environment clearance to the project was obtained under EIA Notification, 2006 vide Ministry’s letter No. J-11015/77/2011-1A-II(M) dated 26.08.2013 with amendment on 26.07.2019 for 6.604 MTPA (PEAK) & Moonidih Washery (1.6 MTPA) in mine lease area of 3447.03 ha.
- Earlier, the proposal was considered in the 48th EAC meeting held during 25-28 August, 2023 wherein the committee deferred the proposal for the clarifications. The project proponent has submitted the information vide letter dated 30.10.2023 on PARIVESH Portal are as follows:

S. No.	Observation of EAC	Reply by PP
1.	Environmental control measures needs to submit with proper mitigation plan along with adequate budget.	As per the directions given by EAC, the Capital and Revenue Cost of EIA-EMP detailing the quantum of mitigation measures has been prepared. Now, it is revised to Rs 1098.13 lakhs against earlier proposal of Rs 490.00 lakhs (increase of 608.13 lakhs) The revised Cost estimate has been enclosed.
2.	Water balance sheet to be prepared considering the water discharge from Mine	Water balance sheet has been revised and enclosed. The revised water requirement of the

	water and as per the water requirement for coal washery.	washery Project is 870 m3/day sourced from mine water only. Therefore, dependency on source water – Mine water: 100% and Ground water: 0.0%.
3.	Public Hearing plan to be revised with required activity and budgetary allocation.	As per the directions given by EAC, the Budgetary provisions and commitments have been revised as per the issues raised in Public hearing. Now it is revised to 567.50 lakhs against earlier proposal of Rs.417.57 Lakhs and enclosed. The details of the budget proposed was deliberated during the meeting
4.	Integrated coal evacuation plan to be submitted which includes the coal from mining and as well as from coal washery.	Integrated Coal Evacuation Plan is enclosed.
5.	PP shall submit the copy of forest clearance for 80.44 ha or copy of revised mine plan after excluding the forest area of 80.44 ha i.e for net ML area of 3447.14 ha (without forest area). Also, revised Mine Plan is required to be submitted for change in land use pattern	Mining Plan of Moonidih UG was revised excluding Forest land based on which EC amendment was granted on 26.07.2019 The Copy of Mining Plan approval along with section mentioning the establishment of additional washery is enclosed.
6.	PP shall submit the details w.r.t. capacity of pipe conveyor system to convey about 4.1 MTPA raw coal for to washery and evacuation by conveyor till railway siding.	Details of the Pipe Conveyor system with capacity to convey 4.1 MTPA raw coal is enclosed. This pipe conveyor will received raw coal from Moonidih mines and discharge this crushed raw coal to the proposed raw coal storage bunker of Moonidih washery and will totally avoid road transportation, prevent spillage, scattering of crushed coal and dust in the populated area between mine and washery. One number of pipe conveyor of rated/design capacity of 600 TPH / 720 TPH will be provided. The total length of pipe conveyor will be 2100 M.
7.	PP shall submit the MoU/Agreement to the reject utilizer in the Thermal Power Plant for 0.6 MTPA reject capacity. Also, current mechanism for disposal of washery rejects and mode of transportation of rejects.	No rejects will be generated by the washery. The washery is a two product washery and the two products are Clean Coal and Middlings. A letter from M/s SAIL to M/s BCCL expressing intent for procurement of washed coal and list of Fuel Supply Agreement is enclosed.

8.	PP shall submit the details of number of trees to be cut and measures to protect the existing trees by suitably laying of plant facilities. Further, PP shall submit plan for peripheral plantation as such that it can be completed before commissioning of the washery plant	As per survey 10-12 Trees are proposed to be cut while laying of the plant facilities. However, a green belt in Area of 7.64 ha will be developed. Before commissioning of Washery, two ha of Plantation shall be completed and after construction 5.64 ha of plantation will be carried out.
9.	Status Employment to be submitted as per the issue raised in Public Hearing	A Certificate is hereby enclosed indicating that nearly 70% employment by WJ Area is provided to locals.
10.	PP shall submit authenticated or certified list of species present in 10 km buffer and core area (mine lease area).	Certified list of species in Core and Buffer Zone from CMPDI were submitted and submitted during the meeting
11.	PP shall submit Action Taken report with time line for non-compliance and partial compliance highlighted in Certified compliance report by Ministry's IRO.	Updated ATR against the Not complied and Partly Complied condition are enclosed. ATR was timely submitted to MoEFCC earlier and included in EIA-EMP is enclosed.
12.	PP shall submit the certificate from translator regarding authentic translation of public hearing minutes/records.	The Legal Translated document is enclosed.
13.	PP shall submit plan of action for desilting of drains outside washery boundary and pond adjacent to railway siding alongwith conservation plan of Damodar river banks, and grassing of slopes of OB dump	De-silting of drains and sedimentation ponds is periodically done at an interval of six months. Further, 02 additional sedimentation ponds have already been constructed and Pucca sedimentation pond is proposed to be constructed. The periodicity will be increased to very three months. Further, Damodar River Bank Conservation Plan along with grassing of slopes of OB has been enclosed.

ii. PP has submitted the Mine plan and Mine Closure plan for Moonidih UG Colliery having mining land area of 1982.90 ha (i.e. 2063.45 ha – 80.44 ha) vide dated November 2018. Along with the Mine plan and mine closure plan for Kendwadih OC mine for 217.535 ha vide dated May 2018.

3.5.3 *The Committee after deliberation observed that the instant proposal is for setting up of additional coal washery for Moonidih UG Mine apart from the existing Moonidih Washery of 1.6 MTPA.*

It was observed that the project proponent has submitted their revised Mine plan for Moonidih Colliery having Mining area of 1982.90 ha (i.e. 2063.45 ha – 80.44 ha of forest area involved) along with the Mine plan for Kendwadih OC mine having mine area of 217.535 ha. Further, Committee asked the PP to submit the latest mine plan for the active mines (after revising every 5th year) and emphasized to submit the mine closure status for the mines namely Pootkee UG Mine, Kachi Balihari UG Mine and others lying inside the Cluster XI group of mines.

The Committee expressed displeasure on the weak plantation within and outside the mine. It was emphasized that the project proponent should complete the plantation (by Miyawaki method) in an area of 33% of total mine lease area of 3447.14 ha (i.e.1137.56 ha) with detailed action plan and with documentary proof. It has also been observed that the Damodar river flowing adjacent to the project boundary of the Cluster XI group of mines, therefore the Committee asked the PP to maintain 7.5 m width of dense plantation along the Mine boundary with the safety barrier all along the adjacent bank of Damodar river. PP was advised for preparing the River conservation plan for improvement in water quality of river at u/s and d/s of mine (1 km stretch at upward and downward side of u/s and d/s location)including de-siltation, if required, adjacent to the Mine boundary. It shall be ensured that no mine water shall enter into the river. The Committee observed unscientific design of weep holes and advised to prepare properly.

As per the observation of IRO, the Committee asked PP to immediately start the coal transportation inside/outside the mine in tarpaulin covered trucks. The Committee took a note that Mine fire in the area, and that required to be dealt expeditiously.

In view of the above, committee asked the project proponent to submit compliance for the following details:

- i. PP to submit the latest mine plan and mine closure plan for the active mines (as per the directions from MoC to revise the mine plan in every five year) along with status of mine closure for the mines namely Pootkee UG Mine, Kachi Balihari UG Mine and others lying inside the Cluster XI group of mines.*
- ii. PP has to submit the status of plantation and complete plantation plan (by Miyawaki method) in an area of 33% of total mine lease area of 3447.14 ha (i.e.1137.56 ha) with proof of photographs of area. Also, since the area of washery is already in possession of PP, details of peripheral plantation shall be submitted.*
- iii. PP to submit the adequate River conservation plan for Damodar river including de-siltation plan, river safety barrier 100m apart from river, plan for dense plantation with a 7.5m width all along the bank of Damodar river. The revised plan shall be certified from the recognized institute having expertise in the field of Hydrology to integrate with State River Action Plan.*
- iv. PP to submit the photographs for coal transportation through tarpaulin covered trucks having capacity 35-40 tonnes payload capacity.*
- v. PP shall submit the details of expenditure incurred towards CSR and proposed to be spent as Regional office has highlighted the lower expenditure.*
- vi. PP to submit the current employment status in the company certified from the state labour department.*
- vii. PP to submit the preparedness of mechanized system with their time line incorporating tendering detail.*
- viii. PP to submit the transportation route for raw & washed coal and reject on the Kml file alongwith mitigation plan during road transportation till mechanized system put in place.*
- ix. PP to submit the status of any pending court cases or disposed of cases before Civil court, High court, Supreme court and in any tribunal. In addition to that PP to submit the status of Court*

cases with the detail of WP(C) 4944/2011, WP(PIL) 387/1997 and IA no. 505/13 (pending matter in Hon'ble High Court, Ranchi).

- x. PP shall submit the activities being done and proposed to stop illegal coal mining from closed underground mine and operational opencast mines.
- xi. PP shall submit the details of pre-mining land use, during mining and post mining of Cluster XI group of mines as per ToR.
- xii. PP shall submit number of mine fire incident, subsidence and control activities being taken within and outside (if any) its mine lease area.
- xiii. PP shall submit a water balance study with utilization of mine water and Zero Liquid Discharge

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

Agenda No. 3.6

Expansion of Amelia (North) combined OC & UG coal mine with increase of production capacity from 3.36 MTPA to 3.92 MTPA in Mine Lease Area of 728.75 ha by M/s Jaiprakash Power Ventures Limited at village Majhauri, Tehsil Deosar, District Singrauli (Madhya Pradesh) – Reconsideration for Environmental Clearance under OM dated 11.04.2022 (Stage-II expansion) reg.

[Online Proposal No. IA/MP/CMIN/444292/2023; File No. J-11015/355/2006-IA-II (M)]

3.6.1 The proposal is for Environmental Clearance for Amelia (North) combined OC & UG coal mine with increase of production capacity from 3.36 MTPA to 3.92 MTPA in Mine Lease Area of 728.75 ha by M/s Jaiprakash Power Ventures Limited at village Majhauri, Tehsil Deosar, District Singrauli (Madhya Pradesh).

3.6.2 The EAC during deliberations noted the following:

Earlier, the proposal was considered in the 50th EAC meeting held on 27th September 2023 wherein the committee has deferred the proposal for desired information. The project proponent has submitted the information vide letter dated 01.11.2023 and on PARIVESH Portal are as follows:

S. No.	Observation of EAC	Reply by PP
1.	PP to either submit the certificate from the SPCB stating the instant project is out of Severely Polluted Area of Singrauli or otherwise comply the	Distance Certificate of Amelia (North) Coal Mine to Severely Polluted Area has been received from Madhya Pradesh Pollution Control Board, Bhopal on 27.10.2023. The distance from Amelia (North) Coal Mine to Severely Polluted Area is 11.68 km as certified in letter received from MPPCB, Bhopal.

	<p>complete SPA conditions followed by the submission of compliance report from IRO.</p>	
<p>2.</p>	<p>PP should submit the court case status related to the C.A. No. 6233/2019 "M/s Jaiprakash Power Ventures Ltd. Vs Human Right Redemption Social Welfare Association of India and Ors."</p>	<p>A Civil Appeal No. 6233/2019 has been submitted to the Hon'ble Supreme Court. The Hon'ble Supreme Court has stayed the judgment Order 4.07.2019 of National Green Tribunal (NGT) and the case is pending in Hon'ble Supreme Court.</p> <p>Copy of SC order is given in subsequent slides.</p>
<p>3.</p>	<p>PP shall submit the mitigation measures to be adopted/being adopted w.r.t. movement of leachate arising from OB dumps (mixed with fly ash) area to surrounding forest area and water bodies in perspective of Kanchan river and Kanchan reservoir.</p>	<p>Overburden dumping in external dumps A&B has been completed with Biological reclamation. No dumping is carried out in external dumps at present. <i>No dumping of fly ash had been undertaken in the external dumps A&B. Hence, the rain water runoff and the seep out of percolated water does not have influence of fly ash.</i> The OB dump comprises of sandstone, carb shale type of material, which is inert in nature. 4,39,410 nos. of plants have been planted in both external dumps upto September 2023. Toe of the over burden Dump A was at a distance varying from about 60m to 250 m from River Kanchan. Kutchra garland drain have been provided and maintained around Dump A. Wherever required, in between toe of the dump and Kanchan river, retaining walls and Gabion walls have been constructed on eastern side and western side of the Dump A, to arrest flow of rain wash, should there be such an eventuality in case of heavy rains. Toe of the overburden Dump B is at a distance varying from about 115m to 150m from River Kanchan. Kutchra garland drain has also been provided and maintained around Dump B. In between toe of the dump and Kanchan river, Retaining walls of 3209 meter long (2 meter height, 2.45 meter width at base and 0.45 meter at the top) at the toe of external overburden Dump 'A' & 'B' have been constructed to check run-off and siltation. Besides the retaining wall 3830 meter length of Gabion walls have been constructed at the toe of Dump A & B with adequate height (3-4 meter) and width (1-3 meter). The</p>

		<p>water quality of Kanchan river is periodically tested. The latest test reports are shown in slides and parameters are found to be within limit, showing that there is no contamination due to dumping. Furthermore, there shall be no mining activity including dumping of overburden within 100 m of Kanchan River and there shall be no discharge of any effluents or wastes of any kind from the lease area into the river. Overburden dumping is being carried out only in backfill dump area. The internal/backfill dump is at safe distance from the river i.e. more than 1.5 km. <i>No fly ash dumping has been carried out in the backfill dump, no shall be carried out in the future.</i></p>
4.	<p>PP should submit a copy of the latest Approved Mining plan along with progressive mine closure plan with year wise past production detail.</p>	<p>Mining Plan along with Progressive Mine Closure Plan has been prepared for targeted coal production 3.92 MTPA in October 2022 (i.e. 40% expansion with respect to 2.8 MTPA production) and the same has been approved by Board of M/s JPVL under minor changes, clause 1.3.(B) of Guidelines for Preparation, Formulation, Submission, Processing, Scrutiny, approval and revision of Mining Plan for the coal and lignite blocks, issued by Ministry of Coal vide O.M No.34011/28/2019-CPAM dated 29.05.2020 and also submitted alongwith our application no. IA/MP/CMIN/287311/2022 (SW/287295/2022), whereafter EC for the first 20% enhancement of coal production was granted vide letter no. J-11015/355/2006-IA-II(M) dated 16.01.2023. A copy of the approval letter and the Mining Plan is shown herewith.</p>
5.	<p>PP should submit the detail number of exotic species and native species planted in and around the ML area.</p>	<p>Initial plantation was started from 2013-14 in consultation with Forest Department. A total of 4,67,709 plants have been planted till 30th September 2023. Out of which 2,57,066 plants have been planted with following <i>native species</i> i.e, Mahuwa, Neem, Sirus, Jamun, Aamla, Bargad, Peepal, Sagwan, Arjun, Imli, Bel, Bair, Harra & Bhera, Kachnar, Amaltas, Gular, Semal, Molsiri, etc. But some saplings did not survive due to destruction by animals and survival rate was below 50%. After gaining experience from previous plantation for so many years in this area, the Company had started plantation of <i>Acacia auriculiformis</i> and <i>Acacia semia</i> during last three years along with native species such as Neem, Jamun, Karanj, Aam, Kachnar. The survival rate can now be maintained at more than 85%. Balance 2,10,643 plants have been planted with <i>exotic species</i>. <i>From now onward ratio of native species will be kept on higher side as compare to exotic species.</i></p>

6.	PP shall submit the plan of construction for pavement of road wherein road transportation exist i.e. within the ML area and outside ML area till National Highway.	<p>Plan for construction of pavement road for transportation within the M.L. area and outside ML area has been prepared and it will be completed up to 31.10.2025 at a cost of Rs. 2.87 crores.</p> <table border="1"> <thead> <tr> <th rowspan="2">S. No.</th> <th rowspan="2">Particulars</th> <th colspan="2">Area</th> </tr> <tr> <th>Within Lease Area</th> <th>Outside Lease Area</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Location</td> <td>Haul Road Weigh Bridge to HEME and from C-Point to CHP</td> <td>Mines Gate to HEME</td> </tr> <tr> <td>2</td> <td>Length</td> <td>800 (m)</td> <td>915 (m)</td> </tr> <tr> <td>3</td> <td>Width</td> <td>10 (m)</td> <td>10 (m)</td> </tr> <tr> <td>4</td> <td>Cost (Rs.)</td> <td>1,62,06,700.00</td> <td>1,25,18,900.00</td> </tr> <tr> <td>5</td> <td>Completion Date</td> <td>31.10.2025</td> <td>31.10.2025</td> </tr> </tbody> </table> <p>The details cost estimate of the proposed paving of the road is shown in slide. Metal topped road already exists outside the M.L. area from Mine gate to National Highway. No coal transportation is carried out outside the premises by roads.</p>	S. No.	Particulars	Area		Within Lease Area	Outside Lease Area	1	Location	Haul Road Weigh Bridge to HEME and from C-Point to CHP	Mines Gate to HEME	2	Length	800 (m)	915 (m)	3	Width	10 (m)	10 (m)	4	Cost (Rs.)	1,62,06,700.00	1,25,18,900.00	5	Completion Date	31.10.2025	31.10.2025																																																																																				
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7.	PP should submit the plantation plan for OB and progressive reclaimed area.	<p>Plantation plan for OB and progressive reclaimed area till the life of mine are as under :-</p> <table border="1"> <thead> <tr> <th rowspan="2">Year</th> <th rowspan="2">External Dump (ha)</th> <th colspan="5">Plantation Programme</th> </tr> <tr> <th>Back filed Area (ha)</th> <th>Un-disturbed Area (ha)</th> <th>Barrier zone</th> <th>Total (ha)</th> <th>Total no. of trees</th> </tr> </thead> <tbody> <tr><td>2023-24</td><td>10</td><td>26.5</td><td>-</td><td></td><td>36.5</td><td>91250</td></tr> <tr><td>2024-25</td><td>10</td><td>26.5</td><td></td><td></td><td>36.5</td><td>91250</td></tr> <tr><td>2025-26</td><td>10</td><td>26.5</td><td></td><td></td><td>36.5</td><td>91250</td></tr> <tr><td>2026-27</td><td>10</td><td>26.5</td><td>-</td><td></td><td>36.5</td><td>91250</td></tr> <tr><td>2027-28</td><td>8.29</td><td>26.5</td><td>-</td><td></td><td>34.79</td><td>87000</td></tr> <tr><td>2028-29</td><td></td><td>26.5</td><td>-</td><td></td><td>26.5</td><td>66250</td></tr> <tr><td>2029-30</td><td></td><td>26.5</td><td>-</td><td></td><td>26.5</td><td>66250</td></tr> <tr><td>2030-31</td><td>-</td><td>27.5</td><td>-</td><td></td><td>27.5</td><td>68750</td></tr> <tr><td>2031-32</td><td>-</td><td>27.5</td><td>-</td><td>2</td><td>29.5</td><td>73750</td></tr> <tr><td>2032-33</td><td>-</td><td>27.5</td><td>-</td><td>2</td><td>29.5</td><td>73750</td></tr> <tr><td>2033-34</td><td>-</td><td>27.5</td><td>-</td><td>2</td><td>29.5</td><td>73750</td></tr> <tr><td>2034-35</td><td>-</td><td>32.5</td><td>-</td><td>2</td><td>34.5</td><td>86250</td></tr> <tr><td>2035-36</td><td>-</td><td>32.5</td><td>-</td><td>1</td><td>33.5</td><td>86250</td></tr> <tr> <td>Total</td> <td>48.29</td> <td>360.5</td> <td>0</td> <td>9</td> <td>417.79</td> <td>1047000</td> </tr> </tbody> </table>	Year	External Dump (ha)	Plantation Programme					Back filed Area (ha)	Un-disturbed Area (ha)	Barrier zone	Total (ha)	Total no. of trees	2023-24	10	26.5	-		36.5	91250	2024-25	10	26.5			36.5	91250	2025-26	10	26.5			36.5	91250	2026-27	10	26.5	-		36.5	91250	2027-28	8.29	26.5	-		34.79	87000	2028-29		26.5	-		26.5	66250	2029-30		26.5	-		26.5	66250	2030-31	-	27.5	-		27.5	68750	2031-32	-	27.5	-	2	29.5	73750	2032-33	-	27.5	-	2	29.5	73750	2033-34	-	27.5	-	2	29.5	73750	2034-35	-	32.5	-	2	34.5	86250	2035-36	-	32.5	-	1	33.5	86250	Total	48.29	360.5	0	9	417.79	1047000
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8.	PP shall submit the plan of action to display the CAAQMS data at entry and exit gate of mine office and shall be share with the SPCB/CPCB.	03 Nos. Continuous Ambient Air Quality Monitoring Stations (CAAQMS) have already been installed and additional 01 No. Continuous Ambient Air Quality Monitoring Stations (CAAQMS) has been installed as per the Condition of granted Environmental Clearance letter dated 16.01.2023 for coal production target 3.36 MTPA. A digital display has already been established at entry and exit gate of mine office for displaying the real time data and URL, ID & Password of CAAQMS Connectivity already been shared with SPCB/CPCB. Photographs of CAAQMS & Display Board are attached.
9.	Status of installation Fog cannons including the movable fog cannons for the Mines, haul road, CHP area and other required area.	Mist fog cannon (Truck Mounted) is in operation in the Mines, haul road and CHP area. In addition to above 52 nos. static high pressure Water Sprinklers have been installed in length of 3000 meters along the coal transport road from mine to CHP and are in operation. Photographs of Mist Fog Cannon were displayed
10.	PP should submit the status of development of ECO park in 2.0 ha land.	A total 14000 nos. of herbal & medicinal plants have been planted in ECO park i.e. Alovera, Arjuna, Green Chireta, Lemon Grass, Terminalia, Texas Sage etc in 2.0 ha . The park is functional with fullfledged nursery, horticulture staff, water supply and open to visitors.
11.	PP shall submit the expenditure status of Rs. 14 crore submitted against the wildlife conservation plan.	The Wildlife Conservation Plan of Impact Area of Amelia (North) Coal Block had been prepared by Dr. R. C. Sharma, IFS (Retd.), Founder PCCF, Chhattisgarh and Ex Wild Life Chief & C.W.L.W (Undivided M.P.) in September 2012. The same was approved vide letter no. F-5-2/2010/10-3/2591 dated 01.11.2012. Accordingly, an amount of Rs 14 crores had been deposited by the prior allottee ie. MPSMCL in CAMPA A/c No. 391702010098522 on 24.11.2012 towards pro-rata share of Amelia (North) Coal Block. The wildlife plan since then is being implemented by the Office of the Principal Chief Conservator Forest (Wild Life), Bhopal. The Company requested them vide letters dated 26.05.2016, 01.09.2022 & 12.10.2022 to intimate us the present position of the implementation of Wildlife Conservation Plan. In response to above, the Upper Principal Chief Conservator of Forests has sent a letter dated 12.10.2022 to the Regional Director, Sanjay Tiger Reserve, Sidhi mentioning that in the year 2014-15 an amount of Rs. 13,680 lakhs was allotted to All coal blocks of Singrauli Main Basin

		including Amelia (North) Coal Block, out of which Rs. 1,270 lakhs has been spent. Another letter has been sent to the concerned MP Forest Department for obtaining the information regarding the incurred expenses for Wildlife Conservation and Management on dated 17/18.08.2023. Copy of letter is attached.								
12.	PP shall review the recommendation of already prepared Site-Specific Conservation Plan / Wildlife Management Plan in pursuance of increase in production capacity from 2.8 to 3.92 MTPA.	The site-specific Wildlife Conservation and Management Plan, along with its recommendations, was based on area of the Amelia (North) Coal Mine and was not based on quantum of coal production. The same was approved vide letter no. F-5-2/2010/10-3/2591 dated 01.11.2012. Accordingly, an amount of Rs 14 Crores had been deposited by the prior allottee i.e. MPSMCL in CAMPA A/c No. 391702010098522 on 24.11.2012 towards pro-rata share of Amelia (North) Coal Block.								
13.	Status of preparation of Riverine/Riparian Ecosystem conservation & Management Plan.	The Riverine/Riparian Ecosystem conservation & Management Plan is currently being prepared by Greencindia Consulting Private Ltd. A team of Greencindia Consulting Private Ltd. visited on 29 & 30.09.2023 at site for the collection of water samples and other information w.r.t. Riverine/Riparian Ecosystem conservation & Management Plan. A copy of Work order is being attached.								
14.	PP shall revise the EMP budget capital cost as well as recurring cost.	<p>Approximately Rs. 2.91 Crores capital cost was proposed on EMP Budgetary Provision which included recurring as well as investment for FY 2021-22 in EIA & EMP Report for expansion of coal production 2.8 to 3.92 MTPA. The investment on EMP has been envisaged Rs. 350.55 lacs as a Capital investment and 175.73 lacs for recurring expenditure is envisaged for FY 2023-24 during the expansion of production. The total EMP Budgetary Provision for FY 2023-24 is 5.26 Crores given below:</p> <table border="1"> <thead> <tr> <th>Sl. No.</th> <th>Particulars</th> <th>Capital Cost, Rs. lakhs</th> <th>Annual Recurring Cost, Rs. lakhs</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>ENVIRONMENTAL EXPENSES</td> <td></td> <td></td> </tr> </tbody> </table>	Sl. No.	Particulars	Capital Cost, Rs. lakhs	Annual Recurring Cost, Rs. lakhs	1	ENVIRONMENTAL EXPENSES		
Sl. No.	Particulars	Capital Cost, Rs. lakhs	Annual Recurring Cost, Rs. lakhs							
1	ENVIRONMENTAL EXPENSES									

	<ul style="list-style-type: none"> Plantation related purchases for celebration of occasion, media for WTP, Continuous Ambient Air Quality Monitoring Station, Peizometer construction with telemetric device 	56	28.02
	<ul style="list-style-type: none"> Environmental Monitoring (Air, Noise, Water & Waste water, Soil, DG Stack, DG Noise, O&M STP & ETP) 		
	2 PLANTATION		
	<ul style="list-style-type: none"> Seed, fertiliser, plants, bags, cutters, fawda, pots & other horticulture items 	4	19.83
	<ul style="list-style-type: none"> Water tanker hiring, tractor hiring 		
	3 MINING RESTORATION ACTIVITIES		
	<ul style="list-style-type: none"> Construction of minor structures, purchase of PC & its parts 	290.55	127.88
	<ul style="list-style-type: none"> Water sprinkler O&M, AMC charges, hiring of machines, diesel charges, lab costs, etc 		
	TOTAL	350.55	175.73

3.6.3 The EAC, after deliberations observed that instant project is for expansion and PP has applied under OM dated 11.04.2022 for enhancement upto 40% (Stage-2) capacity expansion under para 7(ii) of EIA Notification, 2006.

The Committee noted that Madhya Pradesh Pollution Control Board, Bhopal on 27.10.2023 certified that the instant project is 11.68 km away from the Severely Polluted Area. It has been mentioned that boundary of Amelia (north) and SPA was marked on google earth, accordingly distant is more than 11.6 km i.e. 11.68 km is being displayed. As per submissions of PP, since the project lies beyond the area of SPA, the condition stipulated in earlier EC could have been amended. EAC cautioned EIA Consultant to provide adequate advice to PP in the matter. However, based on the letter from Madhya Pradesh Pollution Control Board, EAC agrees with the observations of IRO-Bhopal

The Committee noted the details of species planted near to the ML area and dump area. Also, 4 no of operational CAAQMSs are operational within the ML area. In a court case pending before Supreme court, it is noted to be listed on 5th December 2023 for matter of "M/s Jaiprakash Power

Ventures Ltd. Vs Human Right Redemption Social Welfare Association of India and Ors.” (C.A. No. 6233/2019). Main issue in the matter is on protection of Kanchan river from all type of mining activities. As per the latest order, the Union of India (herein-Ministry of Coal) has been asked to file its submission regarding mine lease area). The Committee emphasized for planting dense trees adjacent to the Mine boundary towards Kanchan river alongwith construction of safety barrier all along the mine boundary so that the mine water should not enter into the River.

The Committee observed that merely 50 percent native/exotic species were grown, however it was desired that percentage of native species shall be increased and if in case of low survival rate then gap plantation shall be initiated with native species only.

In view of the above, committee asked the project proponent to submit the compliance for the following details:

- i. PP should submit the status of court case listed before Supreme court related to the C.A. No. 6233/2019 "M/s Jaiprakash Power Ventures Ltd. Vs Human Right Redemption Social Welfare Association of India and Ors.”*
- ii. PP should submit the protection plan for Kanchan river by making river safety barrier 100m apart from mine boundary as well as from Toe of dumping and Near dump area to be densely planted (by Miyawaki method) with native species.*
- iii. PP should prepare plan for construction of civil works in consultation with State department.*
- iv. PP should assign appropriate budget for construction of safety barrier and for dense plantation in order to protect Kanchan river.*
- v. PP should submit the photographs and recorded drone video of the Kanchan river joining the ML area.*
- vi. PP shall submit time series picture (before and after) of the reclamation of overburden dump.*
- vii. PP shall submit the time line for completing the development of eco-park as per EC condition and development of 11 ha of plantation with native species.*
- viii. PP shall clarify the discrepancy of mine lease area of 728.75 ha and submission of land use while mining as 819.6 ha and virgin area of 61.15 ha.*

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

Agenda No. 3.7

Expansion of Khadia Opencast coal mining project for increase in production capacity from 14 MTPA to 15 MTPA (increase of 10% w.r.t 10 MTPA) in land area of 1640 Ha by M/s Northern Coalfields Ltd. located in the village Khadia, Tehsil Dudhi, District Sonbhadra (Uttar Pradesh) & village Dhudhichua, Tehsil Singrauli, District Singrauli (Madhya Pradesh) - Environmental Clearance under OM vide F. No. IA3-22/10/2022-IA.III 07.05.2022 - [Availing total 50% relaxation of OM dealing with exemption of public hearing under clause 7 (ii) of EIA notification] – reg.

[Online Proposal No. IA/UP/CMIN/413536/2023; File No. J-11015/255/2006-IA-II(M)]

3.7.1 The proposal is for post facto Environmental Clearance issued under OM dated 07.05.2022 to avail 50% relaxation for project “Khadia opencast coal mining project for increase in production capacity from 14 MTPA to 15 MTPA (increase of 10% w.r.t 10 MTPA) in land area of 1640 Ha by M/s Northern Coalfields Ltd. located in the village Khadia, Tehsil Dudhi, District Sonbhadra (Uttar Pradesh) & village Dhudhichua, Tehsil Singrauli, District Singrauli (Madhya Pradesh)”.

3.7.2 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. LOCATION OF PROJECT

- (i) The project area is covered under Survey of India Topo Sheet No 63-L /12 and is bounded by the geographical coordinates ranging from Latitude 24°06'50.48" North to 24°08'59.22" North and Longitude 82°41'20.91" East to 82°44'27.55" East.
- (ii) Coal linkage of the project is for Anpara TPS (1630 MW) of UPRVUNL and Lanco Anpara TPS (1200MW) and it will also serve as Basket Linkage mine to meet the overall demand of power grade coal on NCL.
- (iii) Joint venture cartel has NOT been formed.
- (iv) 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 2050 nos. (As per Mining Plan 15 MTPA) persons will be provided from the project.
- (vi) The project is reported to be beneficial in terms of (i) Environmental: Post mining enhancement of green cover; (ii) Economic: Increase in employment potential and contribution to the exchequer of the adjoining area; (iii) Social: Improvement in social infrastructure of the adjoining area.
- (vii) Earlier, the environment clearance to the project was obtained under EIA Notification, 2006 vide Ministry’s F. No J-11015/255/2006-IA.II (M) dated: 23.03.2016 for 14.00 MTPA in mine lease area of 1640 Ha. Subsequently, environment clearance to the project has also been obtained under EIA Notification, 2006 vide Ministry’s F. No J-11015/255/2006-IA.II (M) dated: 27.07.2022 for 15.00 MTPA in mine lease area of 1640 Ha
- (viii) Terms of Reference granted on – (for EC proposals)- Standard ToR
- (ix) Total mining lease area as per block allotment is 1640 Ha. Mining Plan (Including Mine Closure Plan) has been approved by the NCL Board in 276th meeting on 30.05.2022.

II. LAND USE DETAILS OF MINE

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

Pre-mining land use details (Area in Ha)

S. No.	LAND USE	Within ML Area (Ha)	Outside ML area (Ha)	Total (Ha)
1.	Agricultural land(Tenancy Land)	449 Ha	Nil	449

2.	Forest Land	844 Ha	Nil	844
3.	Wasteland	0	Nil	0
4.	Grazing land	0	Nil	0
5.	Surface water bodies	0	Nil	0
6.	Settlements	0	Nil	0
7.	Others (Specify) • Government land	347 Ha	Nil	347
Total		1640 Ha	Nil	1640

Post- Mining:

S. No.	Land use during Mining	Land Use (ha)				
		Plantation	Water Body	Public Use	Undisturbed	TOTAL
1	External OB dump	258	0	0	0	258
2	Top soil dump	Top soil will be completely used in reclamation of dumps.				
3	Excavation	964	39	0	0	1003
4	Roads and Infrastructure	49	0	81	0	130
5	Residential area and Green Belt	0	0	142	0	142
6	Undisturbed Area (Safety Zone & Others)	107	0	0	0	107
Total		1378	39.00	223	0	1640

- (xi) Total geological reserve reported in the mine lease area 335.95 MT (since inception) with 296.85 MT (since inception) mineable reserve. Out of total mineable reserve of 296.85, 144.54 are available for extraction as on 01.04.2022. Percent of extraction is 88.36 % to the geological reserve.
- (xii) Three number of seams (namely Purewa Top, Purewa Bottom, Turra) with thickness ranging from 7.00 m to 22.93 m are workable. Grade of coal is G-8 (Average Grade), stripping ratio 4.61m³/t (balance as on 31.03.2022), while gradient is 2 to 4 degree.
- (xiii) Method of mining operations envisages by ‘combined mining system deploying dragline and shovel dumper combination and Surface Miner’ method
- (xiv) Life of mine is 11 years from 31.03.2022.
- (xv) The project has 2 number of external OB dumps in an area of 258 ha with 90 m height and 209.977 Mm³ of OB filled till 31.03.2023, 2 number of internal OB dumps in an area of 964 ha with 434.494 Mm³ of OB filled till 31.03.2023 and additional 611.564 Mm³ of OB is envisaged in the project.

(xvi) Total quarry area is 1003 ha out of which backfilling will be done in 964 ha while final mine void will be created in an area of 39 ha with a depth of 40m. Backfilled quarry area of 964 ha shall be reclaimed with plantation. Final mine void will be converted into a water body.

III. TRANSPORTATION OF COAL

(xvii) Transportation of coal has been proposed by dumpers in mine pit head, from surface to SILO / siding by Closed Conveyor Belt System and from SILO/ siding by MGR/Rail through automatic RLS (Rapid Loading System). Also, provision of dispatch by road may be considered for meeting the demands of small consumers of various industries.

(xviii) Reclamation Plan in an area of 1417 ha, comprising of 258 ha of external dump, 964 ha of excavated area and 61 ha of green belt, 95 ha land of built-up area will be planted, 39 Ha of hydro reclamation. In addition to this, 107 Ha, included in the safety zone/rationalization area, has also been proposed for green belt development.

(xix) 844 ha of forest land has been reported to be involved in the project. Approval under the Forest (Conservation) Act, 1980 for diversion of 664 ha of forest land for non-forestry purposes has been obtained vide F No. 8- 298/87-FC dated 30.07.1990 in UP state and 180 Ha of Forest Clearance obtained vide No.8-85/2005-FC dt. 14/09/2010 for 180 ha in MP State.

(xx) No National Parks, Wildlife Sanctuaries and Eco-Sensitive Zones fall within 10 km boundary of the project

(xxi) Wildlife Conservation Plan for Schedule -I:- NA

(xxii) The ground water level has been reported to be varying between 0.85 m to 5.65 m during pre-monsoon and between 0.35 m to 4.65 m during post-monsoon (from 2011 to 2021). Total water requirement for the project is 2100 KLD for industrial use, 675 KLD for Fire Fighting and 1300 KLD for Domestic purpose.

(xxiii) Application for obtaining the approval of the Central Ground Water Authority for ground water clearance for Khadia OCP, has been submitted on 29.03.2020.

IV. DETAILS OF PUBLIC HEARING & RELATED ISSUES

(xxiv) Public Hearing for the project of 10.00 MTPA capacity in an area of 1640 Ha was conducted on 06.04.2005 and 18.04.2006 at Samudayik Bhawan, Waidhan, Singrauli (under the chairmanship of Collector, Sidhi District) and Collectorate Auditorium, Sonebhadra respectively (under the chairmanship of Collector, Sonebhadra). Major issues raised in the public hearing include community development works and infrastructure etc. Appropriate action to address the issue raised in the public hearing have been taken.

(xxv) Commitment made by project proponent to address the public hearing concerns in lieu of Corporate Environment Responsibility (CER) to be mentioned in the following table.

	Particulars		khs)	khs)	as)
	(cleaning of public road	road			
	ontrol of road dust due to	road			
	ublic transport)				
	ation in community areas	tion			
	ontrol measures at nearby	s			
	villages				
Total					

- (xxvi) Hearing has already been taken as under: The proposal is for enhancement in coal production capacity under clause 7(ii) of EIA Notification, 2006, which exempts from requirement of public hearing.
- (xxvii) Consent to Operate for the existing capacity was obtained from the MPPCB on 28.12.2022 and is valid till 31.12.2023 and from UPPCB on 16.12.2022 and is valid till 31.12.2024.
- (xxviii) No River/nalla is flowing near boundary of lease.
- (xxix) Regular monitoring of ambient air quality is being carried out on fortnightly basis. The documented report is submitted to MPPCB, UPPCB, and also to MoEF&CC 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.
- (xxx) No court cases, violation cases are pending against the project of the PP.
- (xxxi) The project does not involve violation of the EIA Notification, 2006 and amendment issued thereunder. The coal production from the mine was started from the year 1991-92 onwards. No excess production of coal from the sanctioned capacity has been realized since the commencement of mining operation. The Coal Production, realized from the project, from 1993-94 onwards, is given below.

V. BENEFITS OF THE PROJECT

- (xxxii) The project involves nil project affected families in expansion.
- (xxxiii) Total cost of the project is Rs. 2091.60 Crore. Cost of production is Rs. 1032.81 /- per tonne, CSR cost is as per CIL CSR Policy, 2021, 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/- per tonne of coal production of previous year, R&R cost is Nil. Environment Management Cost is Rs. 2758.64 Lakhs.
- (xxxiv) Consent to Operate for the existing capacity was obtained from the MPPCB on 28.12.2022 and is valid till 31.12.2023 and from UPPCB on 16.12.2022 and is valid till 31.12.2024.
- (xxxv) Past Production details comparison with existing EC since FY 1993-94.

Year	EC Sanctioned Capacity(MTPA)	Actual Production (MTPA)	Excess production beyond the EC sanctioned capacity
2012-2013	10.00	4.375	NIL
2013-2014	10.00	5.139	NIL
2014-2015	10.00	5.325	NIL
2015-2016	14.00	6.735	NIL
2016-2017	14.00	6.006	NIL
2017-2018	14.00	8.8	NIL
2018-2019	14.00	11.4	NIL
2019-2020	14.00	13.183	NIL

2020-2021	14.00	14.00	NIL
2021-2022	14.00	14.00	NIL
2022-2023	15.00	15.00	NIL

VI. CONTROL OF POLLUTION: (A) AIR & (B) WATER

(xxxvi) Environmental baseline data was generated in the winter season 04.10.2021 to 31.12.2021 at 08 locations (02 in core and 06 in Buffer Zone). Results indicate that

a) Particulate Matter (PM 10)

- In core zone Industrial area varies from 240.3 to 321.9 µg/m³.
- In buffer zone in Residential area varies from 72.5 to 143.8 µg/m³.

b) PM 2.5:

- In core zone Industrial area varies from 122.6 to 183.9 µg/m³.
- In buffer zone in Residential area varies from 37.3 to 90.4 µg/m³.

c) Sulphur Dioxide:

- In core zone under Industrial area varies from 27.6 to 40.9 µg/m³.
- In buffer zone in Residential area varies from 12.7 to 36.4 µg/m³.

d) Oxides of Nitrogen:

- In core zone under Industrial area varies from 33.1 to 45.6 µg/m³.
- In buffer zone in Residential area varies from 15.1 to 41.1 µg/m³.

The observed pollutant levels were compared with CPCB National Ambient Air Quality Standards and found to be mostly within the prescribed limits as setup by CPCB NAAQS.

(xxxvii) Surface water monitoring was done at 04 locations. The result indicates that the pH value in the range of 6.58 to 7.3. Dissolved oxygen is in the range of 6.2 mg/l to 7.1 mg/l, dissolved solids ranged from 112 mg/l to 422 mg/l, total hardness in the range of 84 mg/l to 276 mg/l. Surface water samples have coliforms ranges between 18 to 52 MPN/100 ML.

3.7.3 The committee during deliberations noted the following:

i. The following EC has been obtained by the PP:

EC Capacity (MTPA)	File no. & Date	Remarks
10.0	J-11015/255/2006-IA.II(M) dated 10.04.2007 with Public Hearing	Public Hearing held on 6 th April, 2005 in Madhya Pradesh and on 18 th April, 2006 in Uttar Pradesh.
14.0	J-11015/255/2006-IA.II(M) dated 23.03.2016	40% expansion-under clause 7(ii), EIA Notification 2006, OM dated 30.05.2014
15.0	J-11015/255/2006-IA.II(M) dated 27.07.2022	50% expansion-clause 7(ii) of EIA Notification 2006, OM dated 07.05.2022

- ii. The Forest Clearance (FC) detail for total forest land of 844.00 Ha involved in the ML area 1640.00 Ha are as follows:

Forest Land(Ha)	FC Reference No.
750.00	F No.8-298/87-FC dated 30 th July 1990 & lease for 40 years valid up to 29.07.2030
180.00	F No. 8-85/2005-FC dated 14.09.2010 and lease for 30 years valid up to 13.09.2030

- iii. The CTO detail are as follows:

From Madhya Pradesh Pollution Control Board	AW-57297 dtd:28.12.2022, Valid up to:31/12/2023
From Uttar Pradesh Pollution Control Board	Vide No. 166971/UPPCB/Sonebhadra (UPPCBRO)/CTO/both/SONBHADRA/2022 dated 16.12.2022 valid up to 31.12.2024

- iv. Mining plan and mine closure for Khadia expansion OCP for 15.0 MTPA has been approved by NCL board on 30.05.2022.
- v. Life of mine is 11 years from 31.03.2022.
- vi. Earlier, the proposal was considered in the 48th EAC meeting dated 25-28th August, 2023 wherein the proposal was deferred for the important observation. PP has submitted the reply vide letter dated 03.11.2023 are as follows:

No.	Observation of EAC	
1.	PP needs PP to submit the certified copy of annual production from CCO along with the justification for non-implementation of surface miner	<ul style="list-style-type: none"> • Certificate of annual production details has been received from the office of Coal Controller's Organization, Delhi vide no. CCO-S10S110/1/2023S-S-I dated 26.09.2023. • Supply order for procurement of 6 nos. of Surface Miners (including 1 no. for Khadia OCP) was issued by NCL vide ref. no. 6321095/122A1035/Surface Miner dated 31.03.2023. 1 no. Surface Miner is expected to be delivered at Khadia Project by the supplier firm in the month of November, 2023.
2.	PP shall submit the proof of implementation of silo loading facility for 10MTPA and 15 MTPA separately without considering the option of road transportation.	<ul style="list-style-type: none"> • Khadia OCP of NCL is equipped with 2 nos. of CHPs with Silo loading facility of 10.0 Mtpa total (One 4.0 Mtpa Capacity and another 6.0 Mtpa Capacity) through which coal is being transported via MerryGo-Round (MGR) arrangement. • Krishnashila OCP of NCL located adjacent to Khadia OCP has limited balance life about 4-5

		<p>years. This mine is having CHP with Silo loading facility (4.0 Mtpa Capacity) and a dedicated Belt-Pipe-Conveyor (BPC) system for Hindalco (Power) Industries of Annual conveying capacity more than 3 MTPA for transportation of coal. Hence, for continued gainful utilization of already existing coal evacuation infrastructure developed by NCL, about 2.00 Mtpa coal of Khadia OCP is being transported using internal road and dispatched through rail mode using CHP-Silo facility of Krishnashila OCP.</p> <ul style="list-style-type: none"> • Further, coal is also being transported using internal road and dispatched through rail mode using wharf wall of nearby Jhingurda Project of NCL. As wharf wall of Jhingurda Project has scope for evacuation of enhanced capacity of coal. • Further, at least 20% of the road transportation w.r.t. FY 2022-23 will be reduced in FY 2023-24. • For, considering the further enhancement in capacity of coal evacuation, construction of a Rapid Loading System (Silo) of 4.0 MTPA Capacity has been planned and is under process of technical scrutiny and construction is likely to be completed by March, 2025.
3.	PP shall plan to start Sal nursery plantation with capacity of 10,000 plants in an area of 10 ha.	<ul style="list-style-type: none"> • Khadia Project will develop Sal saplings in its nursery which is developed in an area of 1.5 ha with capacity of 1.0 lakh nos. of plant saplings per year. This nursery is maintained by Renukoot Division, Forest Department, Uttar Pradesh. • Moreover, NCL has invited offers for establishment of Sal Nursery from various premier institutes viz. Forest Research Institute (FRI), Dehradun, Renukoot Forest Division, Singaruli Forest Division, Madhya Pradesh Rajya Van Vikash Nigam and Chhatisgarh Rajya Van Vikas Nigam Limited. • Sal sapling preparation are likely to be started at these Nursery in 2024 and plantation of the developed saplings from FY 2025-26.
4.	PP shall start immediately mine boundary plantation with safe distance from the adjacent mine boundary. Also Drain side plantation to be done near to	<ul style="list-style-type: none"> • Major coal seams namely Purewa Top, Purewa Bottom and Turra of Singrauli coalfields are lying continuous. Khadia OCP and its adjacent mines namely Krishnashila OCP & Dudhichua OCP are

	<p>the Ambedkar road of 6.1 km.</p>	<p>operating on the same continuing seams. The adjoining mines extract coal in sequential operation at barrier so as to extract maximum coal.</p> <ul style="list-style-type: none"> • Plantation at this stage shall sterilize 36 Mt of coal worth Rs 6084 crores (considering base price Rs 1690/Te of G 8 grade) which shall result into not only national loss, but loss of natural resources also. We kindly pray EAC for exemption from this clause at this point of time. • Further, any coal left shall catch fire due to spontaneous heating which shall further aggravate environmental damage and create safety Hazard. • A proposal is in process for plantation on both sides of Cement concrete road of 6.61 Km constructed inside the mine in May'2023. Plantation work is likely to be completed in 2023-24. • Work of widening of State Highway is under progress in front of Ambedkar Nagar which is going to be completed in FY 2023-24. Widening of State Highway involves land area notified under Section-4 of Indian Forest Act, 1927 and Forest Clearance of the same is in process. As soon as demand for deposit of fund for plantation along this road is raised by Forest Department, Uttar Pradesh, same shall be deposited by Khadia Project. An affidavit in this regard has already been submitted to UP Forest Department.
5.	<p>After treatment, PP to plan 10 MLD of surplus water supply to near villagers & township with the dedicated pipeline and concrete plan may be submitted.</p>	<ul style="list-style-type: none"> • Ground Water Modelling Report for Khadia OCP (June, 2022) was submitted by Sri V. Pugazhendi, Viurgambakkam, Chennai, a Ground Water Modelling consultant accredited by Central Ground Water Authority. As per modelling report, seepage to the tune of 2704 m³/day from mine pit of Khadia OCP has been estimated. • At present, the current demand of water for industrial purposes within mine premises is about 2775 m³ /day, which is being met through ground water seepage and rain water accumulated. • Hence, there is no surplus water available at Khadia OCP to supply outside the mine for nearby villagers & township.
6.	<p>PP to conduct Source apportionment</p>	<p>Nagpur was engaged by NCL to carry out "Source</p>

studies to identify pollution sources and the amount they contribute to air pollution.	Apportionment Study of Singrauli Region”. The study report has been received from CSIR-NEERI, Nagpur in September, 2023.
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3.7.4 *The EAC observed that instant project has been submitted in compliance of Ministry’s OM dated 7th May, 2022 wherein 10% expansion in capacity was granted in view of shortage of coal in the country with exemption in public hearing. PP was required to submit the proposal within six months with EIA/EMP report based on standard ToR. In this project, it has been observed that EC under this OM was granted on 27th July, 2022 and PP has now submitted the application of its ratification beyond 6 months. The PP has now submitted the application second time for ratification of EC.*

The committee noted that the PP has submitted the EIA-EMP for the production capacity of 15 MTPA, CTO for 15 MTPA from MPPCB & UPPCB, copy of certified compliance report along with past production details certified from CCO (Ministry of Coal). During discussions, PP committed for deploying surface miner by November, 2023. Apart from 10 MTPA handling capacity, PP has proposed for installation of additional Rapid Loading System (Silo) of 4.0 MTPA Capacity before March, 2025.

The Committee asked the PP to implement extra mitigation measures (such as installation of fog cannon, wheel washing facility, implementation of electric vehicle and others.) in order to reduce the pollution inside/outside the ML area. The Committee emphasized to operationalize in-situ lab facility by December, 2023. It was desired that diesel truck movement should be reduced and electric/CNG/LNG driven dumpers shall be deployed. The Committee was of the view that Development of environmental lab within internal capacity of M/s NCL shall also be institutionalized instead of dependency on M/s CMPDI.

EAC observed that the instant project lies in Singrauli area which comes under Severely Polluted Area (SPA), PP has to take extra pollution mitigation measures with compliance of EC conditions.

*Based on the above, EAC **recommended** the proposal for grant of post facto Environmental Clearance for Khadia Opencast coal mining project for increase in production capacity from 14 MTPA to 15 MTPA (increase of 10% w.r.t 10 MTPA) in land area of 1640 Ha by M/s Northern Coalfields Ltd. located in the village Khadia, Tehsil Dudhi, District Sonbhadra (Uttar Pradesh) & village Dhudhichua, Tehsil Singrauli, District Singrauli (Madhya Pradesh), OM dated 7th May, 2022 and under provisions of EIA Notification, 2006 and its amendments therein with following additional specific conditions to be followed:*

Specific Conditions:

- i. *PP shall commission the additional Rapid Loading System (Silo) of 4.0 MTPA before December, 2024 in addition to the existing coal transportation facility (with 2 nos. of CHPs with Silo loading facility of 10.0 MTPA) having Merry Go-Round (MGR) arrangement.*
- ii. *PP shall use the mechanized system for 13.5 MTPA (i.e. ~90% of 15MTPA) and for the rest 1.5 MTPA (i.e. ~10 % of 15MTPA) by road through automatic truck loading system linked with SILO arrangement. Accordingly, SPCB shall issue the CTO.*

- iii. *PP shall develop environmental lab with adequate environmental monitoring instrument/equipment and deploy qualified manpower in its mine office instead of using laboratory of consultant for regular monitoring and analysis activity shall be done by December, 2023.*
- iv. *PP shall protect/preserve 10 ha Sal nursery with capacity of approximately 1.0 lakh nos. Sal saplings and yearly minimum 10,000 saplings to be distributed among near villagers for afforestation purpose. The planted trees shall be geotagged and its status to be submitted to Ministry's Regional Office with six monthly report.*
- v. *PP shall obtain No objection certificate from Central Ground water authority for expanded capacity.*
- vi. *PP to implement extra mitigation measures (such as installation of fog cannon, wheel washing facility, implementation of electric vehicle and others.) in order to reduce the pollution inside/outside the ML area in order to meet ambient air quality standards and a progressive report to be submitted to IRO, MoEF&CC.*
- vii. *PP needs to submit the audited figures against the expenditure and activities to be conducted for environment mitigation measures and addressing the issues of public hearing through dedicated monitoring mechanism. The maintenance of all activities raised in earlier PH, shall be covered through recurring cost of Public Hearing, which will be part of CSR budget.*
- viii. *PP shall create a "Public Grievance Redressal and Monitoring System" for resolving any issues related to the pollution of mines and complaint has to resolve as soon as possible not beyond 30 days. In this regard, adequate awareness to be spread among the public to address their grievance to company with simple and easy manner and for which company needs to devise the mechanism. The same shall be reported to IRO within 3 months. A logbook to be maintained by PP on "Public Grievance Redressal and Monitoring System."*
- ix. *PP shall submit status of audited report for progressive mine closure after commissioning of mine till date to IRO, MoEF&CC.*
- x. *PP shall start reclamation of the mine with combination of top soil and Fly ash with the development of grazing facility and other activities to be considered from the progressive mine closure plan.*
- xi. *PP shall fulfill the water requirement for agricultural purpose by creating artificial ponds and shall fulfil the drinking water requirement after treatment through dedicated well or alternate sources for villagers.*
- xii. *Water storage ponds shall be constructed of appropriate depth in nearby village in collaboration with Gram Panchayat.*
- xiii. *PP shall provide Quarterly health check-up with free medical facilities for the local villager's surrounding to the 10 km buffer area along with the ambulance facilities.*
- xiv. *PP shall establish a technical training institute in the area to train the local youth for better employment. A report shall be prepared & submitted upon the status of the training session already conducted in order to provide livelihood and skill development to near-by villagers to make them employable.*
- xv. *PP needs to submit the compliance of SoP issued by CPCB regarding dumping of mine void with fly ash.*

- xvi. *The project proponent shall include development of solar parks, eco-friendly-parks, fish farming pond, picnic spot and sports compound in its Mine Closure Report. Further if possible, maximum possible area of quarry shall be brought upto original ground level and handover the land to Project affected Families.*
- xvii. *Proper garland drain and retaining wall should be made (if required) and same should be revived from time to time.*
- xviii. *PP to complete the tree plantation particularly fruit bearing tree along the village road and safety zone and submit its status to Ministry's Regional Office. The plantation shall also be planted along the Mine boundary and Mine pit. A detailed report with GIS images of every six months subsequently be submitted in every six monthly report to justify the adequate tree plantation.*
- xix. *PP shall increase number of fixed type sprinkling system (near to haul road, stockyard, transportation route etc.) across the mine lease area in order to arrest the dust coming out from the mining activities.*
- xx. *PP shall install 100 m jet spray length in order to arrest the heavy air pollution on the roads and other dust generating points. More number of Fog cannons, Road sweeper and Mobile water sprinklers to be used on road.*
- xxi. *PP shall construct 25-sitting digital library in each village including the daily newspaper facility*
- xxii. *PP shall conduct third party audit of compliance of EC condition at an interval six months and its report shall be submitted to IRO, MoEF&CC.*
- xxiii. *The status of mine closure activities must be included in every six months' compliance report submitted to the state pollution control board and IRO.*
- xxiv. *PP to maintain the topped haul road properly to minimized the dust emission. PP to also develop pucca roads by seeking consent from the panchayat with widening of roads especially roads inter linking the villages within the study area of 10 km radius buffer zone.*
- xxv. *PP to install solar lights along the road used for transportation of minerals to avoid the accidents at night and also seek its maintenance. PP is asked to also identify the rural areas for installation of solar light with its maintenance within the study area of 10 km radius buffer zone within one year.*
- xxvi. *PP to provide bio toilets to the villages located within the study areas within 1 year from the grant of this EC.*
- xxvii. *PP shall pay to farmers of agricultural land if there is any loss due to pollution found by concerned District Commissioner as per extent rules or norms.*
- xxviii. *PP shall explore atleast 20% of overall fleet of dumpers/trucks/other vehicles as electrical or CNG/LNG based for transportation of coal/OB etc.*
- xxix. *PP shall conduct feasibility studies for assessment of voids for backfilling of ash and mixing of ash with overburden, taking up backfilling ash and OB mixing activities during operations as well as post closure of mines in line with the Fly Ash Utilization Notification, 2021.*
- xxx. *All the other terms and conditions of earlier EC dated 10.04.2007 (with Public Hearing), 23.03.2016, and 27.07.2022 shall also be complied.*

Agenda No. 3.8

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] – reg.

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

3.8.1 The proposal is for ratification 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).

3.8.2 The EAC noted the following during the meeting:

- i. The proposal was earlier considered in the 43rd EAC meeting held on 24th April, 2023, 48th meeting held during 25-28 August 2023 wherein the committee has deferred the proposal for desired information. The PP has submitted the observations of EAC vide its letter dated 23.10.2023 and on PARIVESH Portal are as follows:

S. No.	Observation of EAC	Reply by PP
1.	PP to submit application after achieving significant progress and operationalization of silo loading system for 15 MTPA and at least 50% works for the 25 MTPA.	<ul style="list-style-type: none">• The In-pit Conveyor along with Silo Loading System for 15 MTPA is already in operation since August 2014. Photographs of In-pit Conveyor and Silo (1&2) having 15 MTPA capacity are shown in next slides.• The Mechanized Siding with Silo Loading for 25 MTPA capacity is under construction. The physical and financial completion is 95% with an expenditure of Rs. 188.48 Crores. Photograph shown.• The delay in completion of Mechanized Siding with Silo for 25 MTPA capacity was caused in obtaining permissions from railway, as the conveyor gallery was crossing railway track and overhead electric lines of railway were fouling the Silo location, which needed to be shifted by Railways. The issues have been resolved and the construction works are expected to be completed by the end of December 2023 and Silo will be operational by January 2024

2.	PP to use dedicated pucca road with the fixed sprinkling system till the mechanization put in place.	A dedicated CC Road is under construction from Railway Siding to TRS with fixed sprinklers installed on the side, which will be used until mechanization is put in place. Out of 16.575 KM, 10.90 KM CC has been completed and balance 5.675 KM will be completed by 31.03.2024.																							
3.	PP shall submit status of mine closure as on today and future plan for progressive mine closure.	<p>The status of progressive mine closure activities taken up by the project:</p> <table border="1"> <thead> <tr> <th colspan="4">Technical & Biological Reclamation (As on October - 2023)</th> </tr> <tr> <th rowspan="2">Description</th> <th colspan="3">Reclamation details</th> </tr> <tr> <th>Area as per MCP (in Ha.)</th> <th>Technical reclamation Oct-23 (in Ha.)</th> <th>Biological reclamation Oct-23 (in Ha.)</th> </tr> </thead> <tbody> <tr> <td>External Dump</td> <td>206</td> <td>204.26</td> <td>204.26</td> </tr> <tr> <td>Internal Dump</td> <td>780</td> <td>223</td> <td>127.66</td> </tr> <tr> <td>Total</td> <td></td> <td></td> <td>331.92</td> </tr> </tbody> </table> <ul style="list-style-type: none"> • The fund deposited in escrow account till 31.03.2023=156.39 Cr. • Claim/reimbursement details against mine closure activities from 2010-2020 is shown in <u>next slides</u>. • The Progressive Mine Closure Plan is an integral part of the Mining Plan for 37.50 MTPA and balance life of mines was 5 years as on 01.04.2022. However, a Project Report for Dipka OC Expansion Project (40.00 MTPA) dovetailing existing project report of Dipka OC Expansion Project (25 MTPA) and additional property in the dip-side (Hardi, Renki and Part of Bhilai Geological block reserves) for a rated capacity of 40.00 MTY was approved on 24.12.2020, in which the project area will increase to 3096.24 Ha and life of mine to 26 years. 	Technical & Biological Reclamation (As on October - 2023)				Description	Reclamation details			Area as per MCP (in Ha.)	Technical reclamation Oct-23 (in Ha.)	Biological reclamation Oct-23 (in Ha.)	External Dump	206	204.26	204.26	Internal Dump	780	223	127.66	Total			331.92
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4.	Status of Stage II FC for forest area of 409.056 Ha involved within the ML area.	<p>The project has Stage-I Forest Clearance for entire revenue forest land i.e. 409.056 Ha. involved in the project. The status of FC is given below:</p> <table border="1"> <tr> <td style="text-align: center;">Status of Forest Clearance for Dipka Opencast Coal Mines</td> </tr> </table>	Status of Forest Clearance for Dipka Opencast Coal Mines																						
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		Area (Ha)	Stage-I /Stage-II FC letters no. & date	Status															
		133.707 Ha	F. No. 8-78/2006-FC, dated-31.01.2022	Stage – II clearance obtained															
		15.159 Ha	Diverted to NTPC (FC dated: 20.06.2004)																
		16.794 Ha	F. No. 8C/6/591/98/FCW/78, 11/01/2001																
		2.918 Ha	F. No.8B/115/2001-FCW/869, 03/04/2002 (In favour of STCIL)																
		168.578 Ha	SUB TOTAL-STAGE-II																
		206.638 Ha	F. No. 8-80/2006-FC, dated-20/10/2006 (Regularization)	Stage - I clearance obtained; Stage – II awaited-															
		33.84 Ha	F. No. 8-8/2006-FC, dated-03/03/2010 (Lease Renewal)																
		240.478 Ha	SUB TOTAL-STAGE-I																
		409.056 Ha	TOTAL FOREST LAND																
5.	Status of online sharing of CAAQMS data and plan for installation of another 2 CAAQMS system in consultation of SPCB.	<ul style="list-style-type: none"> One CAAQMS is already in operation which is connected with <u>CPCB portal</u> on 06.10.2023. As instructed by EAC in meeting dated:28.08.2023, A Proposal for procurement of additional 02 CAAQMS has been approved (<u>See Annexure</u>). <p>The time bound Action Plan is as follows: -</p> <table border="1"> <thead> <tr> <th>S. No.</th> <th>Activities</th> <th>Timeline</th> </tr> </thead> <tbody> <tr> <td>1.</td> <td>Approval & Sanction by Competent Authority for Procurement</td> <td>31.10.2023</td> </tr> <tr> <td>2.</td> <td>Tendering for Purchase of CAAQMS</td> <td>31.12.2023</td> </tr> <tr> <td>3.</td> <td>Issue of Work Order</td> <td>31.01.2024</td> </tr> <tr> <td>4.</td> <td>Installation and Commissioning of CAAQMS.</td> <td>31.03.2024</td> </tr> </tbody> </table>			S. No.	Activities	Timeline	1.	Approval & Sanction by Competent Authority for Procurement	31.10.2023	2.	Tendering for Purchase of CAAQMS	31.12.2023	3.	Issue of Work Order	31.01.2024	4.	Installation and Commissioning of CAAQMS.	31.03.2024
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4.	Installation and Commissioning of CAAQMS.	31.03.2024																	
6.	Plan to setup in-situ laboratory within the ML area.	The laboratory room has been setup and being developed at Dipka Opencast Coal Mine with the help of CMPDIL for spot analysis like PH, temperature, DO, conductivity, free chlorine																	

		etc. The necessary lab equipment's and human resources will be provided by CMPDIL and Lab will be functional by January 2024.
7.	Drone video clip for 5 minutes shall be submitted for total ML area including mechanized system.	The recorded <u>Drone Video Clip</u> of Dipka Open Cast Coal Mine Project has been televised during the EAC meeting.

ii. There are 03 active 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.

3.8.3 *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 already granted 40% from the existing base capacity) subject to 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 expressed displeasure after observing the incomplete work of conveyor belt and silo loading system, which results into the transportation of coal by road approximately 60% of total granted capacity (i.e. 37.5MTPA). By seeing photographs and recorded videos, the Committee noted that works of conveyor belt and silo loading system is still pending and will take significant time. Subsequently, it was also observed that the concrete road is still under construction stage from Railway siding to TRS for transportation of coal. The Committee realized that PP must reduce the road dependency at this stage and same time it was asked to complete the construction of pucca road in order to reduce the dust emission. On enquiry, PP was also not able to submit the mine closure status.

From photographs, it was observed that external dump of 205 Ha has been biologically reclaimed; however, slopes of the dump are left bare. It was desired that slopes should also be densely planted. Also, top of the internal dump of 127 ha has been planted but its slope not adequately planted. It was desired that PP shall submit the detail action plan for fully planting trees on the slopes.

As per the earlier direction of the committee, PP was to install additional 2 nos. of CAAQMS, but PP narrated to have one CAAQMS. The Committee expressed displeasure and advised to follow the instruction of installing additional 2 CAQMS, being a one of largest mines which require adequate data management through online system. The Committee also took serious note of not having dedicated mine within mine lease area.

In view of the above, committee asked the PP to submit the compliance for the following details:

- i. PP should complete the construction of conveyor belt and silo loading system and submit the photographs and recorded video of operational system as proof of completion required for compliance of Ministry's OM dated 7th May, 2022.*
- ii. PP to complete the construction of pucca road by December 2023 to reduce the dust emission into the atmosphere. Action taken report be submitted to IRO.*
- iii. PP should submit closure status of portion of the mine lease area in compliance of progressive mine closure.*
- iv. PP shall submit the detail action plan for fully planting trees on the slopes of 205 ha of external dump and 127 ha of internal dump.*
- v. PP shall submit the proof of developed environment lab with air monitoring and water monitoring/analysis instruments at the site.*
- vi. PP shall submit the NOC of CGWA which was earlier valid till 25.02.2023.*
- vii. Latest Status of Court cases i.e. of Case No: 826/2021; Case No: 1217/2007 & Case No: 26/2009*

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

Agenda No. 3.9

Expansion of Jalagam Vengala Rao Opencast Mine (amalgamation of Jalagam I & II) with increase in production capacity from 10 MTPA to 12 MTPA with coal washery of 4 MTPA capacity in ML Area 1953.46 ha by M/s Singareni Collieries Company Limited at village Kommepalli near Sathupalli town, Sathupalli mandal, Khammam District, (Telangana) - For Environmental Clearance under Ministry's OM dated 11.04.2022 (Stage I - 20% expansion) – reg.

[Online Proposal no. IA/TG/CMIN/447089/2023; File no. J-11015/268/2007-IA-II(M)]

3.9.1 The proposal is for Environmental Clearance for expansion of Jalagam Vengala Rao Opencast Mine (after amalgamation of Jalagam I & II) production capacity from 10 MTPA to 12 MTPA with coal washery of 4 MTPA capacity in ML Area 1953.46 ha by M/s Singareni Collieries Company

Limited at village Kommepalli near Sathupalli town, Sathupalli mandal, Khammam District, (Telangana) under Ministry's OM dated 11.04.2022 (Stage I - 20% expansion).

3.9.2 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. LOCATION OF PROJECT

- (i) The project area is covered under Survey of India Topo Sheet No. 65C/16 and is bounded by the geographical coordinates ranging from Latitudes 17°09'54.59"N to 17°13'01.70"N and longitudes 80°45'43.38" E to 80°49'20.86" E.
- (ii) Coal will be supplied to the major customers like Power houses, cement, Textiles, Paper, Railways and other Industries.
- (iii) Joint venture cartel has been formed - Not Applicable.
- (iv) 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, Permanent/Contractual employment to 595/1000 persons will be provided from the project.
- (vi) The project is reported to be beneficial in terms of socio-economics and improving living standards.
- (vii) Earlier, the Environment Clearances to the project was obtained under EIA Notification, 2006 vide EC identification No. EC21A006TG132986 and Ministry's letter No. J-11015/268/2007-IA. II (M), dated 11th October, 2021 for 10.00 MTPA in an area of 1953.46 ha (1910.09 ha of project area and 43.37 ha of colony)
- (viii) Total project area is 1953.46 ha (1910.09 ha project area and 43.37 ha colony). Mining Plan (Including Mine Closure Plan) has been approved by MoC Vide F.No PCA-38011/12/2017-PCA dated 29th March, 2019 for 10.00 MTPA.

II. LAND USE DETAILS OF MINE

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

Pre-mining Land use details (Area in ha)

S. No.	Land use	Within ML Area(ha)	Outside ML Area (ha)	Total(ha)
1.	Non-Forest Land			
	Agriculture	691.74	22.57	714.31
	Grazing	3.75		3.75
	Water Body	37.29		37.29
	Roads	12.24		12.24
	Villages	8.35		8.35
	Waste Land		20.80	20.8
	Sub-Total	753.37	43.37	796.74

2.	Forest Land	1156.72		1156.72
Total		1910.09	43.37	1953.46

Post Mining:

Post Closure Land use status is furnished hereunder: (Area in ha)

S. No.	Type	Total Area	Plantation	Water Body	Public / Company Use	Forest Land (Returned)
1	Excavation/ Quarry Area:	1030.87				
	(a) Backfilled Area	531.75	141.40			390.35
	(b) Excavated Void	499.12		95.56		
2	External Dump	507.05	314.96			192.09
3	Safety Zone /Rationalization area	177.69	65.71		15.00	96.98
4	Road& Infra-structure area	152.74	7.88		93.85	51.01
	(a) CHP & Coal Yard	22.33				22.33
	(b) Coal Washery	13.03	1.13		11.90	
	(c) Road Diversion	18.97	1.15		5.09	12.73
	(d) Magazine	6.94	1.45		5.49	
	(e) Railway Siding	43.15	1.74		41.41	
	(f) Mine Service Facilities	48.32	2.41		29.96	15.95
5	Garland Drains, Settling Ponds	26.78	0.46	13.26		13.06
6	Embankment	14.96	5.29			9.67
7	Water Reservoir near pit/ Water Body					403.56
	GRAND TOTAL	1910.09	535.70	108.82	108.85	1156.72

- (x) Total geological reserves reported in the mine lease area are 309.55 MT with 291.97 MT extractable reserves. Percent of extraction is 94.32%. Balance extractable reserves are 206.79 MT as on 31th March, 2023.
- (xi) 6 seams with thickness ranging from 0.05 m – 15.20 m are workable. grade of the coal is G-9 to G-12, stripping ratio 4.12 Cum of OB per 1 tonne of coal, while gradient is 1 in 1.25 to 1 in 11.
- (xii) Method of mining operations envisages by opencast method.
- (xiii) Life of mine is 23 years from 2023-24.
- (xiv) The project has one external OB dumps in an area of 507.05 ha with 120 m height above ground level and 374.61 Mm³ of OB. Internal OB dump in an area of 531.75 ha with 827.72 Mm³ of OB is envisaged in the project.
- (xv) Total quarry area is 1030.87 ha out of which backfilling will be done in 531.75 ha while final mine void will be created in 499.12 ha (121.24 ha in East Side and 377.88 ha in South Side)

with a max. depth of 363.45 m (146 m in East Side & 363.45 m in South Side) will be converted in to water body. Backfilled quarry area of 531.75 ha shall be reclaimed with plantation. Final mine voids will be converted into water body.

III. TRANSPORTATION OF COAL

- (xvi) Transportation of coal has been proposed from quarry to pit head by Trucks/Dumpers, from surface to siding (Railway siding, Sathupalli) by belt conveyor) and from siding (Railway siding, Sathupalli) to customers by rail.
- (xvii) Reclamation Plan in an area of 1288.86 ha, comprising of 507.05 ha of external dump, 531.75 ha of internal dump and 162.29 ha of green belt. In addition to this, an area of 87.77 ha, included in the Infrastructure area etc has also been proposed for green belt development.
- (xviii) 1156.72 ha of forest land has been reported to be involved in the project. Approval under the Forest (Conservation) Act, 1980 for diversion of 1156.72 ha of forest land for non-forestry purposes has been obtained vide MoEF&CC letter Nos. F. No. 8-129/2003-FC, dated 02nd February, 2005 (JVR OCP-I 244.02 ha), F. No. 8- 56/2008-FC, dated 03rd July, 2012 (JVR OCP-I Expansion 136.50 ha) & F. No. 8-56/2014-FC, dated 30th May, 2017 (JVR OC-II 776.20 ha).
- (xix) No National Parks, Wildlife Sanctuaries and Eco-Sensitive Zones have been reported with 10 km boundary of the project.
- (xx) Wildlife conservation plan for schedule – I species has been already obtained with an amount of Rs. 2.57 Crores from the Principal Chief Conservator of Forest (HoFF) and Chief Wild life Warden (FAC), TS and the funds were deposited with State Forest Dept. on 09-11-2021.
- (xxi) The ground water level has been reported to be varying between 2.34 m to 11.45 m during pre-monsoon and between 1.20 m to 8.18 m during post-monsoon. Ground Water Clearance was obtained vide Lr. No. 2182/HgI/2008, dated 05th May, 2021 and is valid for five years.
- (xxii) Total water requirement for the project is 2410 KLD.
- (xxiii) Ground Water Clearance was obtained vide Lr. No. 2182/HgI/2008, dated 05th May, 2021 and is valid for five years.

IV. DETAILS OF PUBLIC HEARING & RELATED ISSUES

- (xxiv) Public hearing for the existing project of 10 MTPA capacity in an area of 1953.46 ha was conducted on 14th February, 2020 at JVR Government college, Sathupalli, Major issues raised in the public hearing include development of surrounding areas, infrastructure facilities employment of local, compensations for land, education and health, effects of air, noise, water, and road repairs etc.
- (xxv) No River/nalla is flowing within the boundary of lease.
- (xxvi) Regular monitoring of ambient air quality is being carried out on fortnightly basis. The documented report is submitted to State Pollution Control Board and also to MoEF & CC 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 the specific local conditions during the day of sampling.

(xxvii) Two cases have been admitted by National Green Tribunal, Southern Bench, Chennai. Details as follows:

- Case No. O.A. 174 of 2020 (SZ), dt: 08.09.2020 - Basing on a complaint received from Sri Banothu Nandu Nayak, R/o Sathupalli in regard to environmental violations and damage caused to houses by SCCL in operation of JVR Opencast mines.
- 2 Case No. O.A.No. 20 of 2021(SZ) , dt: 27.01.2021 - Basing on a complaint received from Sri Oggu Srinivasa Reddy, R/o Sathupalli and another in regard to violation of environmental conditions by SCCL in operation of JVR OCP-II.
- Hon'ble NGT directed in its common judgment on 06.05.2022 to pay a compensation of Rs.41.21Crores [i.e. Rs.58.86Crores (10% of the profit) - Rs.17.65Crores (3% of the profit) which was directed to be adjusted towards the remediation plan] within a period of 3 (Three) months with the Telangana State Pollution Control Board along with other directions to comply by SCCL.
- However, SCCL approached Hon'ble Supreme Court on the common judgment and the Apex court while granting stay directed to pay 50% of amount imposed by the Tribunal and presently case is pending with the Hon'ble Supreme Court.

(xxviii)The Project does not involve violation of the EIA Notification, 2006 and amendment issued there under.

The coal production from the mine was started from the year 2021 onwards. No excess production of coal from the sanctioned capacity has been realized since the commencement of mining operations. The coal production, realized from the project, from 2021-22 onwards, is as under:

Year	EC capacity (MTPA)	Actual Production (MTPA)	Excess Production beyond the EC
2021-22	10.00	07.35	0
2022-23	10.00	10.00	0

V. BENEFITS OF THE PROJECT

(xxix) The project does not involve project affected families. No R&R involved.

(xxx) Total cost of the project is Rs. 47322 lakhs. Cost of production is Rs. 1225.97/- per tone, CSR cost is 2% of average net profits of the company made during last three years at company level, R&R cost is Nil. Environment Management Cost is Rs. 13.70 crores.

(xxxix) Consent to Operate for the existing capacity was obtained from the State PCB on 13th April, 2022 and is valid till 31st October, 2026.

VI. CONTROL OF POLLUTION: (A) AIR & (B) WATER

(xxxii) Environmental Baseline data was generated in the summer season from March to May, 2023 (Summer Season) at 10 locations.

The result indicates in core zone that PM10 is in the range of 94 µg/m³ to 151µg/m³ and in buffer zone from 45µg/m³ to 69µg/m³, whereas the PM2.5 concentrations in core zone is in the range of 31.8 µg/m³ to 52.1 µg/m³ and in buffer zone 19.0 µg/m³ to 28.7 µg/m³.

The SO₂ in the core zone varies from 14.1 µg/m³ to 17.7 µg/m³ and in buffer zone from 12 µg/m³ to 14.9 µg/m³. NO₂ concentration in core zone varies from 21.3 µg/m³ to 27.4 µg/m³ and in buffer zone from and 17.4 µg/m³ to 22.5 µg/m³.

The incremental increase in the values was projected to be in the range of 1.25µg/m³ to 5.58 µg/m³ for PM10 and 0.47 µg/m³ to 2.35µg/m³ for PM2.5 respectively. Whereas, for SO₂ it is in the range of 0.09µg/m³ to 0.58µg/m³ and that of for NO_x is 0.14µg/m³ to 0.93µg/m³.

The value of Total GLC is for PM10 in the range of 61.03 µg/m³ to 129.58µg/m³ and that of for PM2.5 is 53.06 µg/m³ to 23.92µg/m³, whereas for SO₂ it is in the range of 13.76µg/m³ to 17.87µg/m³ and 20.29µg/m³ to 27.68µg/m³ for NO_x respectively.

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

(xxxiii) Surface water Monitoring was done at 5 locations. The result indicates that the pH value in the range of 7.2 to 7.9 and its turbidity value is 0.07 to 10.9 NTU, dissolved oxygen in the range of 5.6 to 6.5 mg/l, dissolved solids ranged 242 to 956 mg/l, Surface water samples have Coliforms ranges between 94 to 240 MPN/100ml and contaminated due to surface runoff entering these sources.

3.9.3 The committee noted the following during the EAC meeting:

- i. Earlier, Environment Clearance was granted on 28.03.2010 for Jalagam Vengalrao Opencast project-II vide letter no. J-11015/268/2007-IA. II(M) for production capacity of 4MTPA/5MTPA(Normative/Peak) in area of 1409.81 ha.
- ii. Amendment in EC dated 28.03.2010 vide letter no. J-11015/268/2007-IA. II(M) on 19.04.2021 for Jalagam Vengalrao Opencast project-II with production capacity of 4MTPA / 5MTPA (Normative / Peak) in ML area of 1409.81 ha.
- iii. Environment Clearance for Jalagam Vengal Rao Opencast-I was granted on 01.02.2021 vide letter no. 23-77/2018 for production capacity from 2.5 to 5.0 MTPA in the ML area of 544.81 ha under violation category.
- iv. Amalgamation and expansion of Jalagam Vengala Rao Opencast Mine (after amalgamation of Jalagam I & II) with production capacity of 4MTPA/ 5MTPA(Normative/Peak) to 10 MTPA (Peak) with coal washery of 4 MTPA capacity in ML Area 1953.46 ha located at village Kommepalli near Sathupalli town, Sathupallimandal, Khammam District, (Telanagana) was granted on 11th October, 2021.
- v. Mining Plan (Including Mine Closure Plan) has been approved by MoC Vide F.No PCA-38011/12/2017-PCA dated 29th March, 2019 for 10.00 MTPA.

- vi. 1156.72 ha of forest land has been involved in the total ML area of 1953.46 ha. Forest Clearance for the non-forestry purposes has been obtained for 1156.72 ha vide MoEF&CC letter Nos. F. No. 8-129/2003-FC on 02nd February, 2005 (JVR OCP-I 244.02 ha), F. No. 8- 56/2008-FC dated 03rd July, 2012 (JVR OCP-I Expansion 136.50 ha) & F. No. 8-56/2014-FC dated 30th May, 2017 (JVR OC-II 776.20 ha).
- vii. Wildlife conservation plan for schedule – I species has been already obtained with an amount of Rs. 2.57 Crores from the Principal Chief Conservator of Forest (HoFF) and Chief Wild life Warden (FAC), TS and the funds were deposited with State Forest Dept. on 09-11-2021.
- viii. Ground Water Clearance was obtained vide Lr. No. 2182/HgI/2008, dated 05th May, 2021 and is valid for five years.
- ix. Public Hearing was conducted on 14.02.2020 for 10 MTPA capacity on ML area of 1953.046 ha and Major issues raised in the public hearing related to the development of surrounding areas, infrastructure facilities employment of local, compensations for land, education and health, effects of air, noise, water, and road repairs etc.
- x. PP has prepared & submitted the revised EIA/EMP report along with copy of latest certified EC compliance report approved from IRO Hyderabad.
- xi. PP has submitted the following justifications as per OM dated 11.04.2022 w.r.t expansion under 7 (ii) (a) Stage I (20%) for Jalagam Vengala Rao Opencast Mine Project within the same mine lease area of M/s Singareni Collieries Company Limited:

S.No.	Criteria as Per OM dated 11.04.2022	Reply Reply
1.	PP should have gone through the public hearing process, at least once, for its existing EC capacity on which expansion is being sought, except those categories of projects which have been exempted as per para 7 II (i) of EIA Notification 2006 and its amendments.	Public Hearing was held on 14 th February, 2020. MoEF&CC granted EC for a capacity of 10.00 MTPA in ML area of 1953.46 ha on 11th October, 2021.
2.	PP should not change in Category of the project from “B2” to “B1” or 'A' due to proposed modernization or expansion.	No change in category. Category ‘A’.
3.	No additional land acquisition or forestland diversion involved for the proposed expansion or there is no increase in lease area with regard to mining vis-a-vis the area mentioned in the EC, based on which public hearing has been held earlier.	There is no additional land requirement for the proposed expansion as there is no increase in project area.
4.	Proposed expansion shall not be more than 50% of production capacity as mentioned in the prior EC, issued on the basis of public hearing held and the same shall be allowed in minimum three phases.	Proposal is for 20% production enhancement (1st Phase) over the production capacity mentioned in the prior EC, issued on the basis of public hearing held.
5.	Environmental quality parameters arising out of proposed expansion / modernization shall be within	Air quality impact prediction modelling is done for 50% expansion

	the prescribed norms and the same shall be maintained as per Prescribed norms.	i.e., from 10.00 MTPA to 15.00 MTPA. All the predicted values are within the prescribed norms.
6.	Proposed expansion should not result in reduction in the greenbelt area as stipulated in the earlier EC, or if the existing ratio of greenbelt is more than 33%, after expansion it should not reduce below 33%.	There is no reduction in the greenbelt area due to the proposed expansion. The green belt area as per the existing EC as well as proposed expansion is 1288.86 ha at post closure stage, which is about 67.5% of the total project area.
7.	Proponent should have satisfactorily complied the conditions stipulated in the existing EC(s) and satisfactorily fulfilled all the commitments made during the earlier public hearing/ consultation proceedings and also the commitments given while granting previous expansion, as may be applicable. This shall be duly recorded in the certified compliance report issued by the IRO/CPCB/SPCB, which should not be more than one year old at the time of submission of application	Director, MoEF&CC, I.R.O., Hyderabad inspected the project on 20 th September, 2023 and issued latest certified EC compliance report. The conditions of existing EC are being complied and the commitments of earlier public hearing are being fulfilled.
8.	Consultation shall be undertaken [if applicable as per table below] by obtaining response in writing, as per para 7 III (ii) (b) of EIA Notification 2006, except those categories of projects which have been exempted as per para 7 III (i) of EIA Notification 2006 and its amendments.	The proposal is for 20% increase of production capacity only. Public consultation will be undertaken at the time of expansion proposal from 40% to 50%
9.	Ambient monitoring including air quality monitoring systems as specified in the existing EC, if stipulated, should have been installed.	Effluent monitoring and air quality monitoring is being carried out as specified in the EC. An online ambient air quality monitoring station was established at the core zone.

3.9.4 The EAC, after deliberations observed that the instant proposal is for 20 % expansion under Ministry's OM dated 11.04.2022 (i.e. without public hearing) and proposed expansion within same mine lease area. Earlier, there were two separate ECs (JVR I and JVR II) for the project and both the mines were amalgamated with expansion upto 10 MTPA. EC of JVR I OCP was granted under violation category and Ministry had stipulated various mitigation measures and Remediation plan, Natural Resource Augmentation plan and Community Resource Augmentation plan with budgetary. It was observed that major actions/ measures have not been completed yet. Also, the Committee observed that the instant project is having court cases pending before the Supreme Court for further proceedings after paying 50% of amount imposed by Tribunal. M/s SECL made Ministry as one of the respondents in this matter.

During the discussions, Committee noted that compliance of the Environmental Clearance granted under violation category have not fully complied wherein PP violated the EC conditions by excess production. Environmental conditions w.r.t. dedicated medical facilities, implementing Sal trees and deployment of Surface Miner for extraction of coal instead of shovel dumper method has not been followed. It was submitted that there are technical difficulties in compliance of these conditions, on which EAC desired to take amendment in EC instead of non-complying it. PP shall have to submit in detailed reasons. Further, there are other EC conditions w.r.t. medical facilities under the project, which are required to be complied and accordingly, PP shall submit the action taken report on those conditions.

The Committee finally asked the PP to complete compliance of the previous EC conditions as one of the important criteria of OM dated 11.04.2022. Further, committee asked the PP to re-review the improvement of all conditions.

In view of the above, Committee asked the PP to submit the compliance for the following details:

- i. PP should submit the certified compliance report after completing 90% of the EC conditions along with compliance of Remediation plan, Natural Resource Augmentation plan and Community Resource Augmentation plan. Also, status of construction of school and hospital and its operational shall be submitted.*
- ii. PP shall submit the status of pending court cases as well as disposed of cases from any court (Civil court, High court and Supreme Court)/NGT.*
- iii. PP shall submit the technical justification for not implementing the conditions of surface miner and plantation of sal trees with its nursery. Further, difference of emission and impact due to shovel dumper and surface miners should be provided*
- iv. PP shall submit the status of mine closure activity wrt to area of already reclaimed (biologically) and proposed area to be completed in 2-3 years*
- v. PP to submit the details related to the existing mechanized transportation route and preparedness for transporting 12 MTPA of coal.*
- vi. PP shall submit the Approved Mine Plan document for its proposed capacity after its approval from its Board, considering the justification of OM issued by Ministry of Coal.*
- vii. PP should install CAAQMS on urgent basis in consultation with state pollution control Board and share their online data with the CPCB/SPCB.*
- viii. PP should submit existing status of plantation along with the plantation proposed in the upcoming year considering native species only.*
- ix. PP should submit plan to strengthen the Environmental cell with qualification having environment engineer's/science degree and by developing dedicated environment laboratory at with certain timeline.*
- x. PP should submit the status upon the implementation of M-sand plant with the ML area.*
- xi. PP should conduct survey to assess the number of house damaged due to blasting within & in the radius of 1km from periphery of ML boundary and its remediation plan*
- xii. PP should submit the CCO certified past production detail before amalgamating mine and after amalgamation.*

- xiii. PP shall submit the compliance of issues raised during earlier Public Hearings for violation EC and amalgamated EC and expenditures incurred.
- xiv. PP shall submit the plan of filling the mine void upto the level of ground (if technically feasible) and accordingly Mine plan shall be submitted.
- xv. PP shall submit plan for third party monitoring of planting preferably through an institution of MoEFCC (ICFRE etc).

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

Agenda No. 3.10

Manoharpur and Dipside Manoharpur Coal Mine Project (Expansion of Manoharpur Coal Mine from 8 MTPA to 16 MTPA with increase in project area from 977.875 to 1848.379 ha) of M/s Odisha Coal and Power Limited located in Villages Manoharpur, Paramanandpur, Kathafali, Ghumudasan, Dulanga, Durubaga, Katarbaga, Laikera and Sarbahal Tehsil Hemgir District Sundargarh (Orissa) – Reconsideration for Environmental Clearance – reg.

[Online proposal No. IA/OR/CMIN/451362/2023; File no. J-11015/139/2008-IA. II(M)]

3.10.1 The proposal is for Environment Clearance of Manoharpur and Dipside Manoharpur Coal Mine Project (Expansion of Manoharpur Coal Mine of production capacity from 8 MTPA to 16 MTPA with increase in project area from 977.875 to 1848.379 ha) of M/s Odisha Coal and Power Limited located in Villages Manoharpur, Paramanandpur, Kathafali, Ghumudasan, Dulanga, Durubaga, Katarbaga, Laikera and Sarbahal Tehsil Hemgir District Sundargarh (Orissa).

3.10.2 Earlier the proposal was considered in the 27th EAC meeting held during 3 to 4 March, 2022 wherein the committee returned the proposal for re-submitting the fresh application with the certain information. PP has now submitted the information vide letter dated 19.10.2023 are as follows:

S. No.	Observation of EAC	Reply by PP
1.	PP shall limit the activities of mining in its mine lease area only. No OB Dumping and infrastructure activity should be proposed and dumped on forest land. The already proposed 60 ha of forest land for OB dumping shall not use and plan of action for tree plantation in 30 ha (already deforested) shall be submitted. Accordingly revised Mine Plan should be submitted (if required).	<ul style="list-style-type: none"> ➤ The matter has been re-examined by the CMPDI who has opined that they have already considered maximum height of 150 m above OGL for internal dumping and 120m for external dump and hence, there is no scope to revise the mining plan. Further, as per the Rev III Mining Plan, the height of the external OB dump is increased from 60m to 120m to accommodate more OB in minimum area. ➤ The detailed justification for proposing OB dump in forest land as provided by the CMPDI is attached herewith

		<ul style="list-style-type: none"> ➤ The total forest land planned for OB dumping as per the earlier forest approvals is 7.226 ha. As on date the entire diverted forest land outside the Manoharpur coal block has already been utilized. ➤ Further, the tree plantation is being carried out regularly and till date 46.14 ha (5.94 ha inside the mine block area + 40.20 ha outside the mine block area) of area is covered with new plantation. 																																																
2.	<p>The acquisition status of 1848.379 Ha land must be furnished by PP and clearly define the area covered under forest and list of activities in and out of mine lease area.</p>	<p>Land Acquisition of 1848.379 Ha is as per below table:</p> <table border="1"> <thead> <tr> <th>Acquisition Status</th> <th>Act</th> <th>Area (Ha)</th> </tr> </thead> <tbody> <tr> <td>Acquired</td> <td>LARR Act</td> <td>1064.402</td> </tr> <tr> <td>Acquired under Section 11</td> <td>CB Act</td> <td>684.620</td> </tr> <tr> <td>Under Process</td> <td>LARR Act / FDP (outside area)</td> <td>99.357</td> </tr> <tr> <td>Total</td> <td></td> <td>1848.379 Ha</td> </tr> </tbody> </table> <p>The area covered under forest as per approved Mining Plan (Rev III) is 618.644 ha.</p> <p>The activities inside the ML area are as follows:</p> <table border="1"> <thead> <tr> <th>SL No.</th> <th>Activities inside ML area</th> <th>Area in Ha</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Quarry excavation</td> <td>432.392</td> </tr> <tr> <td>2</td> <td>Nalla Diversion</td> <td>9.075</td> </tr> <tr> <td>3</td> <td>Safety Zone along the Mine Lease Boundary and Nalla</td> <td>7.827</td> </tr> <tr> <td>4</td> <td>Expit Dump</td> <td>64.675</td> </tr> <tr> <td>5</td> <td>Top Soil dump</td> <td>2.683</td> </tr> <tr> <td>6</td> <td>ROM Stock Pile</td> <td>1.658</td> </tr> <tr> <td>7</td> <td>Settling Pond</td> <td>3.913</td> </tr> <tr> <td>8</td> <td>Other infra</td> <td>6.644</td> </tr> <tr> <td>9</td> <td>Other Mining related activities & Mine Roads</td> <td>20.029</td> </tr> <tr> <td>10</td> <td>MGR</td> <td>57.078</td> </tr> </tbody> </table>	Acquisition Status	Act	Area (Ha)	Acquired	LARR Act	1064.402	Acquired under Section 11	CB Act	684.620	Under Process	LARR Act / FDP (outside area)	99.357	Total		1848.379 Ha	SL No.	Activities inside ML area	Area in Ha	1	Quarry excavation	432.392	2	Nalla Diversion	9.075	3	Safety Zone along the Mine Lease Boundary and Nalla	7.827	4	Expit Dump	64.675	5	Top Soil dump	2.683	6	ROM Stock Pile	1.658	7	Settling Pond	3.913	8	Other infra	6.644	9	Other Mining related activities & Mine Roads	20.029	10	MGR	57.078
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3.	PP shall provide a proper bifurcation of land use for colony proposed by PP by avoiding the forest area of 9.439 Ha. Therefore, revised layout plan to be given.	<ul style="list-style-type: none"> ➤ The forest area outside the ML area is proposed for different activities namely mine colony, road and other infra. ➤ The forest area falling within the colony is 1.2 ha only. ➤ The existing colony developed for serving the Manoharpur Coal Mine avoids this patch of 1.2 ha forest land. However, for the expansion of colony this additional forest land, which is falling within the proposed area, is required. ➤ As such very few trees are existing in the proposed forest area. ➤ Further, OCPL assures that the existing trees will be protected and further tree plantation along with landscaping will be carried out in the same patch and accordingly OCPL undertakes that the design and layout of the colony accommodates the same. 												
4.	PP shall provide alternate land for grazing purpose and water body of same area as in land use plan during pre-mining activity.	Adequate area for grazing purpose and water body has been identified & acquired at proposed R&R colonies.												
5.	PP to submit the revised EIA/ EMP report with revised Form-2.	As per the EAC directives, baseline monitoring has been re-conducted during summer season of 2022 (07.03.2022 to 07.06.2022). The revised EIA/EMP has been prepared based on the monitoring data and the same is being submitted along with revised Form 2 on Parivesh 2.0 portal.												
6.	Stage-I Forest clearance for diversion of forest land within mine lease area to	The forest diversion proposal of 342.87 ha of forest land for Forest Clearance (Stage I) has been recommended by State Govt. (Govt. of Odisha) to MoEF&CC, New Delhi and the same has been												

	be submitted by optimization the land use as suggested by EAC.	presented to Forest Advisory Committee (FAC) on 14.11.2023 for approval.
7.	Base line monitoring shall be re-conducted to represent the production status of at least 6 MTPA of existing EC and accordingly revise the EMP.	Three months' baseline data has been re-collected for summer season of 2022, commensurate with EAC observation during the period from 07" March to 07" June 2022. The total quantity of coal produced during the period of monitoring is 23,32,542.36 tonnes which corresponds an annual production of 8 MT. Further, the EMP has been revised based on latest baseline monitoring results obtained for summer season and is being submitted on Parivesh 2.0 portal.
8.	PP should provide the OB dump re-handling plan with proper implementation of mitigation measures for air pollution with budgetary	The approved Mining Plan and Mine Closure Plan provides for re handling of OB. As per the Plan, during mine closure period upper tiers of internal dump formed after 25 th year will be re handled & brought to the unfilled void area. The required funds for implementing the same are being deposited in the ESCROW account executed with the MoC and the same will be utilized for the purpose.
9.	PP must explore and provide the conservation plan to protect Garia and Lapani stream instead of diverting these streams. Environmental cost-benefit (in terms of coal production/reserves with EMP measures) should be supported with the proposal.	<ul style="list-style-type: none"> • OCPL has submitted the proposal for diversion of Garia and Lapani nalla on 14.09.2021. The submitted design has been scrutinized by Engineer In Charge (EIC) office, Bhubaneswar and they have proposed to modify the design to conserve the course of nalla and flow of catchment area. • Further, the team comprising of Additional Chief Engineer, Superintending Engineer (Sundargarh Irrigation Division), Executive Engineer (Mega lift Projects Division), Deputy Executive Engineer (Minor Irrigation), Assistant Executive Engineer (Lift Irrigation) have visited the site and submitted their recommendation to High Level Committee of Dept. of Water Resources for diverting the same. • Accordingly, the High Level Committee (HLC) comprising of Chief Engineer (Designs), Chief Engineer & Basin Manager (Mahanadi Basin), Chief Engineer (Minor Irrigation), Chief Engineer (Mega lift) & Executive Director (OLIC) have examined the diversion proposal in all aspects

		<p>including environmental impacts. Accordingly, the appraisal of diversion proposal has been carried out before the Engineer in Chief (EIC), DoWR, Bhubaneswar.</p> <ul style="list-style-type: none"> • After detailed discussion and presentation before the HLC and EIC, DoWR Bhubaneswar on 16.11.2022, the diversion proposal of Garia Nalla and Lapani Nallah has been approved by the Dept. of Water Resources, Bhubaneswar vide letter dt. 07.02.2023. • Further, the environmental cost benefit analysis has also been carried out for the said project which is attached here.
10.	PP shall clarify regarding envisaged coal washery since ToR is only granted for Coal mine expansion.	Proposal for coal washery was not part of ToR since no washery is envisaged at present.
11.	PP to prepare EMP in conjunction with state action plan drawn IB valley as declared as SPA.	Complied. The EMP has been prepared in line with state action plan drawn for IB valley area and is being submitted on Parivesh 2.0 Portal along with revised Form-2.
12.	Air Pollution is the major issue discussed in the public hearing and PP had mentioned that CHP and RLS is to be completed and commissioned by, June, 2022 but not yet started so PP must provide a time bound action plan for its implementation	Coal Handling Plant (CHP) along with Rapid Loading System (RLS) for loading of coal has been commissioned at site and is operational from September 2022. Presently, 100% of coal requirement of EUP is being met through the CHP, RLS and dedicated MGR system.
13.	PP shall strengthen the toe wall along the OB dump by cementing it.	The existing toe wall has been removed and a toe wall with proper civil design has been reconstructed along the OB dump. The Photographs showing the same is attached here.
14.	Time bound action plan with budgetary provision for commitment made on the issues raised during public hearing.	Time bound action plan with budgetary provision for commitment made on the issues raised during public hearing is attached here.

15.	PP to submit the compliance status of existing EC condition in a time bound manner	The compliance status of the existing EC conditions is being submitted regularly to the concerned authorities. Further, the site has been inspected by Scientist B (MoEF&CC, RO, Bhubaneswar) on 25.05.2023 and issued a fresh certified compliance report showing' the compliance status of existing EC condition.
16.	PP shall submit separate proposal of amendment in earlier EC incase' of transportation of surplus coal to other consumers with traffic impact assessment study as desired by Ministry vide its letter dated 31st December, 2021.	As per the directives of EAC, the proposal for amendment of EC to transport the surplus coal to other consumers has been submitted and amendment has been obtained.

3.10.3 *The committee after detail deliberations observed instant project lies in IB valley which comes under Severely Polluted Area (SPA) as per CEPI score of CPCB. It was desired that PP may get clarification from State Pollution Control Board about the distance of project from IB valley and submit the factual distance with co-ordinates. Further, there is a difference in the lease area obtained by PP with mining plan. PP should submit the justification and break up w.r.t. the Mine lease area as per Approved Mine Plan.*

On enquiry to stream diversion, EAC desires to straighten the Garia Nallah/stream and lapani stream/nallah passing through the ML area, for which EAC advised PP for not diverting before 15th year of the commencement of the Mine. Further, the protection measures by embankment and through plantation all along the nallah shall be done. The loss of watershed in catchment area with restoration plan shall be submitted in detail.

Subsequently, the Committee asked PP to have concrete coal evacuation plan for 16 MTPA of coal through mechanized system through inpit belt conveyor system. During presentation, the Committee pointed out the construction of the retaining wall without the weep holes and advised to rectify the same. EAC cautioned CMPDI for not making efforts in changing the mine plan as per the advice of EAC.

Further, with regard dumping of OB on forest land (7.226 ha), committee observed that FC Committee shall take its view on it and instructed PP to avoid forest land for OB dump. It was noted that the particulate matter value at sabahan village is on higher side, for which committee asked to have mitigation measures with dense plantation and insitu EMP measures.

In view of the above the, committee asked the PP to submit the compliance for the following details:

- i. *PP should submit the detail justification and breakup w.r.t. difference in Mine lease area, approved Mine plan area, forest land and its clearance.*

- ii. *PP should submit detailed protection measures for Garia Nallah/stream and Lapani nallah/stream passing through the ML area upto 15 year after commencement of the Mine operation.*
- iii. *Letter from the state government/SPCB clarifying the distance of IB Valley declared as Severally polluted area.*
- iv. *PP should submit the concrete plan for w.r.t. transportation of coal for capacity of 16 MTPA through mechanized system, silo loading and rail line with inpit belt conveyor system. Time bound Completion plan be submitted in this regard.*
- v. *PP should submit the detailed plantation plan along with the development of plant nursery with minimum capacity of 1.0 Lakh trees and action taken plantation in safety zone (of earlier EC). Densification of existing plantation needs to be done*
- vi. *PP shall submit the status of mine closure activity wrt to area of already reclaimed (biologically) and proposed area to be completed in 2-3 years*
- vii. *PP should submit plan to strengthen the Environmental cell with qualification having environment engineer's/science degree and by developing dedicated environment laboratory at with certain timeline.*
- viii. *PP shall provide details of alternate land for grazing purpose and water body of same area as in land use plan during pre-mining activity*
- ix. *PP shall submit Letter of Intent from State Government for proposed mine area, if the mine lease area is not allocated under Coal Bearing Act.*
- x. *PP shall submit the environmental mitigation plan for villages coming in the mine lease area till R&R is completed*

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

Agenda No. 3.11

Expansion of Cluster 12 (comprising of 14 mixed mines) from 31.83 MTPA to 34.83 MTPA with increase in ML area from 12694.47 Ha to 14814.20 Ha (Sonepur Bajri OCP :from 12 MTPA to 15 MTPA and increase in area from 2405 ha to 4681.35 ha; Tilobani UG : increase in area from 827.47 to 865.85 ha and Bankola UG : reduction in area from 830 ha to 635 ha) of M/s Eastern Coalfields Limited located in Raniganj Coalfields in village Sonepur Tehsil Haripur Block, District Paschim Bardhaman (West Bengal) - For Terms of Reference-reg.

[Online proposal No. IA/WB/CMIN/445193/2023; File No. J/11015/76/2011-IA-II (M)]

3.11.1 The proposal is for Terms of Reference to Expansion of Cluster 12 (comprising of 14 mixed mines) from 31.83 MTPA to 34.83 MTPA with increase in ML area from 12694.47 Ha to 14814.20 Ha (Sonepur Bajri OCP :from 12 MTPA to 15 MTPA and increase in area from 2405 ha to 4681.35 ha; Tilobani UG : increase in area from 827.47 to 865.85 ha and Bankola UG : reduction in area from 830 ha to 635 ha) of M/s Eastern Coalfields Limited located in Raniganj Coalfields in village Sonepur Tehsil Haripur Block, District Paschim Bardhaman (West Bengal)

3.11.2 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. LOCATION OF PROJECT

- (i) The project area is covered under Survey of India Topo Sheet No. 73 M/2 and 73 M/6 and is bounded by the geographical coordinates ranging from 23°37'34" N & 23°44'44.51" N and Longitudes 87°11'14.11" E & 87°21'45.08" E.
- (ii) Coal linkage of the project is proposed for thermal power plants / steel plants Use for various thermal power plants like Kahalgaon Super Thermal Power Station (KhSTPP), Kahalgaon, Bhagalpur, Bihar, National Capital Power Station (NCPS) or NTPC Dadri, Gautam Budh Nagar, Uttar Pradesh, Vindhyachal Thermal Power Station, Singrauli, Madhya Pradesh, The West Bengal Power Development Corporation Limited (WBPCDCL), Sipat Super Thermal Power Station or Rajiv Gandhi Super Thermal Power Station at Sipat, Bilaspur district, Chhattisgarh, Farakka Super Thermal Power Plant Nabarun Murshidabad, West Bengal, Simhadri Super Thermal Power Plant, Visakhapatnam, Andhra Pradesh, Mauda Super Thermal Power Station or NTPC Mauda, Nagpur, Maharashtra, Kahalgaon Super Thermal Power Station (KhSTPP), Kahalgaon, Bhagalpur, Bihar, Farakka Super Thermal Power Plant, Nabarun, Murshidabad West Bengal, Simhadri Super Thermal Power Plant, Visakhapatnam, Andhra Pradesh and IISCO Steel Plant of Steel Authority of India Limited, Burnpur, Asansol, West Bengal.
- (iii) No Joint venture cartel has been formed.
- (iv) 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 3951 employment to land losers Persons will be provided from the project.
- (vi) The project is reported to be beneficial in terms of Environmental Benefits: Production augmentation will result in lesser pollution using eco-friendly mining technology. Apart from that, various mitigation measures are already in practice in the cluster for remediation of the potential environment impacts and ecological restoration of degraded land. Financial: There is sufficient geological reserve of coal with favorable stripping ratio within the projects. Ever increasing demand of coal on ECL makes them suitable choices for enhancing the production with higher resource optimization and outsourcing and Social: The cluster will bring enhanced socio-economic benefits to the local population of the project area by way of direct and indirect employment, improvement in infrastructure and growth of ancillary facilities.
- (vii) Earlier, the environment clearance to the project was obtained under EIA Notification, 2006 vide Ministry's letter No J-11015/76/2011-IA.II(M) dated 09.02.20215 and EC Amendments vide even letter dated 03.03.2016, 31.07.2020 and 31.07.2023 for 31.83 MTPA in mine lease area of 12694.47 Ha.
- (viii) Total mining lease area as per block allotment is 14814.20 Ha. Mining Plan (Including Progressive Mine Closure Plan) has been approved by the Board of Directors, ECL on 12.09.2023.

II. LAND USE DETAILS OF MINE

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

Pre-mining land use details

(Area in Ha)

S. No.	Type of Landuse	Within ML Area	Outside ML Area	Total
1	Forest Land**	281.46	0.00	281.46
2	Plantation / Natural Vegetation	760.00	0.00	760.00
	Shrubs	1776.00	0.00	1776.00
3	Agricultural Land	7795.00	0.00	7795.00
4	Danga / Waste Land	362.00	0.00	362.00
5	Settlements		0.00	
	Urban Settlements / Built-up	719.74	0.00	719.74
	Rural Settlements	530.00	0.00	530.00
	Industrial Settlements / Mine Infrastructure	69.00	0.00	69.00
	Rehabilitation Site	510.00	0.00	510.00
6	Coal Quarry (Active / Backfilled)	1100.00	0.00	1100.00
	Safety Zone	0.00	0.00	0.00
	Top-Soil Dump	2.00	0.00	2.00
7	Active OB Dump	650.00	0.00	650.00
8	Coal Dump	9.00	0.00	9.00
9	River/nallah/pond	250.00	0.00	250.00
10	Subsidence	0.00	0.00	0.00
	Total	14814.20	0.00	14814.20

Post-mining land use details

(Area in Ha)

Landuse (Ha)

S. No	Landuse	Landuse (Ha)				Total
		Plantation	Water body	Public Use	Undisturbed	
1	External OB Dump	1362.22	-	-	-	1362.22
2	Top-soil Dump	20.00	-	-	-	20.00
3	Coal Dump	50.00	-	-	-	50.00
4	Excavation	3199.22	-	-	-	3199.22
5	Roads / Railways / Industrial Settlements	62.66	-	-	400.00	462.66
6	Built-up Area	-	-	-	642.17	642.17

	Rehabilitation Site	-	-	-	550.00	550.00
7	Plantation / Natural Vegetation	-	-	-	785.80	785.80
	Shrubs	-	-	-	276.00	276.00
8	Safety Zone	728.86	-	-	-	728.86
9	Water Body	-	250.00	-	-	250.00
10	Forest Land	-	-	-	-	0.00
11	Subsidence	2011.67	-	-	-	2011.67
12	Agricultural Land	-	-	-	4171.40	4171.40
13	Rural Settlements	-	-	-	304.20	304.20
	Total	7434.63	250.00	-	7129.57	14814.2

- (x) Total geological reserve reported in the mine lease area is 2136.39 MT with 1298.82 MT mineable reserve. Out of total mineable reserve of 1298.82 MT, 792.82 MT are available for extraction. Percent of extraction is 60.79%.
- (xi) 19 no. of seams with thickness ranging from 0.05 m to 11.30 m are workable. Grade of coal is G3 to G9, stripping ratio 3.34 to 8.45 while gradient is 1 in 10 to 1 in 50.
- (xii) Method of mining operations envisaged by Opencast and underground method
- (xiii) Life of each mine is: Please refer Sl. No. 1.
- (xiv) The project has 12 no. external OB dumps in an area of 1362.22 Ha with 60.0 to 90.0 m height and 1033.63 Mm³ of OB. 5 no. internal OB in an area of 3199.22 Ha with 3169.30 Mm³ of OB is envisaged in the project.
- (xv) Total quarry area is 3199.22 Ha out of which backfilling will be done in 3199.22 Ha while final mine void will be created in an area of nil ha with a depth of m. Backfilled quarry area of 3199.22 Ha shall be reclaimed with plantation. Final mine void will be converted NA.

III. TRANSPORTATION OF COAL

- (xvi) Transportation of coal has been proposed by tippers from coalface to surface / CHP, from surface / CHP to siding by tippers & conveyor belts and at sidings by rail wagons.
- (xvii) Reclamation Plan in an area of 8220.43 Ha, comprising of 1366.22 Ha of external dump (including top-soil dump), 3199.22 Ha of internal dump and 728.86 Ha of green belt. In addition to this, an area of 2930.13 Ha, included in the safety zone/rationalization area/subsided land, has also been proposed for green belt development.
- (xviii) 281.46 Ha of forestland has been reported to be involved in the project. Approval under the Forest (Conservation) Act, 1980 for diversion of 220.65 Ha (Sonepur-Bazari OCP – 32.65 Ha + Jhanjra UG – 188.0 Ha) of forest land for non-forestry purposes has been obtained vide MoEF&CC letter No. File No. – 8-68/1992-FC dated 18.11.2014 and File No. – 8-101/2004-FC

dated 24.06.2015 (both for Jhanjra UG) and File No. – 5-WBC063/2013-BHU dated 29.06.2015 (for Sonepur-Bazari OC). Stage – I Application has been made for 38.38 Ha forestland in Tilaboni UG. Application for diversion of 22.43 Ha in Kottadih UG & OC is to be made.

- (xix) No National Parks, Wildlife Sanctuaries and Eco Sensitive Zones fall within 10 km boundary of the project.
- (xx) Wildlife conservation plan for schedule – I species has been submitted to DFO, Durgapur on 31.10.2023.
- (xxi) The ground water level has been reported to be varying between 1.17 m to 16.70 m during pre-monsoon and between 0.85 m to 12.08 m during post-monsoon.
- (xxii) Total water requirement for the project is 19037.40 KLD.
- (xxiii) Application for obtaining the approval of the Central Ground Water Authority for NOC has been submitted to State Water Resources Investigation & Development Department, Govt. of West Bengal on 02.11.20218.

IV. DETAILS OF PUBLIC HEARING & RELATED ISSUES

- (xxiv) Consent to Operate for the existing capacity was obtained from the State PCB on 29.09.2022 and is valid till 30.09.2027.
- (xxv) Tumni nalla is flowing within boundary of lease. The nallah will be diverted in consultation with the Water Resource Department of the State Government.
- (xxvi) Regular monitoring of ambient air quality is being carried out on fortnightly basis. The documented report is submitted to WBPCB and also to MoEF&CC 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.
- (xxvii) No court cases, violation cases are pending against the project of the PP.
- (xxviii) The project does not involve violation of the EIA Notification, 2006 and amendment issued thereunder. The coal production from the mine was started from the year onwards. No excess production of coal from the sanctioned capacity has been realized since the commencement of mining operations. The coal production, realized from the project, from 1993-94 onwards, is as under:

Name of Project	EC sanctioned capacity (MTPA)	Year	Actual production (MTPA)	Excess production beyond the EC sanctioned capacity
Cluster No. 12 (Group of mines)	31.83 MTPA	2015 – 16	11.22	Nil
		2016 – 17	14.44	Nil
		2017 – 18	16.47	Nil
		2018 – 19	17.13	Nil
		2019 – 20	18.45	Nil
		2020 – 21	16.33	Nil
		2021 – 22	16.57	Nil
		2022 – 23	19.19	Nil

Note: None of the mines within the cluster has exceeded individual EC capacity since grant of EC.

V. BENEFITS OF THE PROJECT

- (xxix) The project involves 9722 project affected families and 660 non-legal title holders. R&R of the PAPs will be done as per RFCTLARR Act, 2013 and CIL R&R Policy, 2012.
- (xxx) Total cost of the project is Rs. 729844.00 lakhs. Cost of production is Rs 4456.02 per tonne (average), CSR cost is 2% of average profit of the previous three years, R&R cost is Rs 1845.18 crores. Environment Management Cost is Rs crores; EMP will be prepared and Cost for implementing EMP will be computed accordingly.

VI. CONTROL OF POLLUTION: (A) AIR & (B) WATER

- (xxxii) Environmental Baseline data was generated in the post-monsoon season from Oct'21 to Dec'21 (post-monsoon Season) at 10 locations. The PM10 concentration at industrial locations was found in the range of 28.00 to 260.00 µg/m³ and the values are within the limits as per GSR 742 (E) dated 25.09.2000 while PM10 concentration at residential locations was found in the range of 37.40 to 96.10 µg/m³ and the values are within the limits as per as per NAAQS, 2009. The PM2.5 concentrations was found in the range of 14.40 to 65.50 µg/m³. There is no limit defined as per GSR 742 (E) dated 25.09.2000. The SO₂ concentration remained below 10.0 µg/m³ and NO_x concentration was in the range of 11.30 to 22.60 µg/m³ and was well within the standards. The incremental increase will be computed in EIA & EMP report.
- (xxxiii) Surface water Monitoring was done at 8 locations. The result indicates that the pH value in the range of 6.97 and 8.57 and its turbidity value is NTU, dissolved oxygen in the range of 4.22 to 7.12 mg/l, dissolved solids ranged 203.00 to 738.00 mg/l, total hardness in range of 79.48 to 479.35 mg/l. Surface water samples have Coliforms ranges between Nil MPN/100 ml.

3.11.3 The EAC during deliberations noted the following:

- The instant proposal is for Terms of Reference of Expansion of Cluster 12 (comprising of 12 mixed mines) from 31.83 MTPA to 34.83 MTPA with increase in ML area from 12694.47 Ha to 14814.20 Ha (Sonepur Bajri OCP :from 12 MTPA to 15 MTPA and increase in area from 2405 ha to 4681.35 ha; Tilobani UG : increase in area from 827.47 to 865.85 ha and Bankola UG : reduction in area from 830 ha to 635 ha) of M/s Eastern Coalfields Limited located in Raniganj Coalfields in village Sonepur Tehsil Haripur Block, District Paschim Bardhaman (West Bengal)
- Earlier, Environment Clearance to the project was granted by Ministry under EIA Notification, 2006 vide Ministry's letter No J-11015/76/2011-IA. II(M) dated 09.02.2015 and EC Amendments vide even letter dated 03.03.2016, 31.07.2020 and 31.07.2023 for 31.83 MTPA in mine lease area of 12694.47 Ha.
- The details of production capacity, area and life of mine with proposed changes are mentioned below:

As per Existing EC	As proposed in this Supplementary Note to Revised Mining Plan	Remarks
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S. No	Name of mines/project	Existing Lease Area (Ha)	Existing EC Capacity (MTPA)	Life (yrs)	#	Name of mines/project	Proposed Lease Area (Ha)	Proposed EC Capacity (MTPA)	Balance Life (yrs)	
1	Pandaveswar - Dalurband UG & OC	1385	2.25	>25	1	Pandaveswar - Dalurband UG & OC	1385	2.25	>25	No change
2	Manderboni-South Samla UG	1025	0.28	>25	2	Manderboni-South Samla UG	1025	0.28	>25	No change
3	Madhaipur UG & OC	622	0.65	>25	3	Madhaipur UG & OC	622	0.65	>25	No change
4	Nutandanga UG	543	Production suspended	-	4	Nutandanga UG	543	Production suspended	-	No change
5	Kendra UG	459	Production suspended	-	5	Kendra UG	459	Production suspended	-	No change
6	Samla UG & OC	676	0.60	3	6	Samla UG & OC	676	0.60	3	No change
7	Sonepur Bazari OCP	2405	12.00	13	7	Sonepur Bazari Expansion UG & OC	4681.35	15.00	33	Method of mining changed from OC to mixed mine; Area: (+) 2276.35 Ha; Capacity: (+) 3.00 MTY
8	Nakrakonda - Kumardihi B UG & OC	642*	4.12	>25	8	Nakrakonda - Kumardihi B UG & OC*	642	4.12	>25	No change
9	Kumardihi A UG	457	0.20	>25	9	Kumardihi A UG	457	0.20	>25	No change

10	Jhanjra UG	1520	5.00	>25	10	Jhanjra UG	1520	5.00	>25	No change
11	Tilaboni UG	827.47	2.14	>25	11	Tilaboni UG**	865.85	2.14	>25	Area: (+) 38.38 Ha due to inclusion of forest land within project area; No change in capacity
12	Shyamsundarpur UG	533	1.59	>25	12	Shyamsundarpur UG	533.00	1.59	>25	No change
13	Bankola UG	830	0.30	>25	13	Bankola UG	635.00	0.30	>25	Area (-) 195.00 Ha transferred to Sonapur-Bazari Expansion UG & OC. Leasehold area reduced; No change in capacity
14	Khottadih UG & OC	770	2.70	>25	14	Khottadih UG & OC**	770.00	2.70	>25	No change

										Area: (+) 2119.7 3 Ha Capaci ty: (+) 3.00 MTPA
	Total	12694 .47	31.83				14814. 20	34.83		

*Total project area of Nakrakonda-Kumardihi B UG & OC is 1018.48 Ha which includes the entire lease area of Nakrakonda – Kumardihi B UG & OC (642 Ha) and part areas of Kumardihi-A (192.23 Ha), Bankola UG (51.71 Ha), Shyamsundarpur UG (2.57 Ha), Tilaboni UG (67.34 Ha) & Manderboni-South-samla UG (108.94 Ha).

**38.38 Ha of Forest Land already identified for diversion in Tilaboni UG and 22.43 Ha forest land in Kottadih UG & OC has been recently identified within the leasehold vide memo no. 2473/8 dated 08.08.2023 by the DFO, Durgapur Division. FC application being made.

- 281.46 Ha of forestland has been reported to be involved in the project. Approval under the Forest (Conservation) Act, 1980 for diversion of 220.65 Ha (Sonapur-Bazari OCP – 32.65 Ha + Jhanjra UG – 188.0 Ha) of forest land for non-forestry purposes has been obtained vide MoEF&CC letter No. File No. – 8-68/1992-FC dated 18.11.2014 and File No. – 8-101/2004-FC dated 24.06.2015 (both for Jhanjra UG) and File No. – 5-WBC063/2013-BHU dated 29.06.2015 (for Sonapur-Bazari OC).
- Stage – I Application has been made for 38.38 Ha forestland in Tilaboni UG. Application for diversion of 22.43 Ha in Kottadih UG & OC.
- Application for obtaining the approval of the Central Ground Water Authority for NOC has been submitted to State Water Resources Investigation & Development Department, Govt. of West Bengal on 02.11.20218.
- Total mining lease area as per block allotment is 14814.20 Ha. Mining Plan (Including Progressive Mine Closure Plan) has been approved by the Board of Directors, ECL on 12.09.2023.

3.11.4 *The EAC after deliberations observed that instant proposal for Terms of Reference for Cluster 12 (comprising of 15 group of mines) Mines for which EC was given in cluster form. Details of individual mines are given in above table. The instant proposal is for expansion particularly for Sonapur Bajri OCP with increase in area and changes in mining methodology and also changes in area of Tilobani UG and Bankola UG mine.*

The Committee noted that there is adjustment of areas with adjacent mine. Broadly, the area of Cluster 11 mine is being transferred to Cluster 12 mine, and it was desired that necessary amendment in the EC of Cluster 11 shall be obtained by PP immediately from grant of this ToR for administrative document correctness.

Further, there is substantial area that falls under R&R and it was desired that PP shall have to submit detailed social impact assessment report and its approval from District commissioner. Also, 250 ha of river/nallah/pond in mine lease area. PP shall submit the commitment that no activity shall be proposed in this 250 ha of water bodies and submit the plan for its protection. It was desired that OB dump should not be placed near to any village or habitation even though it is projected to be displaced.

In view of above, EAC **recommended** the proposal of Terms of Reference to Expansion of Cluster 12 (comprising of 12 mixed mines) from 31.83 MTPA to 34.83 MTPA with increase in ML area from 12694.47 Ha to 14814.20 Ha (Sonapur Bajri OCP :from 12 MTPA to 15 MTPA and increase in area from 2405 ha to 4681.35 ha; Tilobani UG : increase in area from 827.47 to 865.85 ha and Bankola UG : reduction in area from 830 ha to 635 ha) of M/s Eastern Coalfields Limited located in Raniganj Coalfields in village Sonapur Tehsil Haripur Block, District Paschim Bardhaman (West Bengal), under EIA Notification, 2006 and its amendments therein with following additional specific conditions to be followed-

- i. Public Consultation, including public hearing, shall be conducted 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.
- ii. PP shall submit the Stage-I Forest clearance for forest land 38.38 ha in Tilaboni UG and 22.43 ha in Kottadih UG & OC involved in the Mine lease area of 14814.20 ha.
- iii. PP shall submit the approved Mine Plan as per proposal submitted for its peak production. No mining activity shall be conducted beyond this area and certificate from State Pollution Control Board shall be submitted during submission of EC stating that "No mining and its allied activities has been conducted outside the mine lease area of earlier EC".
- iv. PP shall apply for amendment in area of cluster 11 since some of the areas are being added/transferred into Cluster 12.
- v. PP is not allowed to divert the existing Nallah/Rivers and no activity shall be proposed in the 250 ha of water bodies present in mine lease area. Detailed protection plan for streams may be submitted with budgetary outlays.
- vi. PP shall submit the photographs of plantation and recorded drone video of the complete Mine lease area.
- vii. PP shall explicitly submit the overall area of underground and opencast coal mine in mixed mines.
- viii. PP shall submit the plan for drinking water supply through dedicated pipeline inside the ML area as well for the near villagers.
- ix. PP has to plan and implement the mechanized common coal evacuation system including inpit conveyor belt with silo loading for transportation of coal till railway siding. No transportation of coal by trucks/dumpers shall be proposed in EIA/EMP.
- x. PP has to prepare the collective EIA-EMP report considering the impact of other mines in the cluster. Collective EIA-EMP shall cover the impact on air & water and impact of common coal evacuation system.

- xi. *PP shall submit the proposal of EC only after completion of about 75% conditions stipulated in earlier EC and amendments in EC. IRO shall separately certify in report with conclusion that PP has complied overall weighted conditions.*
- xii. *PP shall extract coal from virgin area in the block only through surface miner and by shovel dumper method from underground developed area (due to practical limitation).*
- xiii. *PP shall submit the authenticated map of the River/Nallah/Stream flowing through the ML area or adjacent area from the concerned authority from the State.*
- xiv. *PP shall explore the possibilities of utilization of OB material for different purposes (in construction of roads, manufacture of artificial sand, aggregates, use for farmers etc.) and accordingly Plan shall be included in EIA/EMP Report.*
- xv. *PP shall submit design details of all Air Pollution control equipment (APCEs) to be implemented as part of Environment Management Plan vis-à-vis reduction in concentration of emission for each APCEs.*
- xvi. *Wind rose pattern in the area should be reviewed and accordingly location of AAQMS shall be planned by the collection of air quality data. 12 nos of Monitoring location for collecting baseline data should cover overall the 10 km buffer zone i.e. dispersed in 10 km buffer area.*
- xvii. *Project proponent to prepare Environmental Cost Benefit Analysis for the project in EIA/EMP Report.*
- xviii. *PP shall provide the details of mining technology/methodology proposed to be adopted for coal mining operations and its associated environmental benefits of using from Climate Change perspective.*
- xix. *Detailed Social Impact Assessment shall be prepared in villages for Rehabilitation and Re-settlement. R & R Activity shall be proposed with timeline and allotted fund with the approval of District Commissioner/collector. A need based sample survey, family-wise, should be undertaken to assess their requirements, and action programs prepared and submitted accordingly, integrating the sectoral programmes of line departments of the State Government.*
- xx. *Permission for ground water withdrawal shall be obtained from Central Ground Water Authority (CGWA) only for mining activity.*
- xxi. *Heavy metals including other parameters in surface water quality shall be analyzed and provided in EIA Report. Further, detailed mineralogical and chemical composition of the mineral and percentage of free silica from a NABL/MoEF&CC accredited laboratory.*
- xxii. *No mining activity shall be proposed on grazing land till the alternate land is provided of same area to the community.*
- xxiii. *PP should clearly bring out that what is the specific diesel consumption ~ (Liters/Tonne of total excavation & mineral) and steps to be taken for reduction of the same. Year-wise target for reduction in the specific diesel consumption needs to be submitted.*
- xxiv. *PP shall provide provision of integrated mine plan and mine reclamation cum land form / land scape plan for both underground and open cast coal mining projects. The plan must show the predicted post mining reclaimed and reformed surface by regarding and reshaping to reduce its height as close to the original surface level and proper sloping benching and terracing of external dump should be clearly brought out in the post mine closure plan. This would also include water management strategies such as surface water catchment and drainage paths etc. of post*

mining land surface. The final mine void shall be reduced from 300 mts of 386.334 ha and brought as near as ground so that land can be restored and reclaimed.

- xxv. *PP shall propose to use e-vehciles/LNG/CNG based mining machineries and trucks for mining operation and transportation of coal.*
- xxvi. *PP shall submit letter from Principal Chief Conservator of Forest, State Government that the area does not falls under any Eco-sensitive zone and areas and further is no corridor of Elephants & Tigers.*
- xxvii. *Details of toe-wall and garland drain to be constructed along the OB dump.*
- xxviii. *Reclamation to be done using geo-texturing technique of the dumps close to habitation and a cause of visual intrusion.*
- xxix. *PP shall submit the certified compliance of the EC letter and their subsequent amendment vide dated 09.02.2015, 03.03.2016, 31.07.2020 and 31.07.2023.*
- xxx. *PP to submit the status of any pending court cases or disposed of cases related to Civil court, High court, Supreme court and in any tribunal.*
- xxxi. *Impact of proposed project/activity on hydrological regime of the area shall be assessed and report be submitted. Hydrological studies as per GEC 2015 guidelines to be prepared and submitted.*

Agenda No. 3.12

Expansion of Cluster 3 (3 mixed mines) having existing production capacity of 3.33/3.97 (Normative/Peak) with increase in ML area from 1628.0 Ha to 1774 Ha (Dabor OCP: reduction in area from 1063 ha to 1056 ha; Bonjemehari OCP: Increase in area from 304 ha to 518 ha; Sangramgarh OCP: reduction in area from 261 ha to 200) of M/s Eastern Coalfield Limited located in Raniganj, District Paschim Bardhaman (West Bengal) - For Terms of Reference - reg.

[Online proposal No. IA/WB/CMIN/441611/2023; File No. J/11015/13/2010-IA-II(M)]

3.12.1 The proposal is of Terms of Reference for Expansion of Cluster 3 (3 mixed mines) having existing production capacity of 3.33/3.97 (Normative/Peak) with increase in ML area from 1628.0 Ha to 1774 Ha (Dabor OCP: reduction in area from 1063 ha to 1056 ha; Bonjemehari OCP: Increase in area from 304 ha to 518 ha; Sangramgarh OCP: reduction in area from 261 ha to 200) of M/s Eastern Coalfield Limited located in Raniganj, District Paschim Bardhaman (West Bengal).

3.12.2 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. LOCATION OF PROJECT

- (i) The project area is covered under Survey of India Topo Sheet No. 73 I/13 and is bounded by the geographical coordinates ranging from Latitudes 23⁰ 44' 42.38" N & 23⁰ 47' 53.75" N and Longitudes 86⁰ 51' 39.01" E & 86⁰ 55' 58.87" E.
- (ii) Coal linkage of the project is proposed for thermal power plants Use for various thermal power plants like Wardha Power Company Limited ((WPCL), Maharashtra, Kahalgaon Super Thermal Power Station (KhSTPP), Kahalgaon, Bhagalpur, Bihar, Aravali Power Company Private

Limited, Haryana, National Capital Power Station (NCPS) Or NTPC Dadri , Gautam Budh Nagar, Uttar Pradesh and Kanti Thermal Power Station in Kanti, Muzaffarpur, Bihar.

- (iii) No Joint venture cartel has been formed.
- (iv) 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 123 employment to land losers Persons will be provided from the project.
- (vi) The project is reported to be beneficial in terms of Environmental Benefits: Production augmentation will result in lesser pollution using eco-friendly mining technology. Apart from that, various mitigation measures are already in practice in the cluster for remediation of the potential environment impacts and ecological restoration of degraded land. Financial: There is sufficient geological reserve of coal with favorable stripping ratio within the projects. Ever increasing demand of coal on ECL makes them suitable choices for enhancing the production with higher resource optimization and outsourcing and Social: The cluster will bring enhanced socio-economic benefits to the local population of the project area by way of direct and indirect employment, improvement in infrastructure and growth of ancillary facilities.
- (vii) Earlier, the environment clearance to the project was obtained under EIA Notification, 2006 vide Ministry's letter No J-11015/13/2010-IA-II.(M) dated 20.10.2014 and EC Amendment vide even letter dated 07.08.2019 for 3.97 MTPA in mine lease area of 1628.00 Ha.
- (viii) Total mining lease area as per block allotment is 1774.00 Ha. Mining Plan (Including Progressive Mine Closure Plan) has been approved by the Board of Directors, ECL on 27.10.2022.

II. LAND USE DETAILS OF MINE

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

Pre-mining land use details

(Area in Ha)

S. No.	Type of Landuse	Within ML Area	Outside ML Area	Total
1	Forest Land	0.00	0.00	0.00
2	Plantation / Natural Vegetation	91.00	0.00	91.00
	Shrubs	302.80	0.00	302.80
3	Agricultural Land	959.70	0.00	959.70
4	Danga / Waste Land	42.50	0.00	42.50
5	Settlements		0.00	
	Urban Settlements	11.30	0.00	11.30
	Rural Settlements	74.00	0.00	74.00
	Industrial Settlements	33.30	0.00	33.30
6	Coal Quarry (Active / Backfilled / Water filled)	117.40	0.00	117.40
	Safety Zone	0.00	0.00	0.00
7	Active OB Dump	91.00	0.00	91.00
	Safety Zone	0.00	0.00	0.00
8	Coal Dump	2.20	0.00	2.20

S. No.	Type of Landuse	Within ML Area	Outside ML Area	Total
9	River/nallah/pond	48.80	0.00	48.80
10	Rehabilitation	0.00	0.00	0.00
	Total	1774.00	0.00	1774.00

Post-mining land use details

(Area in Ha)

S. No.	Landuse	Landuse (Ha)				Total
		Plantation	Water body	Public Use	Undisturbed	
1	External OB Dump	190.88	-	-	-	190.88
2	Top-soil Dump	5.00	-	-	-	5.00
3	Coal Dump	4.00	-	-	-	4.00
4	Excavation	151.20	-	-	-	151.20
5	Roads / Railways / Industrial Settlements	-	-	-	65.00	65.00
6	Built-up Area	-	-	-	11.30	11.30
	Rehabilitation Site	-	-	-	32.55	32.55
7	Plantation / Natural Vegetation	-	-	-	91.00	91.00
	Shrubs	-	-	-	222.26	222.26
8	Safety Zone	179.15	-	-	-	179.15
9	Water Body	-	48.80	-	-	48.80
10	Forest Land	-	-	-	-	-
11	Agricultural Land	-	-	-	716.36	716.36
12	Rural Settlements	-	-	-	54.00	54.00
13	Danga/Waste Land	-	-	-	2.50	2.50
	Total	530.23	48.80	-	1194.97	1774.00

- (x) Total geological reserve reported in the mine lease area is 255.82 MT with 183.00 MT mineable reserve. Out of total mineable reserve of 183.00 MT, 67.45 MT are available for extraction. Percent of extraction is 37.50%.
- (xi) 8 no. of seams with thickness ranging from 0.32 m to 39.42 m are workable. Grade of coal is G5 to G7, stripping ratio 3.41 to 5.39 while gradient is 1 in 2.5 to 1 in 5.
- (xii) Method of mining operations envisages by Opencast and underground (highwall) method
- (xiii) Life of each mine is more than 25 years.
- (xiv) The project has 4 no. external OB dumps in an area of 195.88 Ha with 60.0 to 90.0 m height and 67.53 Mm³ of OB. 3 no. internal OB in an area of 151.20 Ha with 71.00 Mm³ of OB is envisaged in the project.
- (xv) Total quarry area is 151.20 Ha out of which backfilling will be done in 151.20 Ha while final mine void will be created in an area of nil ha with a depth of m. Backfilled quarry area of 151.20 Ha shall be reclaimed with plantation.

III. TRANSPORTATION OF COAL

- (xvi) Transportation of coal has been proposed by tippers from coalface to surface / CHP, from surface / CHP to siding by tippers & conveyor belts and at sidings by rail wagons.
- (xvii) Reclamation Plan in an area of 621.23 Ha, comprising of 195.88 Ha of external dump (including top-soil dump), 151.20 Ha of internal dump and 100.41 Ha of green belt. In addition to this, an area of 173.74 ha, included in the safety zone/rationalization area, has also been proposed for green belt development.
- (xviii) Forest land is not present in the project.
- (xix) No National Parks, Wildlife Sanctuaries and Eco Sensitive Zones fall within 10 km boundary of the project.
- (xx) Wildlife conservation plan for schedule – I species has been submitted to DFO, Durgapur on 31.10.2023.
- (xxi) The ground water level has been reported to be varying between 3.10 m to 8.20 m during pre-monsoon and between 3.00 m to 5.25 m during post-monsoon.
- (xxii) Total water requirement for the project is 2200.00 KLD.
- (xxiii) Application for obtaining the approval of the Central Ground Water Authority for NOC has been submitted to State Water Resources Investigation & Development Department, Govt. of West Bengal on 02.11.20218.

IV. DETAILS OF PUBLIC HEARING & RELATED ISSUES

- (xxiv) Consent to Operate for the existing capacity was obtained from the State PCB on 31.05.2019 and is valid till 31.03.2024
- (xxv) Nunia nalla is flowing within boundary of lease. The nallah will not be diverted.
- (xxvi) Regular monitoring of ambient air quality is being carried out on fortnightly basis. The documented report is submitted to WBPCB and also to MoEF&CC 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.
- (xxvii) No court cases, violation cases are pending against the project of the PP.
- (xxviii) The project does not involve violation of the EIA Notification, 2006 and amendment issued thereunder. The coal production from the mine was started from the year onwards. No excess production of coal from the sanctioned capacity has been realized since the commencement of mining operations. The coal production, realized from the project, from 1993-94 onwards, is as under:

Year	EC sanctioned capacity (MTPA)	Actual production (MT)	Excess production beyond the EC sanctioned capacity
2014-15	3.97	1.63	Nil
2015-16		1.18	Nil
2016-17		0.98	Nil
2017-18		1.16	Nil

Year	EC sanctioned capacity (MTPA)	Actual production (MT)	Excess production beyond the EC sanctioned capacity
2018-19		1.54	Nil
2019-20		1.44	Nil
2020-21		1.72	Nil
2021-22		0.57	Nil
2022-23		0.30	Nil

Note: None of the mines within the cluster has exceeded individual EC capacity since grant of EC.

V. BENEFITS OF THE PROJECT

(xxix) The project involves 3710 project affected families. R&R of the PAPs will be done as per RFCTLARR Act, 2013 and CIL R&R Policy, 2012.

(xxx) Total cost of the project is Rs. 65703.00 lakhs. Cost of production is Rs 2196.95 per tonne., CSR cost is 2% of average profit of the previous three years, R&R cost is Rs 311.6580 crores. Environment Management Cost is Rs crores; EMP will be prepared and Cost for implementing EMP will be computed accordingly.

VI. CONTROL OF POLLUTION: (A) AIR & (B) WATER

(xxxii) Environmental Baseline data was generated in the pre-monsoon season from Mar'22 to May'22 (pre-monsoon Season) at 8 locations. The PM10 concentration was found in the range of 31.30 to 216.30 µg/m³ and the values are within the limits as per GSR 742 (E) dated 25.09.2000 and NAAQS, 2009, as applicable. The PM2.5 concentrations was found in the range of 15.60 to 47.20 µg/m³. There is no limit defined as per GSR 742 (E) dated 25.09.2000. The SO₂ concentration remained below 10.0 µg/m³ and NO_x concentration was in the range of 12.30 to 24.70 µg/m³ and was well within the standards. The incremental increase will be computed in EIA & EMP report.

(xxxiii) Surface water Monitoring was done at 6 locations. The result indicates that the pH value in the range of 5.57 and 8.45 and its turbidity value is NTU, dissolved oxygen in the range of 4.68 to 8.16 mg/l, dissolved solids ranged 125.00 to 1124.00 mg/l, total hardness in range of 11.86 to 940.71 mg/l. Surface water samples have Coliforms ranges between Nil MPN/100 ml.

3.12.3 The EAC during deliberations noted the following:

- The proposal is of Terms of Reference for Expansion of Cluster 3 (3 mixed mines) having existing production capacity of 3.33/3.97 (Normative/Peak) with increase in ML area from 1628.0 Ha to 1774 Ha (Dabor OCP: reduction in area from 1063 ha to 1056 ha; Bonjemehari OCP: Increase in area from 304 ha to 518 ha; Sangramgarh OCP: reduction in area from 261 ha to 200) of M/s Eastern Coalfield Limited located in Raniganj, District Paschim Bardhaman (West Bengal).
- The details of production capacity, area and life of mine with proposed changes are mentioned below:

As per Existing EC					As proposed in this Supplementary Note to Revised Mining Plan					Remarks
S. N.	Name of mines / project	Existing Lease Area (Ha)	Existing EC Capacity (MTY)	Life (years)	S. N.	Name of mines/ project	Proposed Lease Area (Ha)	Proposed EC Capacity (MTY)	Balance Life (years)	
1	Dabor OC	1063	2.30	>25	1	Dabor OC	1056	2.30	>25	Reduction in area (-7.00 Ha) due to boundary re-adjustment with Bonjeme hari OC; No change in capacity.
2	Bonjeme hari OC	304	1.47	>25	2	Bonjemeha ri Expansion UG & OC	518	1.47	>25	Expansion in area (+214.00 Ha); No change in capacity. Total land falling outside the present cluster boundary is 207.00 Ha. Introduction of Highwall Mining from 11 th year onwards
3	Sangram garh OC	261	0.20	>25	3	Sangramga rh OC	200	0.20	>25	Reduction in area

As per Existing EC					As proposed in this Supplementary Note to Revised Mining Plan					Remarks
S. N.	Name of mines / project	Existing Lease Area (Ha)	Existing EC Capacity (MTY)	Life (years)	S. N.	Name of mines/ project	Proposed Lease Area (Ha)	Proposed EC Capacity (MTY)	Balance Life (years)	
										(-61.00 Ha due to transfer of land to Mohanpur Expansion OCP (Phase-II)); No change in capacity
	Total	1628	3.97			Total	1774	3.97		Area: (+) 146.00 Ha* No change in capacity

*Note:

1. 7.00 Ha land transferred from Dabor OC to Bonjemehari Expansion UG & OC due to boundary re-adjustment
2. 207.00 Ha area required for Bonjemehari Expansion UG & OC is falling outside the present cluster boundary
3. 61.00 Ha land transferred from Sangramgarh OC to Mohanpur Expansion OCP (Phase-II)

- Earlier, the environment clearance to the project was obtained under EIA Notification, 2006 vide Ministry's letter No J-11015/13/2010-IA-II.(M) dated 20.10.2014 and EC Amendment vide even letter dated 07.08.2019 for 3.97 MTPA in mine lease area of 1628.00 Ha.
- Total mining lease area as per block allotment is 1774.00 Ha. Mining Plan (Including Progressive Mine Closure Plan) has been approved by the Board of Directors, ECL on 27.10.2022.
- Application for obtaining the approval of the Central Ground Water Authority for NOC has been submitted to State Water Resources Investigation & Development Department, Govt. of West Bengal on 02.11.20218.

3.11.4 *The EAC after deliberations observed that instant proposal for Terms of Reference for Cluster 3 (Group of 3 mines) for which EC was given in cluster form. The instant proposal is for expansion particularly for Bonjemehari OCP for increase in area and change in mine methodology from OC to mixed (OCP & UG) and also decrease mine lease area of other mines without any changes in production capacity.*

The area of Cluster Mohanpur expansion OCP (Phase II) is being transferred to Cluster 3. It was desired that necessary amendment in the EC of Mohanpur expansion OCP (Phase II) shall be obtained by PP.

Further, it was observed that 48.8 ha of river/nallah/pond exist in mine lease area. The Committee asked PP to submit the commitment with protection measures that no activity to be proposed in this 48.8 ha of water bodies. It was also desired that OB dump should not be placed near to any village or habitation even though it is projected to be displaced.

It was also observed that PP has obtained the monitoring data in the year March 2022 whereby rated capacity is merely 0.57 MTPA against production capacity of 3.33/3.97 MTPA. Therefore, it was desired that PP shall have obtained the three months' data again to propose adequate EMP measure with at least 50% of production capacity.

*In view of above, EAC **recommended** the proposal of Terms of Reference to Expansion of Cluster 3 (3 mixed mines) having existing production capacity of 3.33/3.97 (Normative/Peak) with increase in ML area from 1628.0 Ha to 1774 Ha (Dabor OCP: reduction in area from 1063 ha to 1056 ha; Bonjemehari OCP: Increase in area from 304 ha to 518 ha; Sangramgarh OCP: reduction in area from 261 ha to 200) of M/s Eastern Coalfield Limited located in Raniganj, District Paschim Bardhaman (West Bengal), under EIA Notification, 2006 and its amendments therein with following additional specific conditions to be followed-*

- i. Public Consultation, including public hearing, shall be conducted 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.*
- ii. PP shall submit the approved Mine Plan as per proposal submitted for its peak production. No mining activity shall be conducted beyond this area and certificate from State Pollution Control Board shall be submitted during submission of EC stating that "No mining and its allied activities has been conducted out the mine lease area of earlier EC".*
- iii. PP shall apply immediately for amendment in area of Mohanpur expansion OCP (Phase II) since some of the areas are being added/transferred in Cluster 3.*
- iv. PP shall obtain afresh 3 months' baseline at least at 50% of rated capacity of mines to propose with adequate EMP measures.*
- v. No diversion of the existing Nallah/Rivers/water bodies shall be proposed and protection measures shall be planned with budgetary outlay for 48.8 ha of water bodies present in mine lease area.*

- vi. *PP shall submit the photographs of plantation and recorded drone video of the complete Mine lease area.*
- vii. *PP shall submit the plan for drinking water supply through dedicated pipeline inside the ML area as well for the near villagers.*
- viii. *PP shall explicitly submit the area of underground and opencast coal mine in mixed mines.*
- ix. *PP has to plan and implement the mechanized common coal evacuation system including in-pit conveyor belt with silo loading for transportation of coal till railway siding. No transportation of coal by trucks/dumpers shall be proposed in EIA/EMP.*
- x. *PP has to prepare the collective EIA-EMP report considering the impact of other mines in the cluster. Collective EIA-EMP shall cover the impact on air & water and impact of common coal evacuation system.*
- xi. *PP shall submit the proposal of EC only after completion of about 75% conditions stipulated in earlier EC and amendments in EC. IRO shall certify that PP has complied 75% of conditions.*
- xii. *PP shall extract coal from virgin area in the block only through surface miner and by shovel dumper method from underground developed area (due to practical limitation).*
- xiii. *PP shall submit the authenticated map of the River/Nallah/Stream flowing through the ML area or adjacent area from the concerned authority from the State.*
- xiv. *PP shall explore the possibilities of utilization of OB material for different purposes (in construction of roads, manufacture of artificial sand, aggregates, use for farmers etc.) and accordingly Plan shall be included in EIA/EMP Report.*
- xv. *PP shall submit design details of all Air Pollution control equipment (APCEs) to be implemented as part of Environment Management Plan vis-à-vis reduction in concentration of emission for each APCEs.*
- xvi. *Wind rose pattern in the area should be reviewed and accordingly location of AAQMS shall be planned by the collection of air quality data. 12 nos of Monitoring location for collecting baseline data should cover overall the 10 km buffer zone i.e. dispersed in 10 km buffer area.*
- xvii. *Project proponent to prepare Environmental Cost Benefit Analysis for the project in EIA/EMP Report.*
- xviii. *PP shall provide the details of mining technology/methodology proposed to be adopted for coal mining operations and its associated environmental benefits of using from Climate Change perspective.*
- xix. *Detailed Social Impact Assessment shall be prepared in villages for Rehabilitation and Re-settlement. R & R Activity shall be proposed with timeline and allotted fund with the approval of District Commissioner/collector. A need based sample survey, family-wise, should be undertaken to assess their requirements, and action programs prepared and submitted accordingly, integrating the sectoral programmes of line departments of the State Government.*
- xx. *Permission for ground water withdrawal shall be obtained from Central Ground Water Authority (CGWA) only for mining activity.*
- xxi. *Heavy metals including other parameters in surface water quality shall be analyzed and provided in EIA Report. Further, detailed mineralogical and chemical composition of the mineral and percentage of free silica from a NABL/MoEF&CC accredited laboratory.*

- xxii. *No mining activity shall be proposed on grazing land till the alternate land is provided of same area to the community.*
- xxiii. *PP should clearly bring out that what is the specific diesel consumption ~ (Liters/Tonne of total excavation & mineral) and steps to be taken for reduction of the same. Year-wise target for reduction in the specific diesel consumption needs to be submitted.*
- xxiv. *PP shall provide provision of integrated mine plan and mine reclamation cum land form / land scape plan for both underground and open cast coal mining projects. The plan must show the predicted post mining reclaimed and reformed surface by regarding and reshaping to reduce its height as close to the original surface level and proper sloping benching and terracing of external dump should be clearly brought out in the post mine closure plan. This would also include water management strategies such as surface water catchment and drainage paths etc. of post mining land surface. The final mine void shall be reduced from 300 mts of 386.334 ha and brought as near as ground so that land can be restored and reclaimed.*
- xxv. *PP shall propose to use e-vehcles/LNG/CNG based mining machineries and trucks for mining operation and transportation of coal.*
- xxvi. *PP shall submit letter from Principal Chief Conservator of Forest, State Government that the area does not falls under any Eco-sensitive zone and areas and further is no corridor of Elephants & Tigers.*
- xxvii. *Details of toe-wall and garland drain to be constructed along the OB dump.*
- xxviii. *Reclamation to be done using geo-texturing technique of the dumps close to habitation and a cause of visual intrusion.*
- xxix. *PP shall submit the certified compliance of the EC letter and their subsequent amendment issued vide letter dated 20.10.2014 and 07.08.2019.*
- xxx. *PP to submit the status of any pending court cases or disposed of cases related to Civil court, High court, Supreme court and in any tribunal.*
- xxxi. *Impact of proposed project/activity on hydrological regime of the area shall be assessed and report be submitted. Hydrological studies as per GEC 2015 guidelines to be prepared and submitted.*

Agenda No. 3.13

Expansion and amalgamation of three mines Lakhanpur, Belpahar and Lilari Open Cast mine with increase in production capacity from 32.5 MTPA to 40 MTPA within mine lease area of 4399.246 ha by M/s Mahanadi Coalfields Limited located in IB Valley Coalfield, Tehsil Lakhanpur District Jharsuguda (Odisha) – Reconsideration of Environmental Clearance - reg. [Online Proposal No. IA/OR/CMIN/444254/2023; File No. IA-J-11015/15/2019-IA-II(M)]

3.13.1 The proposal is for Environmental Clearance for Amalgamation of three mines Lakhanpur, Belpahar and Lilari Open Cast mine with expansion in production capacity of 40 MTPA and increase in mine lease area of 4399.246 ha by M/s Mahanadi Coalfields Limited located in IB Valley Coalfield, Tehsil Lakhanpur District Jharsuguda (Odisha).

3.13.2 Details of the proposal, as ascertained from the proposal documents are given asunder:

I. LOCATION OF THE PROJECT

- (i) The project area is covered under Survey of India Topo Sheet No 64O/13 & 64O/14 (RF 1:50,000) and is bounded by the geographical coordinates ranging from Latitude 21°42'25.89"N to 21°47'24.82"N and Longitudes 83°49'38.9"E to 83°49'53"E.
- (ii) Coal linkage of the project: Power Plants and basket linkage.
- (iii) Joint venture cartel has been formed: Not Applicable
- (iv) Project does not fall in the Critically Polluted Area (CPA), where the MoEF&CC vide its OM dated 13th January, 2010 has imposed moratorium on grant of environment clearance. However, the project falls in the Severely Polluted Area as per the latest CEPI scores published by NGT in its report on 14.11.2019.
- (v) Employment generation: 4249 nos. of direct employment will be generated.
- (vi) The project is reported to be beneficial in terms of
- Improvement in Physical Infrastructure.
 - Improvement in Social Infrastructure.
 - Increase in employment potential.
 - Contribution to the Exchequer (both State and Central Govt.)
 - Post mining enhancement of Green Cover.
 - Improvement of Electrical Power Generation & availability of electricity for 24x7 in rural areas. Overall economic growth of the country.
- (vii) The proposal is for grant of integrated EC of 40 MTPA in ML area of 4399.246 Ha as per the EIA notification 2006 and its further amendments issued from time to time.
- (viii) Previously EC granted by MoEF&CC to the individual projects named Lakhanpur, Belpahar, Lilari and Ib valley coal washery vide letters-
- a. J-11015/391/2012-IA-II (M) for Lakhanpur OCP (22.5 Mty) dated 18.09.2023
 - b. J-1015/189/2008-IA-II (M) for Belpahar OCP (9 Mty) 22.01.2015, 15.01.2021 & 06.02.2023.
 - c. J-11015/27/89-IA for Lilari OCP (0.8 Mty) dtd 30.07.1990.
 - d. J-11015/2015/IA-II(M) for Ib valley coal washery dated 30.03.2017.
- (ix) Total mining lease area as per block allotment is 4399. 246 Ha. Mining Plan & Mine closure plan was approved by MCL Board in its 205th Board meeting held on 23rd October 2018 while published through minutes on 31.10.2018.

II. LAND USE DETAILS OF THE MINE

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

Pre mining land use (Area in Ha)

S. No	Particulars	Within ML Area (ha)	Outside Lease Area (ha)	Total Area (ha)
1	Agricultural land (tenancy)	1651.551	69.037	1720.588
2	Forest land	958.695	37.693	996.388
3	Wasteland (Non- Forest)	1621.228	50.413	1671.641

4	Grazing land	87.906	12.526	100.432
5	Surface water bodies	14.515	0.00	14.515
6	Settlements	65.351	173.962	239.313
	Total	4399.246	343.631	4742.877

During-mining land use details (Area in Ha)

S. No.	Particulars	Within ML Area (ha)	Outside ML Area (ha)	Total Area for 40 MTY (ha)
a)	Excavation area	3565.484	0.00	3565.484
b)	Safety Zone 7.5 m	24.095	0.00	24.095
c)	External OB dump	22.650	0.00	22.650
d)	Temp. topsoil storage	41.994	0.00	41.994
e)	Temp. Washery reject storage	124.002	0.00	124.002
f)	Infrastructure	495.018	0.00	495.018
g)	300/500 m blasting zone and others	126.003	0.00	126.003
	In Mining Lease (ML)	4399.246	0.00	4399.246
h)	Outside blasting Zone, now outside ML	0.00	169.669	169.669
i)	Residential Colony / Rehabilitation Site	0.00	173.962	173.962
	Outside ML	0.00	343.631	343.631
	Total Project Area	4399.246	343.631	4742.877

Post Mining

S. No.	Category	Plantation	Unfilled void	Quarry Bottom & Slope	Undisturbed / Built up area	Total
1	Quarry excavation	3105.033	23.871	436.58	0.00	3565.484
2	OB dumps (external)	22.65	0.00	0.00	0.00	22.65
3	Infrastructure	495.018	0.00	0.00	0.00	495.018
4	Blasting danger zone/Green belt	150.098	0.00	0.00	0.00	150.098
5	Other areas incl. temporary soil dump & rejects storage	165.996	0.00	0.00	0.00	165.996
6	Mine Lease Area (A)	3938.795	23.871	436.58	0.00	4399.246

(xi) Total geological reserve was 1720.256 MT. The mineable reserve is 1262.86 MT as per approved Mining Plan & Mine closure plan, extractable reserve is 1262.86 MT with per cent of extraction as 100%.

- (xii) 11 seams with maximum thickness 36.92 m. The coal grade is G11. The stripping ratio is 3.43 cum/tonne. The average gradient is 4° to 6°.
- (xiii) The method of mining would be Opencast by Shovel - Dumper/ Ripper-dozer in OB/ parting; Surface miner, pay loader & tipper in coal. Coal production will be done by using 2200/3800 mm drum dia surface miners, 35T multi-wheel trucks are proposed with 6.4 cum Front end loaders. 50 T dumpers will be replaced by 60 T dumpers. 100 T dumpers are proposed for OB excavation with excavators having 9.5 cum and 12 cum buckets. 244 T dumpers are proposed with 34 cum excavator.
- (xiv) The life of mine is 41 Years as per approved MP&MCP by MCL Board.
- (xv) There is one external OB dump with Quantity of 2.93Mcum in an area of 22.65 Ha while one internal dump with quantity 4294.29 M.cum in an area of 3541.613 Ha.
- (xvi) Total quarry area is 3565.484 ha out of which backfilling will be done in 3541.613 Ha. While unfilled mine void will be created in an area of 23.871Ha with a maximum depth of 30m. Backfilled quarry area of 3105.033 Ha shall be reclaimed with plantation/grass. Apart from this 436.58 Ha will remain as quarry bottom and slope which will be grass carpeted.

III. TRANSPORTATION OF THE COAL

- (xvii) **The entire coal production of 40.0Mty** will be by Surface Miner.

Coal Transportation: The coal will be dispatched through rail and road mode.

- Out of the total 40.0 MTPA of coal, 10.0 MTPA of coal will be transported by pipe conveyors to the washery from receiving hoppers towards north. After washing, washed coal will be transported by conveyors to silo for final dispatch by rail.
- For 20.0 Mty ROM coal, receiving hoppers are proposed near southern entry of Central Quarry, which are also near to South Quarry exit. Coal will be transported by conveyors through over-ground bunker to two silos (20 Mty) for rapid loading on rail.
- And 3.5 Mty coal will be dispatched to OPGC by rail from sidings and balance 6.5 Mty will be dispatched locally to nearby customers.

- (xviii) Reclamation Plan in an area of 3973.585Ha, comprising of 3105.033 Ha of internal dump, 22.65Ha of external OB dump, 150.098 Ha of Blasting danger zone/green belt and other areas for an area of 695.804 Ha incl. Infrastructure and outside lease area.
- (xix) The total forest area involved in the project is 996.388 Ha, out of which stage II FC for 541.622 ha has already been granted by MoEF&CC and 37.693Ha falls outside the mine lease area for which forest diversion is not required and will be kept intact.

S. No.	Diversion Particulars	Area in Ha	Date
1	Stage II Forest clearance for Lakhanpur OCP	233.43	08-10-1990
2	Stage II Forest clearance for Belpahar OCP	103.52	02-06-2000
3	Stage II Forest clearance for Belpahar OCP	19.70	15-09-2014
4	Stage II Forest clearance for MGR by OPGC	10.453	19-01-2015

5	Stage II Forest clearance for MGR by OPGC	12.319	10-01-2020
6	Stage II Forest clearance for Lilari OCP	162.20	14-08-1990
Total		541.622	

The Proposal for forest diversion of 417.073Ha and change of land use of 171.774 Ha has been applied on 16.03.2019 and the proposal was considered in FAC meeting held on 13.06.2022 and 17.10.2022 and FAC has directed for site visit and other queries were compiled and the proposal was considered in FAC meeting held on 23.02.2023. The FAC meeting held on 21.08.2023 FAC has sought queries for further Consideration of proposal in FAC meeting.

- (xx) No National Parks, Wildlife Sanctuaries and Eco-Sensitive Zones have been reported with 10 km boundary of the project.
- (xxi) Wildlife Conservation plan: A Site-Specific Wildlife Conservation Plan was prepared and submitted to Principal Chief Conservator of Forest, Wildlife (PCCF) and the proposal was discussed on 09.03.2023 and subsequently queries were raised. The queries were compiled and revised report submitted to PCCF (Wildlife) on 02.11.2023.
- (xxii) Total estimated water requirement is 12.89 MLD. The level of ground water ranges from 5.40 to 7.02 mbgl (pre-monsoon) and 2.24 to 4.83 mbgl (post-monsoon).
- (xxiii) NOC from the Central Ground Water Authority for the individual projects Lakhanpur and Belpahar projects (Lilari is a closed mine, hence no water is abstracted from this mine) have been obtained obtained vide letter CGWA/NOC/MIN/ORIG/2020/9248 dated 09.12.2020. for Lakhanpur OCP while for Belpahar OCP vide letter CGWA/NOC/MIN/ORIG/2020/9025 dated 26.11.2020. Application for renewal of the applications are under process at CGWA.

IV. DETAILS OF PUBLIC HEARING & RELATED ISSUES

- (xxiv) The public hearing for Integrated Lakhanpur Belpahar Lilari Project of coal production capacity 40.00 MTPA of M/s Mahanadi Coalfields Limited' was conducted at Kandsar Primary M.E school on 06.12.2021, at 11.00 AM. Additional District Magistrate supervised and presided over the Public Hearing Process. The issues raised during Public Hearing were regarding Employment, Peripheral Development, R&R and Dust generation.
- (xxv) Commitment made by the Project Proponent to address the Public Hearing concerns in lieu of Corporate Environment Responsibility (CER) is attached as Annexure A with basic information.
- (xxvi) Consent to operate (CTO) will be obtained from the State Pollution Control Board after obtaining Environment Clearance from MoEF&CC for this project.
- (xxvii) Yes, Lilari and Pulijore streams are passing through the mine lease and are proposed to be diverted as per the approved MP&MCP in the 29th year of operation.
- (xxviii) The baseline study generation for this project has been conducted for this project from Mar-May 2021 (pre-monsoon season). All the values are well within the prescribed limits. Regular monitoring of ambient air quality will be carried out on fortnightly basis for this project. The documented report is being and will be submitted to Regional Office, MoEF&CC, and Bhubaneswar and to MoEF&CC along with half yearly EC

compliance report.

- (xxix) No court cases are pending in the court for Lakhanpur OCP while for Belpahar OCP, a case has been registered under Section 15 & 16 of Environment Protection Act, 1986 at Sub-Divisional Judicial Magistrate, Jharsuguda vide ref. no. 2(C) CC NO-170 of 2013 and it is waiting for trial.
- (xxx) The project does not involve violation of the EIA Notification, 2006 and amendment issued there under.

V. **BENEFITS OF THE PROJECT**

- (xxxix) The project involves 1796 project affected families of the PAPs is being done as per Orissa Rehabilitation and Resettlement Policy 2006.
- (xxxixii) Total capital cost of the project is Rs. 2434.75 Crores. CSR Cost - 2% of the average net profit of the company for the three immediately preceding financial years or Rs. 2.00 per tonne of coal production of the previous year whichever is higher. R&R Cost Rs. 479.91 Crores. Environmental Management Cost – Rs. 515.21 Crores.
- (xxxixiii) Consent to operate (CTO) will be obtained from the State Pollution Control Board after securing EC from MoEF&CC for this project.
- (xxxixiv) Past Production details comparison with existing EC- Not applicable as this is a fresh project.
- (xxxixv) Certified compliance report has been obtained for the Lakhanpur Belpahar Lilari project separately on:

Project	Letter No.	Dated
Lakhanpur OCP	101-1029/23/EPE	20.10.2023
Belpahar OCM	101-975/23/EPE	08.08.2023
Lilari OCP	101-22/EPE	31.07.2023
Ib valley coal washery	101-974/23/EPE	19.10.2023

Summary of Compliance report

Project	Total conditions	Complied	Partially Complied	Assured comply	to
Lakhanpur OCP	87	74	02	11	
Belpahar OCM	68	51	01	16	
Lilari OCP	11	10	00	01	
Ib valley coal washery	33	19	03	11	

IRO, MoEF&CC inspection report:

Project	Major conditions
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Lakhanpur OCP	No Major issue was raised.
Belpahar OCM	No Major issue was raised.
Lilari OCP	No Major issue was raised.
Ib valley coal washery	No Major issue was raised.

VI. CONTROL OF POLLUTION: (A) Air & (B) Water.

Air quality: Number of sampling location monitored: 10 (2 core zone and 8 in buffer zone)

- The result indicates that the maximum and minimum values of PM₁₀ are in the range of 83.0 to 117.10 µg/m³ in core zone and 41.6 µg/m³ to 89.70 µg/m³.
- In buffer zone. whereas the PM_{2.5} are in the range of 42.0 to 60.50 µg/m³ in core zone and 21.60 to 47.40 µg/m³ in buffer zone.
- The SO₂ concentrations within the study area are in the range of 18.1 to 33.7 µg/m³ and the NO_x are in the range of 13.4 to 27.2 µg/m³ in buffer zone.
- The observed pollutant levels were compared with CPCB National Ambient Air Quality Standards and found to be within limit.
- The incremental increase in the values were projected to be 34.1 µg/m³ for PM₁₀, for PM_{2.5} 4.9 µg/m³, 7.40 µg/m³ for SO₂, and 29.40 µg/m³ for NO_x.
- The value of Total GLC is 151.20 µg/m³ for PM₁₀, 65.40 µg/m³ for PM_{2.5}, 41.10 µg/m³ for SO₂, and 55.5 µg/m³ for NO_x.

Water quality: Number of Surface water monitoring locations: 6

Parameter	Range
pH at 25°C	6.75-8.12
TDS (mg/L)	118-426
Total Hardness as CaCo ₃ (mg/L)	42-224
DO (mg/L)	6.4-7.0

3.13.3 The Committee after detail deliberation observed the following points: -

- i. PP has obtained the following Environmental Clearance for Lakhanpur, Belpahar and Lilari Opencast Mine:
 - a) Expansion for Lakhanpur Opencast Coal mine project from 15 to 18.75 MTPA vide letter dated 21.05.2014 by M/s Mahanadi Coalfields Limited.
 - b) Expansion for Lakhanpur Opencast Coal mine project from 18.75 MTPA to 21 MTPA vide letter dated 28.02.2018 by M/s Mahanadi Coalfields Limited.
 - c) Expansion for Lakhanpur Opencast Coal mine project from 21 MTPA to 22.5 MTPA (increase of 10% w.r.t. 15 MTPA) in the land area of 2452 ha under OM dated 07.05.2022.

- d) Expansion for Belpahar Opencast Coalmine Project from 6 MTPA to 9 MTPA in an ML area of 1503.683 ha vide letter dated 22.01.2015.
 - e) Amendment in EC dated 22.01.2015 for Belpahar Opencast Coalmine Project vide Ministry's letter dated 15.01.2021.
 - f) Extension of validity of EC dated 22.01.2015 and 15.01.2021 for Belpahar Opencast Coalmine Project vide Ministry's letter dated 06.02.2023 for extension upto March, 2024.
 - g) Lilari Opencast project of M/s South Eastern Coalfield limited with production capacity of 1.69 MTPA in the ML area of 201.00 ha. vide letter dated 30.07.1990.
 - h) Coal washery of 10 MTPA capacity in mine lease area of 39.35 ha by M/s Mahanadi Coalfields Limited vide letter dated 30.03.2017.
 - i) Amendment of Coal washery of 10 MTPA capacity in mine lease area of 39.35 ha by M/s Mahanadi Coalfields Limited vide letter dated 15.06.2017.
- ii. Public Hearing was conducted on 06.12.2021 for capacity of 40 MTPA over MLA of 4399.246 ha.
 - iii. Life of mine is upto 41 years as per approved MP & MCP by MCL Board.
 - iv. Mining Plan for Lakhanpur-Belpahar-Lilari OCP (40.0 MTY) was approved by MCL Board in its 205th meeting held on 23.10.2018.
 - v. System generated Standard ToR has been issued by MoEF&CC vide letter no. IA-J11015/15/2009-IA. II (M) dated 28th April 2019.
 - vi. Baseline data generation was done during March 2021 to May 2021.
 - vii. No Ecologically sensitive areas such as National Park, Sanctuary, Biosphere Reserve etc. in & within 10 km radius from the project.
 - viii. The Lilari stream flowing in between Lakhanpur OCP and Lilari OCP. Pulijhor stream (a small seasonal stream) is flowing through the mine property, the catchment area of which lies near the south-western limit of the quarry boundary.
 - ix. Earlier, the proposal was considered in the 42nd EAC meeting held on 5th April, 2023 wherein the committee has returned the proposal for the desired information. The PP has submitted the reply on PARIVESH on 01.11.2023 are as follows:

S. No.	Observation of EAC	Reply by PP
1.	The PP shall take revalidation of the Environmental Clearance dated 30.05.2022 for Lakhanpur Opencast Mine after fulfilling compliances of deferred points contained under the project.	The revalidation proposal of Lakhanpur OCP Expn. (21.0 to 22.5 Mty) has been considered in 47 th EAC held on 22-07-23. As per the MoM, the proposal has been recommended for revalidation of EC from 21.0 to 22.5 Mty and EC letter is granted vide letter dtd.18-09-23.
2.	PP shall submit the status of the progressive mine closure plan for all of	➤ The proposed integrated project consisting of three existing mines namely Lakhanpur OCP (22.5 Mty), Belpahar OCP (9.0 Mty) and Lilari OCP (0.8 Mty).

above mines along with the synchronization of Mining plan. A drone survey (15 minutes each) of individual mines about mine closure activity to be prepared and to be shown before EAC.

- The progressive closure is lagging behind w.r.t. final mine closure status. The main reason behind it is that, as per the approved Mining Plan proposed Integrated Lakhanpur Belpahar & Lilari, it has been mentioned that to avoid any further external dumping existing OB of Lakhanpur OCP need to be re-handled and the dump height of existing Belpahar OCP need to be raised from 245m to 290m above MSL.
- Therefore, the further plantation can only be done when proposed Integrated Lakhanpur, Belpahar & Lilari becomes operational and existing dumps will achieve their final height as per approved MP/MCP of proposed Integrated Lakhanpur, Belpahar & Lilari.
- Lakhanpur mine was earlier planned to extract only the upper seam – Lajkura only by Open Cast method. Belpahar mine was earlier planned to extract the lower seams – Rampur and IB by OC method in small area. However, for coal conservation, in proposed Integrated LBL, all seams are proposed for extraction in total area by OC method.
- The basic objective of proposed integration is not only to extract the lower seam coal but also optimize the land requirement considering environmental conservation.
- The Mining Plan/ Mine closure Plan of proposed Integrated Lakhanpur Belpahar & Lilari was approved by MCL Board vide letter dated 31-10-2018.
- However, to keep continuity of production of coal, the existing running mines i.e. Lakhanpur and Belpahar will remain operative as per their respective approved Mining Plan and Environmental clearances.

S. No.	Name of Project	Total Excavation area as per EC	Total excavated area till date	Area under back filling	Total technically reclaimed area	Total biologically reclaimed area
1.	Lakhanpur OCP	1314.00	973.20	633.65	305.37	129.7

		<table border="1"> <tr> <td>2.</td> <td>Belpahar OCP</td> <td>606.503</td> <td>567.98</td> <td>428.53</td> <td>194.336</td> <td>108.8</td> </tr> <tr> <td>3.</td> <td>Lilari OCP</td> <td>66.37</td> <td>60.30</td> <td>41.470</td> <td>26.00</td> <td>26.00</td> </tr> </table> <p>Apart from above, external OB dump area & block plantation area have also been taken up which gives the following overall plantation:</p> <table border="1"> <thead> <tr> <th>S. No.</th> <th>Name of Project</th> <th>Total biologically reclaimed area</th> <th>External OB dump reclaimed area</th> <th>Block & Avenue plantation area</th> <th>Total Plantation area</th> </tr> </thead> <tbody> <tr> <td>1.</td> <td>Lakhanpur OCP</td> <td>129.7</td> <td>17.5</td> <td>41.915</td> <td>189.115</td> </tr> <tr> <td>2.</td> <td>Belpahar OCP</td> <td>108.8</td> <td>55.33</td> <td>252.50</td> <td>416.63</td> </tr> <tr> <td>3.</td> <td>Lilari OCP</td> <td>26.00</td> <td>25.40</td> <td>70.10</td> <td>121.50</td> </tr> </tbody> </table>	2.	Belpahar OCP	606.503	567.98	428.53	194.336	108.8	3.	Lilari OCP	66.37	60.30	41.470	26.00	26.00	S. No.	Name of Project	Total biologically reclaimed area	External OB dump reclaimed area	Block & Avenue plantation area	Total Plantation area	1.	Lakhanpur OCP	129.7	17.5	41.915	189.115	2.	Belpahar OCP	108.8	55.33	252.50	416.63	3.	Lilari OCP	26.00	25.40	70.10	121.50
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3.	PP shall submit the updated revised Mine Plan and Mine Closure Plan as per current scenario and existing ECs of these three mines.	<p>The details of existing three mines is as follows:</p> <table border="1"> <thead> <tr> <th>S. No.</th> <th>Name of Mine</th> <th>Capacity in Mty</th> <th>MP/MCP approval date</th> <th>EC date</th> <th>Remarks</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Lakhanpur OCP Expn.</td> <td>22.50</td> <td>22-06-22</td> <td>30-05-22 & 18.09.23</td> <td>Running</td> </tr> <tr> <td>2</td> <td>Belpahar OCP Expn.</td> <td>9.00</td> <td>05-09-23</td> <td>06-02-23</td> <td>Running</td> </tr> <tr> <td>3</td> <td>Lilari OCP</td> <td>0.80</td> <td>25-02-14*</td> <td>30-07-90</td> <td>Production stopped</td> </tr> </tbody> </table> <p>➤ From the above table it can be observed that both the running mines i.e. Lakhanpur OCP and Belpahar OCP has recently approved Mining Plan and in both Mining Plans, it has been mentioned that final closure will</p>	S. No.	Name of Mine	Capacity in Mty	MP/MCP approval date	EC date	Remarks	1	Lakhanpur OCP Expn.	22.50	22-06-22	30-05-22 & 18.09.23	Running	2	Belpahar OCP Expn.	9.00	05-09-23	06-02-23	Running	3	Lilari OCP	0.80	25-02-14*	30-07-90	Production stopped														
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		<p>take place as per Closure Plan of proposed Integrated project.</p> <ul style="list-style-type: none"> ➤ In Lilari OCP production has been stopped since 01-04-2018. MCL has approved this mine closure and its corrigendum in its 156th meeting on 05.02.2014 communicated vide letter MCL/SBP/CS/Bd-155/Exct/2014/7772 dated 25.02.2014. ➤ Accordingly, company has already deposited Rs1441.43 lakhs in Escrow account no 365203800000321 for Lilari OCP on 08.10.2013. The final mine closure has not been prepared because this area will be taken up by Integrated Lakhanpur Belpahar & Lilari for extraction of lower seams. ➤ Therefore, the existing approved Mining Plans are already updated and there is no further updation is required for Lakhanpur and Belpahar. ➤ Extract of the relevant pages of approved MP & MCP is given in subsequent slide has been enclosed. 																									
4.	The PP shall submit the compliance of all the conditions stipulated in Environmental Clearances and its amendments within six months to IRO, MoEF&CC and submit the certified compliance all these documents.	<table border="1"> <thead> <tr> <th>S. No.</th> <th>Name of Mine</th> <th>Existing EC capacity in Mty</th> <th>Date of inspection</th> <th>Date of report</th> </tr> </thead> <tbody> <tr> <td>1.</td> <td>Lakhanpur OCP</td> <td>22.50</td> <td>15-06-23</td> <td>20-10-23</td> </tr> <tr> <td>2.</td> <td>Belpahar OCP</td> <td>9.00</td> <td>15-06-23</td> <td>08-08-23</td> </tr> <tr> <td>3.</td> <td>Lillari OCP</td> <td>0.80</td> <td>15-06-23</td> <td>31-07-23</td> </tr> <tr> <td>4.</td> <td>Ib Washery</td> <td>10.00</td> <td>15-06-23</td> <td>19-10-23</td> </tr> </tbody> </table> <p>➤ CCR report of all the projects has been enclosed.</p>	S. No.	Name of Mine	Existing EC capacity in Mty	Date of inspection	Date of report	1.	Lakhanpur OCP	22.50	15-06-23	20-10-23	2.	Belpahar OCP	9.00	15-06-23	08-08-23	3.	Lillari OCP	0.80	15-06-23	31-07-23	4.	Ib Washery	10.00	15-06-23	19-10-23
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5.	PP shall submit the information in Tabular form w.r.t. mine lease area, production capacity, additional land requirement, Part of mine lease areas to be surrendered.	<p>Tabular form w.r.t. mine lease area, production capacity, additional land requirement, Part of mine lease areas to be surrendered is provided below:</p> <table border="1"> <thead> <tr> <th>S. No.</th> <th>Name of project</th> <th>Existing ML area</th> <th>Capacity in Mty</th> <th>Additional land required</th> <th>Land surrendered</th> <th>Proposed Mine lease area</th> </tr> </thead> <tbody> </tbody> </table>	S. No.	Name of project	Existing ML area	Capacity in Mty	Additional land required	Land surrendered	Proposed Mine lease area																		
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		1	Lakhanpur OCP Expn.	2240.00	22.50	790.42	---	3030.42
		2	Belpahar OCP Expn.	1444.05	9.00	---	276.23	1167.82
		3	Lilari OCP	201.00	0.80	---	---	201.00
			Total	3885.05	32.30	790.42	276.23	4399.24
6.	Separately, the PP shall submit the drone video of mine along with washery; the video shall include coal evacuation system and implementation of the mechanized system in the coal mine.	A separate drone video of mine along with washery including implementation of mechanised coal evacuation system in the mine can be accessed through the provided drive link.						
7.	The PP shall submit the reserves available below the forest area to be deforested in future for mining purposes.	Details of the reserves available below the forest area to be deforested in future for mining purposes is tabulated below for kind reference:						
		S. No.	Particulars					Figures
		1	Total proposed Mine lease area (in Ha)					4399.246
		2	Total Mineable Reserves (in Mt)					1262.86
		3	Total additional Forest land to be diverted in proposed project (in Ha)					417.073
		4	Total Forest land to be diverted under excavation area (in Ha)					315.359
		5	Total reserves estimated beneath the forest land proposed for deforestation (in Mt)					288.35

8.	<p>The PP shall submit proper justification for the instant project. The PP shall also submit scope of the proposals proposed for amalgamation through Standard ToR.</p>	<ul style="list-style-type: none"> ➤ The proposed proposal is an amalgamation as well as expansion of three existing mines namely Lakhanpur OCP (22.5 Mty), Belpahar OCP (9.0 Mty) and Lilari OCP (0.8 Mty). ➤ Like the cluster concept in proposed amalgamation and expansion the existing mines will lose their identity and a new mine namely Integrated Lakhanpur Belpahar and Lilari will come into existence. ➤ As per the approved Mining Plan after grant of EC, CTO and other statutory permissions for opening of this proposed mine the existing escrow accounts will also be closed and a new Escrow account in the name of this mine will be opened and the amount already deposited in existing mines will be transferred to this new escrow account and all the further transactions will be governed by the MP/MCP of Integrated Lakhanpur Belpahar & Lilari. ➤ However, since the proposal includes amalgamation of three existing mines as well as expansion therefore considering the mandatory requirement of expansion the certified compliance from IRO has also been done and incorporated in EIA/EMP. ➤ A fresh Public Hearing has also been conducted for proposed Integrated project. The new proposal suggests integrating all three mines into one to improve conservation, sequential mining, land use optimisation, safety and increase the mine's capacity to meet growing coal demand of nation. ➤ In EIA/EMP also the impact prediction has been done considering all the running mines and their proposed amalgamation and expansion. <p>Therefore considering the above the project has been routed through standard ToR as new project but all the statutory requirement for expansion has also been fulfilled parallelly.</p>
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<p>9.</p>	<p>“PP had obtained EC for Lilari Opencast project in the name of M/s South-eastern Coalfield limited with production capacity of 1.69 MTPA in the ML area of 201.00 ha vide letter dated 30.07. 1990. The name has not been attempted to change into M/s MCL.”</p>	<ul style="list-style-type: none"> ➤ The Lilari Opencast project, located in the Jharsuguda district of Odisha, obtained an Environment Clearance (EC) on July 30, 1990, under the name of M/s South-eastern Coalfield Limited. The project had a production capacity of 0.80 million metric tonnes per annum (MTPA) in the mining lease (ML) area of 201.0 Ha. ➤ In a letter dated March 26, 1992, the Ministry of Coal communicated to the Chairman of Coal India Limited that, due to the increasing production program and investments in the Talcher and Ib Valley coalfields, a new subsidiary company named 'Mahanadi Coalfields Ltd' would be formed with headquarters in Sambalpur, Odisha. The jurisdiction of the new company would cover the state of Odisha, and the coalfields currently under the jurisdiction of South-eastern Coalfields Ltd would be transferred to the new coal company. ➤ Additionally, forest clearance for the Lilari Opencast project was initially obtained for 162.2 hectares under SECL on July 31, 1990 (one-time clearance). However, an additional forest clearance for 12.7 hectares (change of land use) was later obtained from the Ministry of Environment, Forest, and Climate Change (MoEF&CC) in the name of Mahanadi Coalfields Ltd on June 1, 2006. ➤ According to Clause 11 of the EIA notification 2006 regarding the transferability of Environmental Clearance, a prior environmental clearance granted to an applicant can be transferred during its validity to another legal person entitled to undertake the project. This transfer requires written "no objection" from the transferor and approval from the regulatory authority concerned, without the need for reference to the Expert Appraisal Committee or State Level Expert Appraisal Committee. ➤ Furthermore, the revalidation of the EC under the provisions of EIA notification 2006, is not applicable to this project, as it was obtained prior to the 1994 EIA notification. The mine ceased production in 2018, and the MoEF&CC, through its Office Memorandum dated June 11, 2019, introduced different forms under
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		<p>the EIA notification 2006, including Form 7 for the Application for Transfer of Environment Clearance.</p> <p>➤ In conclusion, it is important to note that Coal India operates with eight sister subsidiaries across India, and the mutual transfer of mines within subsidiaries prior to 1994 may kindly not be considered under the provisions of the EIA notification 2006.</p>
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x. The PP has submitted the details of control measures for Integrated Lakhanpur- Belpahar- Lilari OCP (40.0 MTY) as follows:

S. No.	Control Measures	Quantity (Existing) 30.0 Mty	Expenditure till date in Crs (Approx.)	Additional Quantity (Proposed) 40.0 Mty	Budget Estimate Proposed In Crs
1.	Surface Miner	8 Nos.	36 Cr.	04 Nos.	20 Cr.
2.	Mist Sprinkler	22 Nos.	0.04 Cr	100 Nos.	0.18 Cr
3.	Fixed Sprinkler	220 Nos.	0.20 Cr	--	--
4.	Mobile water tankers	34 Nos.	28 Cr	10 Nos.	13 Cr
5.	Mobile Fog Canon	3 Nos.	3.30 Cr	4 Nos.	4.4 Cr
6.	Trolley mounted Fog Canon	12 Nos.	0.81 Cr	12 Nos.	0.81 Cr
7.	Mechanical Road Sweeper	1 Nos.	0.86 Cr	1 Nos.	0.86 Cr
8.	Robotic Nozzle mounted on 28 KL water tanker	1 Nos.	0.21 Cr	2 Nos.	0.42
9.	Wheel washing system	1 Nos.	0.30 Cr.	1 No.	0.30 Cr

10.	Instant Shower System	2 Nos.	0.02 Cr	2 Nos.	0.02 Cr.
11.	Vertical Greenery System*	40m	0.03 Cr	300m	0.15 Cr
12.	Wind Barrier System*	--	--	750m	2.40 Cr.
13.	Plantation since inception	1746053 nos.	9.59 Cr	As per Progressive reclamation	5.00 Cr (Lumpsum)
		Budget till date	69.77 cr.	Budget proposed	47.54 cr
14.	Silo (10 MTY) & Pipe Conveyor*	--	--	1 nos./ 2.15 Km	164.38 Cr
15.	Silo (20 MTY)				320 Cr
16.	Concrete Road*	-	-	5.8 Km	30.56 Cr
17.	Black topping of roads from quarry 5 to NH 49	4 Km	1.60 Cr	2.97 Km	65.26 Cr

*Under construction

- xi. Rs. 20.17 Crs. Has been proposed for complying the issues involved in the public hearing activities with their appropriate budget has been mentioned below:

S. No.	Area of Focus	Proposed CER expenditure to be done per year year in Rs. (In Lakhs)			
		Year 1	Year 2	Year 3	Total
1	Drinking Water Supply and construction of wells, ponds, hand pumps and tube wells	148.00	148.00	148.00	444.00

2	Air pollution/Water Pollution control measures	161.33	161.33	161.33	484.00
3	Infrastructure development (Construction of Road, Electricity, School etc.)	148.00	148.00	148.00	444.00
4	Health Care and vaccination, awareness camp, mobile medical camp, Immunization, medicine etc.	94.00	94.00	94.00	282.00
5	Plantation (Avenue & Community Plantation)	53.67	53.67	53.67	161.00
6	Skill development for locals	67.33	67.33	67.33	202.00
Total					2017.00

However, as per the observations of public following activities have been taken for redressal of the issues raised during hearing

S. No.	Issues raised by the Public	Response of the project proponent on 06.12.2021.	Action taken by the project along with budgetary provisions										
1	Issues related to Employment. 1. Preference to local youths 2. Employment of minors 3. Permanent employment 4. Employment of Displaced persons with Disabilities villagers	1. Preference to local youths Employment is being provided to project displaced people as per Guidelines of Govt. of India and Govt. of Odisha. Any regulations stipulated by statutory agencies will be complied with as per guidelines. 2. Employment of minors The cut-off date for villages is finalized by state authorities as per guidelines, so employment of minor on cut-off date cases will be decided as per guidelines. 3. Permanent Employment Employment is being	<i>Total Budget allotted- Rs. 479.91 Crs.</i> <ul style="list-style-type: none"> Odisha Rehabilitation and Resettlement Policy, 2006 is being followed by the project. As per R&R policy employment, cash in lieu of employment, plot allotment, annuity, cash in lieu of plot are being followed The beneficiaries of R&R policy of Lakhanpur OCP, Belpahar OCM and Lilari OCP is summarized below. <table border="1"> <tr> <td>Employment</td> <td>2156</td> </tr> <tr> <td>Cash in Lieu of employment</td> <td>85</td> </tr> <tr> <td>Opted for Plot</td> <td>660</td> </tr> <tr> <td>Cash compensation</td> <td>1134</td> </tr> <tr> <td>Annuity</td> <td>14</td> </tr> </table> An amount of Rs. 479.91 crores has been earmarked towards R&R expenditure in the Integrated Lakhanpur-Belpahar-Lilari OCP 	Employment	2156	Cash in Lieu of employment	85	Opted for Plot	660	Cash compensation	1134	Annuity	14
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		<p>provided to project displaced people as per Guidelines of Govt. of India and Govt. of Odisha. Any regulations stipulated by Statutory agencies will be complied with as per guidelines.</p> <p>4. Employment of Displaced Persons with Disabilities Villagers The employment of Persons with Disabilities will be done as per the applicable Govt. Guidelines</p>	<p>(40MTY).</p> <ul style="list-style-type: none"> • Further, in contractual agencies local employment is being encouraged.
2	<p>Issues related to Peripheral Development</p> <ol style="list-style-type: none"> 1. Drinking Water 2. Solar Lighting 3. Health 4. Education 5. Roads 	<p>1. Drinking water Previously drinking water was provided to 61 villages and in this year, an additional 17 villages have been included for supply of drinking water so that drinking water will be provided to total of 78 villages. In addition to the above, drinking water will be provided to any other villages as per direction of state authorities.</p> <p>2. Solar lighting A proposal has been initiated for solar lights and pumps in Soldia village and the NOC has been cleared by Tahsildar, Lakhanpur. The proposal is pending at district administration for approval. Further, Solar</p>	<p><i>Budget allotted for Peripheral Development-Rs.10 Crs</i></p> <ul style="list-style-type: none"> • For the year 2022-23 drinking water is being supplied to 63 villages on direct basis from MCL at a cost of Rs. 1.26 Cr and 78 villages on deposit basis at cost Rs. 1.13 Cr. • For the year 2023-24 drinking water will be supplied to 63 villages on direct basis from MCL at a cost of Rs. 1.86 Cr and 157 villages on deposit basis at cost Rs. 2.54 Cr. Further, based on the demand from villages and state government drinking water will be provided. • 18 Nos Solar lighting poles and 06 nos. of Solar pumps have been installed in Soldia village at a cost of Rs. 25.40 Lakhs • Routine health camps are being conducted peripheral camps at regular intervals. From 2019 to till date medical health camps have been conducted in the nearby 20 villages and the total beneficiaries are 3765 and more numbers of health camps will be conducted in consultation with district administration. • A school is being run by MCL i.e., DAV, Bandhabahal with an educational assistance of Rs.5.49 Crs till Feb 2023) where students of

		<p>Lighting in other villages will be carried out in consultation with district administration.</p> <p>3. Health Routine General Health Camps are being conducted at regular intervals: More number of health camps will be conducted in consultation with district administration.</p> <p>4. Education Presently a school is being run by MCL i.e., DAV, Bandhabahal where students of nearby villages are admitted, and one Odia medium school is running which is sponsored by MCL under Grant in aid basis. Also, various activities under CSR for Education related are being carried out and will be carried out in future.</p> <p>5. Roads For peripheral development, roads are being constructed and will be continued in consultation with district administration.</p>	<p>nearby villages are admitted, and <i>one Odia medium school</i> is running which is sponsored by MCL under Grant in aid basis. Further various activities for education development is being carried out through CSR.</p> <ul style="list-style-type: none"> • Peripheral road development is being carried out CSR scheme for the year 2022-23 and 2023-24. • All peripheral development works will be carried out through CSR in consultation with people and State Government.
3.	<p>Issues related to R & R</p> <p>1. Sukhwasis</p> <p>2. Married daughters</p> <p>3. Land Acquisition</p>	<p>The list of villages wise Sukhwasis is being finalized by district administration and action will be taken by MCL authorities as per the direction of district</p>	<p><i>Budget for R&R of Sukhwasis- Rs. 11.24 Crs.</i></p> <ul style="list-style-type: none"> • Sukhwasis are land less people located in mine lease area. In Lakhanpur Area a total of 133 Sukhwasis have been identified and 70 have received the benefits. R&R package includes Sustainable livelihood Rs. 6 Lakhs, Additional incentive Rs. 2 Lakhs, 4 Decimal land and Biju

	<p>authorities. Accordingly, Rs. 14.22 cr has been deposited at the district administration for benefit of the Sukhwasis.</p> <p>daughters The employment regarding married daughter will be provided as per guidelines of Govt. of Odisha issued from time to time.</p> <p>acquisition Land acquisition is being carried out as per Coal Bearing Areas (Acquisition and Development) Act, 1957. Any regulations stipulated by statutory agencies will be complied with as per guidelines.</p>	<p><i>Pacca Ghar and 1 year HRA of Rs. 1.20 Lakhs.</i></p> <p>The budget approved for R&R of Sukhwasis is Rs.11.24 Cr and a amount of Rs. 5.144 Cr has been settled.</p> <ul style="list-style-type: none"> • The married daughters employment will be dealt as per the per guidelines of Govt. of Odisha issued from time to time. • Land acquisition is being carried out as per Coal Bearing Areas (Acquisition and Development) Act, 1957. Any regulations stipulated by statutory agencies will be complied with as per guidelines. • An amount of Rs. 479.91 crores has been earmarked towards R&R expenditure in the Integrated Lakhanpur-Belpahar-Lilari OCP (40MTY). 																				
<p>4. Issues related to Environment</p> <ol style="list-style-type: none"> 1. Generation of dust during transportation of coal 2. Water pollution & Ground Water depletion 3. Ground vibration 4. Deforestation 5. Rehabilitation of animals 	<ol style="list-style-type: none"> 1. Generation of dust during transportation of coal Water Tankers, Fixed Sprinklers, Mobile Fog Cannons and Trolley Mounted Fog Cannons will be deployed for dust suppression. Wheel Washing System, Mechanical Road Sweeper, Silo and Pipe Conveyor arrangement will be provided for abatement of fugitive dust problem. 2. Water pollution & Ground water depletion of ETP and one no. of STP have been installed for 	<p><i>Budget allotted for Environment measures-Rs. 552 Crs</i></p> <ol style="list-style-type: none"> 1. The existing and proposed measures for dust suppression during transportation of coal is tabulated below. <table border="1"> <thead> <tr> <th>Measures</th> <th>Existing</th> <th>Proposed</th> <th>Crores</th> </tr> </thead> <tbody> <tr> <td>Water Tankers</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Mobile Fog Cannons</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Fixed Sprinklers</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Trolley Mounted Fog Cannons</td> <td></td> <td></td> <td></td> </tr> </tbody> </table>	Measures	Existing	Proposed	Crores	Water Tankers				Mobile Fog Cannons				Fixed Sprinklers				Trolley Mounted Fog Cannons			
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treatment of Effluent and Sewage respectively. The backfilling of the de-coaled area will reduce the mine seepage resulting in restoring groundwater.

3. Ground Vibration

All provisions of Coal Mines Regulations are being followed and will be followed and controlled blasting procedure is being adopted.

4. Deforestation

Plantation activities are being carried out within mine premises through Odisha Forest Development Corporation and Chhattisgarh Rajya Van Vikas Nigam Limited and outside the mine premises through State Forest Department. For the upcoming years more plantation activities will be carried out.

5. Rehabilitation of animals

Rehabilitation of animals will be carried out in consultation with State Government.

Wheel Washing System			
Mechanical Road Sweeper			
Silo and Pipe Conveyor	10 MTP pipe conveyor	20 MTPA-Ph II	
Concrete Roads	n	m	
		ul	5

2. Presently there are two nos. of mechanized ETP of 50 KLD and 200 KLD in departmental workshops and 4 Nos. of 50 KLD mechanized ETP in contractual workshops. One STP of 1.7 MLD is installed in residential area.

Further, concurrent backfilling and biological reclamation is being carried out to reduce ground water depletion and regular monitoring of nearby wells and level monitoring of piezometers is also being carried out.

An amount of Rs. 515.21 crores have been earmarked for environment management cost.

3. Controlled blasting is being practiced and regular monitoring of ground vibrations is being carried to ensure safe blasting operations.

4. Progressive biological reclamation is being carried out in mine area and other nearby villages through state government agencies through plantation activities such distribution programmes and awareness programs are being conducted revenue fund of the area. The details of plantation tabulated below

Land	(in Ha)
External OB	98.230
Avenue and Block	4.545
Backfilled area	4.50

		Urban Plantation	0.675
		Total	7.95
		5. Rehabilitation of animals will be carried out as per the guidelines and in consultation of the state government.	

3.13.4 *The Committee after detail deliberations observed that the instant proposal is for the expansion as well as amalgamation of three mines with existing Coal washery within mine lease area. Committee observed that PP has submitted certified compliance report, updated Mine plan & Mine closure plan and availability of reserves below the forest area.*

The Committee asked PP to integrate the mining operations of all proposed mines for amalgamation (Lakhanpur, Belpahar and Lilari OCP) including existing coal washery. It was noted that the Pipe conveyor system and SILO loading system for 10 MTPA has been implemented and further for mechanization for 15 MTPA has been assured by PP to be Operational before January 2024.

The Committee emphasized that in place of exceeding the height of overburden, PP should start backfilling the already exhausted mine which should be made part of mine closure. Mine plan may be changed accordingly. Moreover, any exceed in permissible height of OB requires permission and proper certified inspection report by Department of Mines safety

It was noted that the project is located in IB valley, Jharsuguda district (Odisha) which has been identified as Severely Polluted Areas (SPAs) , accordingly EAC asked the PP to comply all the EC conditions with strict timeline and adequate safeguard. Due to the project falling within the SPA, the mode of coal transportation should be completely converted to mechanized system as per above mentioned timeline. Along with the above conditions PP shall complete the plantation within safety zone of 7.5 mts all along the mine boundary as early as possible. PP displayed the figures of mine area which differs from the submission give in PARIVESH and brief summary (submitted during appraisal), it was later reconciled.

Further, a Site-Specific Wildlife Conservation Plan was prepared and submitted to Principal Chief Conservator of Forest, Wildlife (PCCF) on 09.03.2023 and further their revised report has been submitted to PCCF (Wildlife) on 02.11.2023. The issues raised during public hearing has been addressed by project proponent however, main matter of R&R still needs to be completed in co-ordination of State Government as per applicable provisions.

*In view of above, EAC **recommended** the proposal for Expansion and amalgamation of three mines Lakhanpur, Belpahar and Lilari Open Cast mine with increase in production capacity from 32.5 MTPA to 40 MTPA within mine lease area of 4399.246 ha by M/s Mahanadi Coalfields Limited located in IB Valley Coalfield, Tehsil Lakhanpur District Jharsuguda (Odisha) under EIA Notification, 2006 and its amendments therein with following additional specific conditions to be followed-*

- i. *PP needs to submit the approval of Stage-I forest clearance for the forest area of 417.073 ha along with the status of change in land use for 171.774 ha prior to the grant of Environment Clearance.*
- ii. *PP shall obtain CTE/CTO from State Pollution Control Board for 40.0 MTPA production capacity for open cast operation.*
- iii. *PP shall submit the conservation plan for Lilari Nallah flowing through the ML area to IRO. No diversion of Lilari Stream/Nallah shall be conducted.*
- iv. *In addition to the existing facility for 10MTPA mechanized transportation system, PP shall install dedicated in-pit belt conveyor for 15 MTPA with silo loading system till railway siding for transportation of 100% of extracted coal through rail within six months of grant of EC. No road transportation shall be allowed by State Government. Accordingly, SPCB should grant the consent to operate*
- v. *PP needs to avoid further external dumping over existing OB of Lakhanpur OCP and Belpahar OCP and their re-handling too shall be avoided. Mine shall be modified accordingly.*
- vi. *PP shall deploy the truck size of upto 40 tonnes (payload) for transportation of coal by road. Transportation of coal shall be done in covered trucks only till implementation of mechanized system.*
- vii. *PP shall establish insitu lab facility within three months for regular monitoring of Air, water, solid wastes & soil and submit their test report to IRO.*
- viii. *PP shall start backfilling the existing pit in place of increasing the height of OB dump or creation of extra spaces for another dump area.*
- ix. *PP shall use the existing mine water for the purpose of watering the Mine area, roads and green belt development.*
- x. *PP shall implement routine de-siltation process of pond/drains in order to recharge the ground water.*
- xi. *PP shall submit the details of CO2 equivalent to be generated during the mining operation and CO2 equivalent for transportation to be separately mention.*
- xii. *PP shall maintain 50 mts width of embankment all along the diverted stream/nallah and conduct dense plantation with fruit bearing native species by itself.*
- xiii. *As proposed dedicated concrete Road of 12 mt width, away from the villages and sensitive location like school and hospitals shall be constructed to transport the coal prior to the start of the mining operation. Further 10 mts width of tree plantation shall be conducted to mitigate the vehicular and dust emission on both side of road along with the atleast 3m width of the midroad tree plantation.*
- xiv. *PP shall implement activities-wise proposed budget of Rs. 47.54 Cr. (as EMP cost) & Rs. 20.17 Cr. (as Public Hearing Budget) in time bound manner as per Table in above para of MoM 3.13.3 (x) & (xi) respectively. The details of annual expenditure shall be part of report submitted to IRO, MoEF&CC. PP needs to include the audited figures against the expenditure and activities to be monitored by through dedicated online monitoring mechanism. The maintenance of all activities shall be covered through recurring cost of Public Hearing, which will be part of CSR budget.*
- xv. *PP shall create a “Public Grievance Redressal and Monitoring System” for resolving any issues*

related to the pollution of mines and complaint has to resolve as soon as possible not beyond 30 days. In this regard, adequate awareness to be spread among the public to address their grievance to company with simple and easy manner and for which company needs to devise the mechanism. The same shall be reported to IRO within 3 months. A logbook to be maintained by PP on "Public Grievance Redressal and Monitoring System.

- xvi. PP shall monitor regularly water levels in open dug wells located in village and by establishing Piezometer to ascertain the impact of mining over ground water table and to plan mitigative measures to recharge the area.*
- xvii. Main haul road in the mine shall be provided with permanent water sprinklers, and other roads shall be regularly wetted with water tankers fitted with sprinklers. Also PP shall install Mist Cannon Dust Suppression Systems (80-100 mtrs.) at Coal Stock Yard to suppress the dust particles.*
- xviii. Garland drains (2mX3m) of adequate size shall be provided at the toe of the benches to arrest discharge and runoff with silt and sediments surging into areas adjoining the periphery of Overburden dump, which will be regularly cleaned before the onset of monsoon every year. Proper profiling of working benches of pits and dumps shall be done to channelize water in garland drains & sumps.*
- xix. Check dams shall be constructed at required locations within drains to arrest eroded materials and settling ponds shall be constructed to treat mine discharge water inside the mine block.*
- xx. 5 water harvesting pond of adequate capacity shall be created separately to recharging the ground water and usage of project affected families.*
- xxi. PP shall deploy atleast 20% of overall fleet of dumpers/trucks as electrical or CNG/LNG based dumpers/trucks for transportation of coal/OB etc and deploy e-vehicles for workers/staff in/out of the mine within 2-3 years of grant of EC.*
- xxii. Waste generated from the domestic use shall be treated in STP and the treated water will be utilized in plantation & greenbelt development. Wastewater from the HEMM washing/workshop will be treated in ETP. After treatment, water will be reused in washing of HEMM, dust suppression and greenbelt development.*
- xxiii. PP shall implement the outcome of the socio-economic study as per the EIA-EMP report*
- xxiv. R&R of villages in the mine lease area directly affected by mining operation shall be completed first and for other villages atleast 10 number of fog cannons shall be deployed for mitigation of dust pollution within six months of this EC.*
- xxv. PP shall arrange the permanent drinking water facility through RO plant along with dedicated pipeline facility for the near villagers. PP shall fix the intermittent issues related to the pipeline & RO plant. PP shall ensure distribution of water from the artificial reservoir within and outside Mine lease area in consultation with gram panchayat. The water treatment plant to meet the requirement with the start of production.*
- xxvi. PP to plant 100,000 nos. of Sal trees only with geotagging to identify the SAL trees and develop nursery of 10 ha sal trees for free distribution in nearby areas.*
- xxvii. PP shall install fixed fog cannon (mist sprayer) and fixed sprinkler all along the haul road/CHP, and OB dump till Railway siding is completed. The sufficient number of fog cannons (not less than 10 nos.) with 40 mts jet length shall be installed within 6 months. It should be ensured*

that air pollution level confirm to the standards prescribed by the MOEFCC/CPCB.

- xxviii. *PP shall make alternate arrangement of grazing land of atleast 10 ha for usage of project affected families within 10-15 km of project area within 2 years of commencement of mine operation.*
- xxix. *PP shall deposit the approved amount as proposed for wildlife conservation plan to the State Forest & Environment Dept. PP shall do regular follow up with for expenditure of Wildlife Conservation Plan and the details expenditure shall be submitted with six monthly EC compliance report to Ministry's IRO. Also, PP shall engage with State Biodiversity Authority and local biodiversity committee under its CSR activity to develop the local market.*
- xxx. *PP shall construct new multispecialty (50 beds) hospital in the 10 km of the project area within 5 years for local people out of approved budget outlay of CSR funds. The project affected families shall be given free medical facility. This shall be done in consultation of DM of the district.*
- xxxi. *PP shall conduct third party audit of compliance of EC condition at an interval six months and its report shall be submitted to IRO, MoEF&CC.*
- xxxii. *The status of mine closure activities must be included in every six months compliance report submitted to the state pollution control board and IRO.*
- xxxiii. *PP to install solar lights along the road used for transportation of minerals to avoid the accidents at night and also seek its maintenance. PP is asked to also identify the rural areas for installation of solar light with its maintenance within the study area of 10 km radius buffer zone within one year.*
- xxxiv. *PP to provide bio toilets to the villages located within the study areas within 1 year from the grant of this EC.*
- xxxv. *Persons of nearby villages shall be given training on livelihood and skill development to make them employable with its proper records.*
- xxxvi. *PP shall pay to farmers of agricultural land if there is any loss due to pollution found by concerned District Commissioner as per extent rules or norms.*
- xxxvii. *Hon'ble Supreme Court in an Writ Petition(s) Civil No. 114/2014, Common Cause vs Union of India & Ors vide its judgement dated 8th January, 2020 has directed the Union of India to impose a condition in the mining lease and a similar condition in the environmental clearance and the mining plan to the effect that the mining lease holders shall, after ceasing mining operations, undertake re-grassing the mining area and any other area which may have been disturbed due to their mining activities and restore the land to a condition which is fit for growth of fodder, flora, fauna etc. Compliance of this condition after the mining activity is over at the cost of the mining lease holders/Project Proponent". The implementation report of the above said condition shall be sent to the Regional Office of the MoEF&CC.*
- xxxviii. *PP shall conduct feasibility studies for assessment of voids for backfilling of ash and mixing of ash with overburden, taking up backfilling ash and OB mixing activities during operations as well as post closure of mines in line with the Fly Ash Utilization Notification, 2021.*
- xxxix. *All other terms and conditions as prescribed in the Ministry's letter dated 30.07.1990, 21.05.2014, 22.01.2015, 30.03.2017, 15.06.2017, 28.02.2018, 15.01.2021, 07.05.2022 and 06.02.2023 shall be complied by PP.*

Additional Specific conditions as the area falls under Severely Polluted Areas (SPAs)

- i. *Transportation of materials by rail/conveyor belt with silo loading facility shall be implemented for 40 MTPA.*
- ii. *Encourage use of cleaner fuels for trucks, If the roads required to be widened upto nearest railway siding, the same be constructed to avoid traffic congestion.*
- iii. *Increase green belt cover by 40% of the total land area beyond the permissible requirement of 33%, wherever feasible.*
- iv. *Greenbelt outside the project premises such as avenue plantation, plantation in vacant areas, social forestry, etc. shall be implemented.*
- v. *Assessment of carrying capacity of mine & road transportation shall be done as per the State Plan/instructions.*
- vi. *Reuse/recycle of treated wastewater shall be implemented as feasible with latest technology. Zero liquid discharge concept may be adopted.*
- vii. *PP to install Continuous monitoring station for ambient air quality and also continuous effluent quality in ETP shall be installed. Data so generated shall be linked with respective SPCB and CPCB websites.*
- viii. *A detailed water harvesting plan may be prepared by the project proponent for water augmentation and submitted to Regional Office of MoEF&CC.*
- ix. *The project proponent shall install STP for generated domestic wastewater and should meet for discharge standard.*
- x. *More stringent norms for management of hazardous waste like oil container, ETP sludge etc shall be adopted. The waste generated should be preferably utilized in co-processing.*
- xi. *Monitoring of compliance of EC conditions may be submitted with third party audit every year.*

Agenda No. 3.14

Expansion of Makardhokra- I OC mine (Phase-I) for production capacity from 3.5 MTPA to 4.2 MTPA of M/s Western Coalfields Limited in mine lease area of 614.69 ha located near Tehsil Umrer, District Nagpur (Maharashtra)- For Amendment in Environmental Clearance- reg.

[Online proposal No. IA/MH/CMIN/445137/2023; File No. J/11015/54/2006-IA. II (M)]

3.14.1 The proposal is for amendment in Environmental clearance dated 21.03.2022 for Makardhokra- I OC mine (Phase-I) for production capacity from 3.5 MTPA to 4.2 MTPA of M/s Western Coalfields Limited in mine lease area of 614.69 ha located near Tehsil Umrer, District Nagpur (Maharashtra).

3.14.2 The EAC during deliberations noted the following:

- (i) The instant mine of Makardhokra-I has obtained the EC vide letter dated 20.05.2021 for Production capacity of 3.50 MTPA within ML area of 614.69 Ha as per normal procedure of EIA Notifications, 2006.
- (ii) Amendment in EC was granted vide letter dated 28th February, 2022 for two conditions.
- (iii) Another EC (Stage-I for 20% expansion with exemption of public hearing as per OM dated 15.09.2017) has been issued on 21.03.2022 for expansion in production capacity from 3.5 to 4.2 MTPA on ML area of 614.69.
- (iv) Now, PP has submitted the proposal for amendment of Environment Clearance w.r.t. specific condition no. iv as follows:
Specific EC condition no. iv. - *PP shall implement the work of in-pit Belt conveyor system with CHP and Silo loading system till October, 2023 and accordingly, SPCB shall not grant CTO for road transportation after October, 2023. In this regard, a detailed action plan with documentary proof of bidding process should be submitted to IRO, MoEF&CC within 3 months from date of issue of EC*
- (v) PP has requested the following amendment: *PP shall implement the work of off-pit Belt conveyor system with CHP and Silo loading system till October 2025 i.e. F.Y. 2025-26."*
- (vi) It has submitted that in order to comply with the above-mentioned specific condition Project Report of Makardhokra-I OC Expansion Mine has been revised. In the revised Project Report of Makardhokra-I Expansion OC, working of Quarry has been divided in three phases.
- In Phase-I, the working has been proposed in the western quarry – I (existing quarry of Makardhokra-I OC).
 - In Phase-II, working has been proposed to extend the western quarry – I further dipside and inclusion of Rise side Eastern Quarry-I.
 - Then in Phase-III, the barrier reserves between the Makardhokra-I OC mine & Dinesh (Makardhokra-III) OC mine (Western Quarry – II), Eastern Quarry – II and balance reserves from Western Quarry – I are proposed to be extracted
- (vii) Further, the justification for not implementing the said condition are due to following factors:
- Multi seam working, the proposed area is having seven nos. of seams namely Seam-I, Seam-II (B), Seam-II (T), Seam-III, Seam-IV, Seam-V and seam-VI. All coal seams are considered in the project report. Considering the production from multiple seams, possibility of deployment of Inpit-belt conveyor has been ruled out as it will involve frequent shifting of Inpit-belt conveyor to various seams floor.
 - Backfilling is proposed in the void of Eastern Quarry-I and Western Quarry-I. Out of which simultaneous backfilling is proposed in Western Quarry-I. Deployment of Inpit-belt conveyor may hinder the movement of dumpers for backfilling. In addition, due to backfilling the space required for deployment of Inpit-belt conveyor may not be sufficient.
- (viii) With regard to status of its implementation, PP has submitted the following details

- The financial provision for installation of Belt Conveyor system at Makardhokra-I OC to be linked with the under-commissioning Belt Conveyor CHP Silo System of Dinesh (Makardhokra-III) OC has been made. The total budgetary provision as estimated in the revised Project Report is ₹.11551.97 lakhs. Revised Project Report has been approved by the Competent Authority i.e. WCL Board in its 343rd meeting held on 13th & 14th June 2022.
- Notice Inviting Tender (NIT) for Belt conveyor system with CHP and Silo loading system has been prepared by CMPDIL and tender has been floated on 15.09.2023.
- The work will commence after award of work to the successful bidder.
- As per the NIT the Construction period is 18 months.
- Provision has also been made in the NIT pertaining to Operation and maintenance of plant (which is of 60 months).

(ix) Considering above points, it has been submitted that installation of Belt Conveyor would require further 24 months after Oct' 23 and accordingly, timeline for installation of Belt Conveyor may be amended to October 2025 i.e. F.Y 2025-26.

3.14.2 The EAC after deliberations observed that PP has requested for extension in timeline to complete the work of in-pit Belt conveyor system with CHP and Silo loading system by amending the specific condition no. iv of the EC dated 21.03.2022. PP seeks relaxation in to comply the specific condition no. 'iv' by October, 2025.

It was observed that last expansion in production was granted as per Ministry's OM dated 15.09.2017 which had certain requirement to full for considering the proposal. PP committed to fulfil the commitment wherein one of the requirements to implement inpit conveyor with silo loading facility. Also in earlier EC of 20.05.2021, PP was to implement the inpit belt conveyor system.

It was observed that as of now, PP has only floated NIT for implementation of Belt Conveyor on their website on 15.09.2023 after lapse of 2 and half years and continuing the road transportation. The Committee expressed displeasure by knowing that no work has been awarded so far. The Committee asked PP to accelerate the process of tendering for implementation of Belt conveyor and submit report to IRO after their commencement before December, 2024.

The Committee also expressed displeasure towards SPCB for grating CTO, against the EC condition i.e. after October 2022, rather PP has approached MoEF&CC to seek extension at last stage. Since EC was granted under OM 15.09.2017 with the condition of implementing belt conveyor system, and PP has been remained with lackadaisical approach in implementing the condition by even not awarding the works, the EAC, while recommending the proposal of extension of timeline, proposed MoEF&CC to take action under provision of E(P), Act w.r.t. non compliances of EC condition after 2 and half years.

The Committee was of the view PP should complete 100% compliance of the previous EC (i.e. dated 20.05.2021 & 21.03.2022) before submitting any application for further expansion in the existing project.

*Based on the commitments submitted by PP, EAC **recommended** the proposal for amendment in EC and extended the timeline to complete the work of in-pit Belt conveyor system with CHP and Silo loading system till October, 2024 w.e.f October 2023 for Makardhokra- I OC mine (Phase-I) with the production capacity of 4.2 MTPA in ML area of 614.69 ha of M/s Western Coalfields Limited located near village Shirpur, Tehsil Umrer, District Nagpur (Maharashtra) under EIA Notification, 2006 and subsequent amendments/circulars thereto subject to the compliance of the following terms & conditions / specific conditions for environmental safeguards:*

- i. PP should complete the work of in-pit Belt conveyor system with CHP and Silo loading system till December, 2024 and accordingly, SPCB shall grant CTO for road transportation after December, 2024.*
- ii. PP should submit quarterly progressive report to IRO, MoEF&CC w.r.t the in-pit Belt conveyor system with CHP and Silo loading system.*
- iii. PP needs to submit the certified Compliance of the EC dated 20.05.2021 & 21.03.2022 and EC amendment dated 28th February, 2022 to IRO, MoEF&CC .*
- iv. PP should submit the Species based study report to IRO, MoEF&CC focusing upon the study for plantation of appropriate native species tree. Recommendation of the study to be implemented soon to comply specific condition no. (vii) of the EC 23.10.2021.*
- v. PP shall not use any village road and road along sensitive locations such as schools, hospitals etc for transportation of coal by dumpers/trucks.*
- vi. PP shall use the road having width more than 7 mts with tarpaulin covered 40-50 (payload) dumpers/trucks. Further, State Pollution Control Board shall ensure the emissions of trucks by regular inspections.*
- vii. PP shall install atleast 10 nos of fog cannon in mine lease, overburden dump and transportation route within 6 months.*
- viii. PP shall establish Environmental laboratory at project site by March 2024 and create Environmental Management Cell to monitor the issues related environmental degradation.*

Agenda No. 3.15

Singhali Underground Coal Mine Project for production capacity of 0.42 MTPA in ML area 862.289 ha of M/s South Eastern Coalfields Limited located in village Singhali, Tehsil Korba/Katghora District Korba, (Chhattisgarh) – For Revalidation of Environmental Clearance – reg.

[Online Proposal No. IA/CG/CMIN/449593/2023; File No. J-11015/179/2005-IA. II(M)]

3.15.1 The proposal is for Revalidation of Environment Clearance dated 9th May, 2006 to Singhali Underground Coal Mine Project of 0.42 MTPA production capacity in mine lease area of 862.289 ha of M/s South Eastern Coalfields Limited, located in village Singhali, tehsil Katghora, district Korba (Chhattisgarh), in compliance of the MoEFCC Notification S. O. 1530(E) New Delhi dated 06.04.2018.

3.15.2 The EAC after detail deliberations noted the following: -

- i. Earlier, the project was considered in the EAC meeting held on 25.04.2019 wherein committee deferred the proposed and asked the desired information. PP has submitted the following information as below:

S. No.	Observation of EAC	Reply by PP
1.	Public Notice shall be issued through concerned SPCB for information of the shareholders about the present coal mining operations inviting comments and their redressal	Public notice regarding the 'present coal mining operations inviting comments and their redressal' in respect of Singhali u/g mine has been published through the Chhattisgarh Environment Conservation Board in the Haribhoomi newspaper, Bilaspur edition (C.G.) on and 30.06.2021.
2.	Mining Plan and Progressive Mine Closure Plan duly approved by the competent authority	The mining plan/Board approval and the progressive mine closure plan duly approved by the SECL Board
3.	Compliance status of the conditions stipulated in the Environmental Clearance from the concerned Regional Office of the Ministry	The Certified Compliance report vis-à-vis the EC conditions compliance status of the mine issued by the IRO, Raipur of the MoEF&CC. The action taken report in respect of the CCR.
4.	Valid Consent to Operate from state pollution control board for the present mining Operations.	Consent to operate renewal obtained by the CCEB vide no. 584/TS/CECB/2023 dated 27.04.2023, valid upto 30.04.2024
5.	Redressal of Issue raised during the public hearing conducted by SPCB	The issues raised during the public hearing of Singhali u/g mine conducted on 17.11.2004 have been addressed. Action taken report of the public hearing minutes was discussed.
6.	Coal Production realized from mine from 1993-94 vis-à-vis capacity stipulated in the Environmental Clearance	Coal production from the mine since capacity stipulated in the Environmental Clearance

7.	Need assessment survey for the activities proposed under the CSR and the comprehensive plan to be prepared accordingly for implementation by the project proponent. Also, impact of the CSR activities undertaken at an interval of 5 years to be evaluated and a report to be submitted	The report on need assessment survey for the activities proposed under the CSR and the comprehensive plan to be prepared accordingly for implementation by the project proponent.
8.	Forest Clearance for diversion of 17.50 Ha of forest land as required under the Forest (Conservation) Act, 1980	Desired details is not related with Singhali UG. Forest land diversion of 301.48 ha is involved in the project and the Forestry Clearance
9.	Details of Court Case and the compliance of the orders, if any	No court Case

- ii. PP has obtained the following EC under EIA Notification 1994 in the ML area of 862.289 ha are as follows:
- EC vide letter no. J-11015/29B/94-IA. II(M) dated 17.02.1995 for production capacity of 0.24 MTPA.
 - EC vide letter no. J-11015/179/2005-IA. II(M)) dated 09.05.2006 for production capacity of 0.42 MTPA.
- iii. The instant proposal is revalidation of earlier EC for EIA notification 1994 under Ministry's Notification dated 6th April, 2018.
- iv. PP has submitted the past production detail from the year 1996-97 to till date as follows:

Year	EC sanctioned capacity (MTPA)	Actual Production (MT)	Excess production beyond the capacity
1996-97	0.24	0.106	-
1997-98	0.24	0.142	-
1998-99	0.24	0.169	-
1999-2000	0.24	0.190	-
2000-01	0.24	0.220	-
2001-02	0.24	0.308	0.068
2002-03	0.24	0.315	0.075
2003-04	0.24	0.277	0.037
2004-05	0.24	0.253	0.013
2005-06	0.24	0.258	0.018
2006-07	0.42	0.212	-
2007-08	0.42	0.263	-
2008-09	0.42	0.303	-
2009-10	0.42	0.335	-

2010-11	0.42	0.325	-
2011-12	0.42	0.328	-
2011-12	0.42	0.302	-
2013-14	0.42	0.300	-
2014-15	0.42	0.325	-
2015-16	0.42	0.339	-
2016-17	0.42	0.364	-
2017-18	0.42	0.378	-
2018-19	0.42	0.383	-
2019-20	0.42	0.376	-
2020-21	0.42	0.237	-
2021-22	0.42	0.177	-
2022-23	0.42	0.129	-
2023-24 (upto Oct'23)	0.42	0.0718	-

3.15.3 *The Committee after detail deliberations observed that the instant proposal is for revalidation of EC issued under EIA Notification, 2006 as per Ministry's Notification dated 6th April, 2018. It was observed that PP did not submit reply w.r.t. the observation of the earlier EAC (deferred in 44th EAC meeting dated 25.04.2019) on online proposal no. IA/CG/CMIN/7650/2005; instead applied a new proposal with compliance on PARIVESH 2.0 vide proposal no. IA/CG/CMIN/449593/2023.*

The committee continued the deliberations of earlier EAC meeting (held on 25.04.2019) wherein it was asked to PP for submitting past production detail from 1993-94. It was observed that from 2001 to 2006, the production has exceeded beyond its earlier EC limit and there is no increase in EC after obtaining expansion EC in 2006 (both the EC are under 1994 EIA Notifications). Thus the EAC opined that the instant proposal attracts the judgment of Hon'ble Supreme Court dated the 2nd August 2017 in Writ Petition (Civil) No. 114 of 2014 in the matter of Common Cause versus Union of India and Ors, accordingly PP shall submit the compensation to State Government as per Hon'ble Hon'ble Supreme Court.

Other compliance of earlier observations was found to be satisfactory and PP should further focus on compliance of EC conditions.

In view of the above the, committee asked the PP to submit the compliance for the following details:

- i. PP should submit detail reply on their earlier proposal number IA/CG/CMIN/7650/2005 available on PARIVESH-1.0 for further consideration of proposal instead on new application.*
- ii. PP should submit the NOC from CGWA for withdrawal of ground water.*
- iii. Action plan on partial compliance of EC conditions highlighted by Ministry's Regional office in its report.*

*In view of the project proponent is desired to submit above information and being **deferred** for apply on PARIVESH 1.0 to close the proposal of revalidation based on its application date.*

Agenda No. 3.16

Kulda Opencast Coal Mine Project with production capacity from 19.6 MTPA to 21 MTPA in Mine Lease area of 634.205 ha of M/s Mahanadi Coalfields Limited located at village Balinga, Tumulia, Siarmal, Kulda & Bankibahal, Tehsil Hemgir, District Sundargarh (Odisha) – Reconsideration for Amendment in Environmental Clearance dated 14.02.2022 & 24.05.2022 – reg.

[Online Proposal No. IA/OR/CMIN/442462/2023; File No. J/11015/10/1995-IA. II (M)]

3.16.1 The proposal is for amendment in Environmental Clearance for Kulda Opencast Coal Mine Project with production capacity from 19.6 MTPA to 21 MTPA in Mine Lease area of 634.205 ha of M/s Mahanadi Coalfields Limited located at village Balinga, Tumulia, Siarmal, Kulda & Bankibahal, Tehsil Hemgir, District Sundargarh (Odisha).

3.16.2. PP has requested to extend the timeline of the condition with a request in three part i.e. for extension in timeline to implement in-pit conveyor system with silo loading system till railway siding since part of the condition regarding 2 km of conveyor belt, silo loading till railway siding shall be complied by December, 2023, 5.42 km conveyor shall be completed by March, 2023 and 100% transportation by mechanised system shall be completed by December, 2023 i.e. after commissioning of Barpalli loop.

3.16.2. The EAC during deliberations noted the following:

- i. The Project proponent has obtained the following environmental clearance vide letter no. J-11015/10/1995-IA. II (M):
 - EC was accorded by Ministry on 24.12.2002 for 10 MTPA in an ML area of 878.29 ha. Expansion in EC was granted by Ministry vide its letter dated 22nd March, 2018 from 10 to 14 MTPA with Public Hearing. Extension in validity of EC was granted on 28th March, 2019 and 10th January, 2020.
 - EC vide letter dated 02.03.2021 for the expansion of the Kulda OC mining project from 14 MTPA to 16.80 MTPA in the MLA of 634.205 ha under the provisions of OM dated 15.09.2017 (20% increase- stage-1).
 - EC vide letter dated 14.02.2022 for the expansion of the Kulda OC mining project from 16.8 MTPA to 19.6 MTPA in the MLA of 634.205 ha under the provisions of OM dated 15.09.2017 (from 20 to 40% (stage-2).
 - EC vide letter dated 24.05.2022 for the expansion of the Kulda OC mining project from 19.6 MTPA to 21 MTPA in the MLA of 634.205 ha from 40% to 50% of original EC in compliance of Ministry's OM dated 07.05.2022 (Availing total 50% relaxation of OM dealing with exemption of public hearing under clause 7(ii) of EIA notification, 2006).

- ii. Amendment in EC for specific conditions stipulated for compliance in time bound manner was obtained vide letter dated 09.01.2023.
- iii. As per amended EC point no. 4(ii) and 4(iii) which is quoted below, a new timeline was prescribed by MoEF&CC for compliance of specific condition (v) and (xvi) respectively:

“Point no: 4(ii) PP shall implement in-pit conveyor system with silo loading facility till railway siding and no road transportation shall be allowed after October 2023 and accordingly SPCB shall not grant CTO for road transportation after October 2023.

Point no: 4(iii) PP shall deploy only 40-50 tonnes covered trucks/dumpers to reduce fleet size till rapid loading system and conveyor belt system is commenced. (i.e. Till October, 2023)”.

- iv. Now, project proponent has again requested for extension in timeline for the amended EC conditions. With regarding point no. 4(ii), it has been submitted that all the coal has been planned to be dispatched through belt and further loading through SILO. For implementation of the same the dispatch arrangement is divided into three phases. The details of the same along with time line is given below:
 - Phase I: Commissioning of Sardega RLS (20.0 Mty with 2km Conveyor Belt) by Dec 2023.
 - Phase II: Commissioning of additional 5.42 Km belt to above RLS by Mar 2025. (As per directive of EAC)
 - Phase III: Commissioning of Barpalli Bulb loop (90.0 Mty with conveyors arrangement) by Dec 2025.
 - And, no road transportation shall be allowed after Dec 2025.”
- v. With regarding point no. 4(ii), as on 16th Sept '23 the deployment of 40-50 tonnes covered trucks/dumpers have not yet been fully achieved but there is a reduction in the lower capacity trucks/dumpers by 181 nos. (i.e 394-213). Therefore, it is being requested for phasing out lower capacity trucks for coal transportation by Dec'25
- vi. The details of the same is given below:

Particulars	Before the stipulated condition	As on 31.01.2023	As on 16.09.2023
Deployment of 40-50Te	0 Nos.	106 Nos.	126 Nos.
Deployment of lower capacity trucks	394 Nos.	241 Nos.	213 Nos.
Total	394 Nos.	347 Nos.	339 Nos.

3.16.3 The EAC after detail deliberations observed that instant proposal is for amendment in EC w.r.t the extension of timeline for completing the pending work for in-pit conveyor system with silo loading facility part of mechanized transportation system. The mechanized transportation will help PP to transport 100% coal through mechanized system instead of dumpers/trucks. Earlier, the size of the dumpers was increased in order to decrease the number of trucks which can further reduce the pollution level in environment.

Earlier, Committee observed that the PP has shown 89% of physical progress and 85% of financial progress in compliance of the observation of earlier EAC (i.e. of 48th meeting) wherein it was asked to complete the 50% work w.r.t. mechanized transportation system for 16.5 MTPA with CHP for further validation of EC granted on 24th May, 2022. Subsequently, Committee asked the PP to complete the mechanisation for the rest portion of 4.5 MTPA (i.e. 21MTPA-16.5 MTPA) for complying the EC conditions. Committee asked the PP to submit the Progress report for mechanization of 4.5 MTPA before applying the validation of EC dated 24.05.2022.

During the discussions, Committee observed that PP is in the process to complete additional belt conveyor for 5.42 km and Barpalli Bulb loop (90.0 Mty with conveyors arrangement) by March, 2025 and December 2025 respectively. EAC desired that PP must expedite the implementation and deploy extra manpower/resources instead of repeated extension in timeline. Also, construction of Barpalli loop may be raised at PMG level by M/s MCL to impress upon the urgency to Ministry of Railway.

With regard to fleet size, PP has demonstrated the progress and require further deployment of bigger sizer dumpers/vehicle to optimize the numbers plying on the road.

In view of above, EAC **recommended** the amendment of Environment Clearance dated 14.02.2022 & 24.05.2022 **w.r.t. extension of timeline for belt conveyor system of 5.42 km upto December 2024 and for 2 km conveyor till Sardega railway siding with silo loading facility upto December 2023 respectively and 100% transportation by conveyor still with silo loading system at Barpalli loop till December, 2025** for Kulda Opencast Coal Mine Project with production capacity from 19.6 MTPA to 21 MTPA in Mine Lease area of 634.205 ha of M/s Mahanadi Coalfields Limited located at village Balinga, Tumulia, Siarmal, Kulda & Bankibahal, Tehsil Hemgir, District Sundargarh (Odisha) under EIA notification, 2006 and subsequent amendments/circulars thereto subject to the compliance of the following terms & conditions / specific conditions for environmental safeguards:

- (i) PP to submit the Progress report for mechanization of 4.5 MTPA (i.e. 21MTPA-16.5 MTPA) before submitting application for the validation of EC dated 24.05.2022.
- (ii) Further expansion in capacity shall be considered subject to the compliance of in-pit conveyor and silo loading system till railway siding for 100% transportation of coal is implemented.
- (iii) PP shall implement in-pit conveyor system with silo loading facility till railway siding and No road transportation shall be allowed after December, 2024 till Sardega Siding and after December 2025 for Barpalli loop and accordingly, SPCB shall grant CTO for road transportation.
- (iv) PP shall deploy only 40-50 tonnes covered trucks/dumper to reduce fleet size till Rapid loading system and conveyor belt system is commenced. (i.e., till December, 2024).
- (v) PP shall complete the implementation of conveyor system of 5.42 km till railway siding by December, 2024. SPCB shall not grant CTO for non-implementation of In-pit belt conveyor system after December, 2024.

- (vi) *PP shall develop in-house/at mine office environmental laboratory facilities with adequate instruments/equipment by June, 2023 for regular monitoring instead of depending upon its consultant and submit the status to Ministry's RO.*
- (vii) *PP to submit the existing transportation route in the matrix format before 31st December, 2023 to IRO, MoEF&CC.*
- (viii) *All other terms and conditions as prescribed in Ministry's letter dated 22nd March, 2018, 10.01.2020 02.03.2021, 14.02.2022 and 24.05.2022 needs to be complied by PP.*

Agenda No. 3.17

Chhattibariatu Opencast Coal Mine Project (7 MTPA and 646.23 ha ML area) of M/s NTPC Ltd located in North Karanpura Coalfields, in villages Chhattibariatu, lordag and Pagar in district Hazaribagh (Jharkhand) – Amendment in Environmental Clearance -reg.

[Online Proposal No. IA/OR/CMIN/450771/2023; File No. J-11015/133/2007-IA. II (M)]

3.17.1 The proposal is for amendment in EC for Chattibariatu Coal Mining Project of 7 MTPA peak capacity in mine lease area of 646.23 ha of M/s NTPC Limited located in North Karanpura Coalfields in villages Chhatti bariatu, Jordag, Kerendari and Pagar, Tehsil-Kerendari, District-Hazaribagh (Jharkhand)

3.17.2 The EAC during deliberations noted the following: -

- The proposal is for amendment in EC for Chattibariatu Coal Mining Project of 7 MTPA peak capacity in mine lease area of 646.23 ha of M/s NTPC Limited located in North Karanpura Coalfields in villages Chhatti bariatu, Jordag, Kerendari and Pagar, Tehsil-Kerendari, District Hazaribagh (Jharkhand).
- Earlier, the Ministry in accordance with the Environmental Impact Assessment (EIA) Notification, 2006 and subsequent amendment thereto had accorded Environmental Clearance (EC) for Chhattibariatu Opencast Coal Mine Project of 7 MTPA in an ML area of 646.23 ha in North Karanpura Coalfields, villages Chhattibariatu, Jordag and Pagar, District Hazaribagh (Jharkhand) to M/s National Thermal Power Corporation Limited subject to compliance of terms and conditions stipulated therein vide letter No. J-11015/133/2007-IA.II (M) dated 19th April, 2010 with a conditions at 2(A) (ix & xi) and later re-validated on 03.03.2016.

2(A) (ix) - Raw coal from CHP shall be transported by closed conveyors to the railway siding and from there to linked Barh STPS by rail. There shall be no road transportation of coal.

2(A) (xi) Company's Railway siding shall be established within 3 years from date of grant of environmental clearance.

- Further, vide letter no. J-11015/133/2007-IA.II(M) dated 01.12.2020, the EC was amended to allow transportation of coal by road for three years by road as an interim arrangement by

adopting all mitigation measures to control dust pollution with additional specific condition mentioned therein.

- Now, PP has again requested for extension in timeline for compliance of above said conditions. It has been submitted that production from the coal mine was envisaged to start in April, 2020. However, it eventually began in September 2022 due to following:
 - Covid Pandemic (MoEF&CC vide Notification No. S.O. 221 (E) dated 18.01.2021 has notified that the period from 1st April 2020 to 31st March 2021 shall not be considered for the purpose of calculation of the period of validity)
 - Extreme law and order issues leading to violence and death of one executive of construction agency on 19.02.2021 by miscreants.
 - Delay in land acquisition on account of above two issues
- Also, it was noted that at present approximately 50% of the conveyor work is completed and balance work is expected to be completed by October 2024. Therefore, temporary permission for transportation of coal by road as an interim arrangement from mine end for a period of 3 years from 1 December 2023 to November 2026 or till the dedicated conveyor system & associated railway siding becomes operational, whichever is earlier to.
- PP has submitted following location and distance from coal mine for transportation of coal
 - Shivpur Railway siding (~25 km) and/or
 - Bachra Railway siding (~36 km) and/or
 - Katkamsandi Railway siding (~92 km) and thereafter to linked Barh STPP by rail and North Karanpura Thermal Power Plant of NTPC (~22-23.5 km)
- It was also noted that a new road is under construction between village Brinda and Shivpur siding, over a distance of 0.498 km and width 10 m. The new route is proposed for coal transportation to Shivpur railway siding.
- The company also proposes to use an alternative option of passing through Chatra (4.508 km) instead of bypass (3.006 km), at night, while going to Katkamsandi Railway Siding. The extra length required to be traversed by the trucks shall be 1.502 km

3.17.3 The EAC after deliberations observed that the instant proposal is for extension of timeline for transportation of coal by road w.r.t. existing amended EC condition dated 01.12.2020. PP informed that the mine operation was actually started in September, 2022 and despite the award of contract, due to land acquisition issues, the work of mechanized system has been delayed,. The Committee noted that approximately 50% of the closed conveyor work has been completed and balance work is expected to be completed by October 2024. PP committed that M/s NTPC shall pursue to Ministry of Power to coordinate with Ministry of Railways for expeditious construction of Railway siding, which is in their domain, which will finally ensure railway transportation to respective linkage.

While discussing the proposed route of transportation, the Committee desired that no road transportation shall be followed through villages or sensitive locations such as schools, hospital rather; nearest possible location of railway siding shall be used for transporting the coal using road till functionality of mechanized system. As informed by PP, the nearest railway siding of Shivpur and Bachra Railway siding shall be used instead of Katkamsandi which is 92 km away. Further, as proposed

construction of road for shivpur siding shall be immediately completed with adequate pollution mitigation measures such as water sprinkler and tree plantation along the road.

By recognizing the facts of previous delays were occurred primarily due to land acquisition and also noting that merely 25% production achieved against the sanctioned value (7 MTPA) at present since inception of mine i.e from September 2022, the Committee agreed to extend the timeline for closed conveyor system from CHP to railway siding till October, 2024 and construction of railway siding by March 2026 in view of its integrated nature with other mines, with strict compliance of conditions for road transportation.

*In view of above, EAC **recommended** the proposal for grant of amendment in Environment Clearance to Chhattibariatu Opencast Coal Mine Project (7 MTPA and 646.23 ha ML area) of M/s NTPC Ltd located in North Karanpura Coalfields, in villages Chhattibariatu, lordag and Pagar in district Hazaribagh (Jharkhand), by extending timeline for construction of railway siding w.e.f 30th November 2023 for a further period of March, 2026, and construction of closed belt conveyor upto October 2024 under the provisions of EIA Notifications, 2006 and its amendments therein with following specific conditions for environment safeguards:-*

- (i) As proposed, PP shall complete the balance work of conveyor and CHP by July, 2024 and railway siding by March, 2025. Further, PP shall explore the possibility of implementing inpit conveyer till CHP to stop vehicular transportation.*
- (ii) PP shall submit the approved revised Mine Plan with progressive reclamation for change in land use / area of forest land as per approvals obtained to IRO, MoEF&CC.*
- (iii) PP shall avoid transporting coal by road through forest land without permission from concerned Forest Department.*
- (iv) PP shall not use any village road and road along sensitive locations such as schools, hospitals etc for transportation of coal by dumpers/trucks.*
- (v) PP shall use the road having width more than 7 mts with tarpaulin covered 40-50 (payload) dumpers/trucks. Further, State Pollution Control Board shall ensure the emissions of trucks by regular inspections.*
- (vi) M/s NTPC shall write to Ministry of Power to co-ordinate with Ministry of Railways for expeditious construction of Railway siding near to the proposed location.*
- (vii) PP shall maximum use the nearest location of railway siding (Shivpur & Bachra) for transporting the coal instead of using road for long distance.*
- (viii) As proposed by PP, construction of road for enroute shivpur siding shall be immediately completed with water sprinkler and tree plantation along the road.*
- (ix) PP shall install atleast 10 nos of fog cannon in mine lease, overburden dump and transportation route within 6 months.*
- (x) PP shall establish Environmental laboratory at project site by March 2024 and create Environmental Management Cell to monitor the issues related environmental degradation*

- (xi) *PP shall explore at least 20% of overall fleet size of dumpers/trucks as electrical or CNG/LNG based dumpers/trucks for transportation of coal/OB etc and deploy e-vehicles for workers/staff in/out of the mine.*
- (xii) *PP shall ensure the compliance of expenditure to be incurred for wildlife conservation plan submitted to the State Govt. and the details expenditure shall be submitted with six monthly EC compliance report to Ministry's IRO. Also, PP shall engage State Biodiversity Authority and local biodiversity committee for implementation of CSR activity for developing the local market.*
- (xiii) *PP shall create a "Public Grievance Redressal and Monitoring System" for resolving any issues related to the pollution of mines and complaint has to resolve as soon as possible not beyond 30 days. In this regard, adequate awareness to be spread among the public to address their grievance to company with simple and easy manner and for which company needs to devise the mechanism. The same shall be reported to IRO within 3 months. A logbook to be maintained by PP on "Public Grievance Redressal and Monitoring System."*
- (xiv) *PP shall submit certified compliance report of EC vide letter F.No. J-11015/133/2007-IA. II (M) dated 19th April, 2010 with a conditions and later re-validated on 03.03.2016 and amendment in EC dated 1st December, 2020*
- (xv) *PP shall commission a study for evaluating the impact of air pollution generated by its activities on the forests upto a distance of about 10 kms through an institution of MoEFCC*

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 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.
- (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/PM_{2.5}) 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 5km. 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 shall 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 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'.
- (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 riverian/ riparian ecosystem in and around the coal mine upto a distance of 5 km. A riverian /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 Hearings 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 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'.

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 environment clearanceportal.
- 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.

Annexure-III

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. Therecommendations 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 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. shall be carried out at least once in six months.
- ii. Continuous ambient air quality monitoring stations as prescribed in the statute shall 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/transferpoints 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 /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.

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 conveyer belt to avoid air pollution.
- ii. The washery shall not be located in eco-sensitive zones areas.
- iii. The washery should have a closed system and zero discharge. The storm drainage should be treated in settling ponds before discharging into rivers/streams/water bodies.
- iv. A thick Green belt of about 50 m width should be developed surrounding the washery.
- v. A brief description of the plant 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, SOx and NOx, 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 transported 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-II0I3/25/2014-IA.I dated 11th August, 2014 to be followed with regard to CSR activities.
- xv. Details of Public Hearing, Notice(s) issued in newspapers, proceedings/minutes of Public Hearing, points raised by the general public and response/commitments made by the proponent along with the Action Plan and budgetary provisions be submitted in tabular form. If the Public Hearing is in the regional language, an authenticated English translation of the same should be provided. Status of any litigations/ court cases filed/pending, if any, against the project should be mentioned in EIA.
- xvi. Analysis of samples indicating the following be submitted: Characteristics of coal prior to washing (this includes grade of coal, other characteristics of ash, S and heavy levels of metals such as Hg, As, Pb, Cr etc). Characteristics and quantum of coal after washing. Characteristics and quantum of coal rejects.
- xvii. Details of management/disposal/use of coal rejects should be provided. The rejects should be used in TPP located close to the washery as far as possible. If TPP is within a reasonable distance (10 km), transportation should be by conveyor belt. If it is far away, the transportation should be by rail as far as possible.
- xviii. Copies of MOU/Agreement with linkages (for stand-alone washery) for the capacity for which EC is being sought should be submitted.
- xix. Corporate Environment Responsibility:
 - a) The Company must have a well laid down Environment Policy approved by the Board of Directors.
 - b) The Environment Policy must prescribe for standard operating process/procedures to bring into focus any infringements/deviation/violation of the environmental or forest norms/conditions.
 - c) The hierarchical system or Administrative Order of the company to deal with environmental issues and for ensuring compliance with the environmental clearance conditions must be furnished.
 - d) To have proper checks and balances, the company should have a well laid down system of reporting of non-compliances/violations of environmental norms to the Board of Directors of the company and/or shareholders or stakeholders at large.
- xx. A detailed action Plan for Corporate Social Responsibility for the project affected people and people living in and around the project area should be provided.
- xxi. Permission of drawl of water shall be pre-requisite for consideration of EC.
- xxii. Wastewater /effluent should conform 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, PM_{2.5}, SO_x, NO_x and heavy metals such as Hg, Pb, Cr, As, etc), noise, water (surface and groundwater), soil - along with one-season met data coinciding with the same season for AAQ collection period should be provided.
- (xv) Map (1: 50, 000 scale) of the study area (core and buffer zone) showing the location of various sampling stations superimposed with location of habitats, other industries/mines, polluting sources, should be provided. The number and location of the sampling stations in both core and buffer zones should be selected on the basis of size of lease/project area, the proposed impacts in the downwind (air)/downstream (surface water)/groundwater regime (based on flow). One station should be in the upwind/upstream/non-impact/non-polluting area as a control station. The monitoring should be as per CPCB guidelines and parameters for water testing for both ground water and surface water as per ISI standards

and CPCB classification wherever applicable. Observed values should be provided along with the specified standards.

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

(xxxi) 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:
- The Company must have a well laid down Environment Policy approved by the Board of Directors.
 - The Environment Policy must prescribe for standard operating process/procedures to bring into focus any infringements/deviation/violation of the environmental or forest norms/conditions.
 - The hierarchical system or Administrative Order of the company to deal with environmental issues and for ensuring compliance with the environmental clearance

conditions must be furnished.

- 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			

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/water bodies) of the area should be provided as per the tables given below. Impacts of project, if any on the land use, in particular, agricultural land/forestland/grazing land/water bodies falling

within the lease/project and acquired for mining operations should be analyzed. Extent of area under surface rights and under mining rights should be specified.

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

Area under Surface Rights

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

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

lease/project and the impact on the existing users and impacts of mining operations thereon.

- (xii) One-season (other than monsoon) primary baseline data on environmental quality - air (PM₁₀, PM_{2.5}, SO_x, NO_x and heavy metals such as Hg, Pb, Cr, As, etc), noise, water (surface and groundwater), soil - along with one-season met data coinciding with the same season for AAQ collection period should be provided.
- (xiii) Map (1: 50, 000 scale) of the study area (core and buffer zone) showing the location of various sampling stations superimposed with location of habitats, other industries/mines, polluting sources, should be provided. The number and location of the sampling stations in both core and buffer zones should be selected on the basis of size of lease/project area, the proposed impacts in the downwind (air)/downstream (surface water)/groundwater regime (based on flow). One station should be in the upwind/upstream/non-impact/non-polluting area as a control station. The monitoring should be as per CPCB guidelines and parameters for water testing for both ground water and surface water as per ISI standards and CPCB classification wherever applicable. Observed values should be provided along with the specified standards.
- (xiv) Impact of mining and water abstraction from the mine on the hydrogeology and groundwater regime within the core zone and 10 km buffer zone including long-term monitoring measures should be provided. Details of rainwater harvesting and measures for recharge of groundwater should be reflected in case there is a declining trend of groundwater availability and/or if the area falls within dark/grey zone.
- (xv) Study on subsidence including modeling for prediction, mitigation/prevention of subsidence, continuous monitoring measures, and safety issues should be carried out.
- (xvi) Detailed water balance should be provided. The 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 ML /Project Area (ha)	Total Forest Land (ha)	Date of FC	Extent of Forest Land	Balance area for which FC is yet to be obtained	Status of appl. For diversion of forest land
		If more than one provide details of each FC			

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 anML/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.

LIST OF PARTICIPANTS OF EAC (COAL) IN 3rd MEETING HELD ON 16-17 NOVEMBER, 2023 THROUGH VIDEO CONFERENCING

1.	Dr. Sharad Singh Negi (I.F.S Retd.)			DAY-1	DAY-2
		-	Chairman	P	P
2.	Sh. Inder Pal Singh Matharu, (I.F.S. Retd.)	-	Member	P	P
3.	Sh. Lalit Kapur (Retd. Adviser, MoEFCC)	-	Member	P	P
4.	Dr. Umesh Jagannathrao Kahalekar	-	Member	P	P
5.	Shri K.B. Biswas	-	Member	P	P
6.	Sh. Savalge Chandrasekhar	-	Member	P	P
7.	Prof. Shyam Shanker Singh		Member	P	P
8.	Dr. Vinod Agrawal		Member	P	P
9.	Dr. Santosh Kumar Hampannavar	-	Member	P	P
10.	Prof. R M Bhattacharjee, Representative of IIT/ISM Dhanbad	-	Member	P	P
11.	Shri M.P Singh, Representative of CEA	-	Member	P	P
12.	Representative of IMD	-	Member	A	A
13.	Dr. Nazimuddin Representative of Central Pollution Control Board	-	Member	P	P
14.	Shri Lalit Bokolia, Director, MoEFCC	-	Member Secretary	P	P
