

MINUTES OF 48th MEETING OF THE EXPERT APPRAISAL, COMMITTEE FOR ENVIRONMENT APPRAISAL OF COAL MINING PROJECTS HELD ON 25 & 28 AUGUST 2023 THROUGH VIDEO CONFERENCE.

Confirmation of the Minutes of 47th Meeting of the EAC (Coal): The minutes of the 47th Meeting of the EAC (Coal) held during 21 to 22nd July 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 48th meeting of the Expert Appraisal Committee (EAC) for coal mining projects was held on **25 & 28 August 2023** through Video Conferencing. 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. 48.1

Surakachhar Underground Coal Mine for Production Capacity of 0.456 MTPA in the project area of 1045.86 ha of M/s South Eastern Coalfields Limited located at Bhairota, District Korba (Chhattisgarh) - For Terms of Reference as per SOP dated 7th July, 2021 (read with OM dated 28th January, 2022 -Violation category) – reg.

[Online proposal number IA/CG/CMIN/281963/2022; File no. IA-J-11015/142/2018-IA-II (M)]

48.1.1 The proposal is for Terms of Reference (MoEF&CC's OM dated 7th July, 2021 read with 28.01.2022 for Violation category) for Surakachhar Underground Coal Mine for Production Capacity of 0.456 MTPA in the project area of 1045.86 ha of M/s South Eastern Coalfields Limited located at Bhairota, District Korba (Chhattisgarh).

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

- (i) The project area is covered under Survey of India Topo Sheet No 64 J/11 and is bounded by the geographical coordinates ranging from 22^o20'52" to 22^o22'57" North latitudes and 82^o36'20" to 82^o39'20" East longitudes.
- (ii) Coal linkage of the project is proposed for coal use for various thermal power plants and other coal consumers including steel plants, cement plants, etc.
- (iii) Joint venture cartel has been formed: not a joint venture
- (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: 635 no. of manpower employed in the project as on 31.07.2023.
- (vi) The project is reported to be beneficial in terms of fulfillment of national coal demand,

generation of direct and indirect employment, socio-economic welfare measures under CSR, contribution to the Govt. exchequer.

- (vii) Surakachhar underground coal mine of South Eastern Coalfields Ltd. is an ongoing mine which started production in 1963, i.e. prior to the EIA Notification dated 1994 (regularization case) The mine had been running on CTE and CTO with subsequent renewals obtained from the MPPCB/CECB.
- (viii) Terms of Reference granted on (for EC proposals): Not Applicable
- (ix) Total mining lease area as per block allotment is 1045.86 ha.
- (x) Progressive Mine Closure Plan has been approved by the SECL Board on 18.05.2013. Revised Project Estimate of Surakachhar Colliery of 1972 report was approved by N.C.D.C Board of Directors on 30.06.1961 and by Govt. of India on 31.03.1962.
- (xi) The land usage pattern of the project is as follows:
Land-use: Pre-mining

S. No.	Land Use	Within ML Area (ha)	Outside ML Area (ha)	Total (ha)
1.	Agricultural Land	372.53	-	372.53
2.	Forest land	Nil	-	Nil
3.	Waste land	Nil	-	Nil
4.	Grazing land	Nil	-	Nil
5.	Surface Water Bodies	*24.54	-	*24.54
6.	Settlements	-	-	-
7.	Other (Specify)	673.33	-	673.33
	Total	1045.86	-	1045.86

*Area of surface water bodies is included in Govt. Land

Land-use: during mining:

S. No.	Particulars	Tenancy Land (Ha)	Forest Land (Ha)	Government Land (Ha)					Grand Total (Ha)
				Grazing Land	Waste Land	Water Body	Others	Total	
1	Road	1.95	Nil	-	-	-	4.25	4.25	6.20
2	Magazine	Nil	Nil	-	-	-	0.06	0.06	0.06
3	Railway Siding	1.97	Nil	-	-	-	2.70	2.70	4.67
4	Township, office buildings, other mine	6.09	Nil	-	-	-	50.94	50.94	57.03

	infrastructure and built-up area								
5	Mine entries and approach road	0.79	Nil	-	-	-	3.15	3.15	3.94
6	plantation area	21.52	Nil	-	-	-	32.28	32.28	53.80
7	Undisturbed Area	340.21	Nil	-	-	24.54	555.41	579.95	920.16
Total land (Ha)		372.53	Nil	-	-	24.54	638.79	673.33	1045.86

Land-use: Post Mining:

S.No.	LAND USE	LAND USE (ha)				
		Plantation	Water body	Public use	Undisturbed	TOTAL
1.	External OB Dump	NA	NA	NA	NA	NA
2.	Internal Dump/ Backfilled Area	NA	NA	NA	NA	NA
3.	Excavation	NA	NA	NA	NA	NA
4.	Built up area including roads	2.0	-	69.90	-	71.9
5.	Green Belt/Afforested Area	53.8	-	-	-	53.8
6.	Undisturbed Area	-	24.54	-	895.62	920.16
TOTAL		55.8	24.54	69.90	895.62	1045.86

- (xii) Total geological reserve reported in the mine lease area is 14.26 MT with 3.84 MT mineable reserve as on 01.04.2023. Out of total mineable reserve of 3.84 MT, 3.072 MT are available for extraction. Percent of extraction is 80 %.
- (xiii) 4 nos. seams (G-I,G-II,G-III and G-IV) with thickness ranging from 1.2-3.0 m for Seam G-III (Top)1.5 m to 1.5-3.3 m for Seam G-I (Bottom) are workable. Grade of coal is G-7.
- (xiv) Method of mining operations envisaged: Semi-mechanized Board and Pillar method of mining.
- (xv) Life of mine is 12 years as on 01.04.2023 @ 0.256 MTPA.
- (xvi) Transportation of coal is being done by conveyor belt in mine pit head, from surface to siding by tippers and at sidings by Railway Wagon.
- (xvii) No of forest land in the project.
- (xviii) Please mention any National Parks, Wildlife Sanctuaries and Eco-Sensitive Zones fall within 10 km boundary of the project: No such area within 10 km boundary of the project.
- (xix) Wildlife conservation plan for schedule – I species not applicable.

- (xx) The ground water level has been reported to be varying between 4.4 m to 8.6 m during pre-monsoon and between 7.8 m to 11.8 m during post-monsoon. Total water requirement for the project is 1452 KLD.
- (xxi) Groundwater NOC has been obtained vide NOC no. CGWA/NOC/MIN/ORIG/ 2020/8121. Application for obtaining ground-water NOC renewal is under consideration with CGWA.
- (xxii) Public hearing Public hearing has not been conducted for the project as the mine has started its operation before 1994.
- (xxiii) 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: Public hearing has not been conducted. Mine was running on CTO.
- (xxiv) Hearing have already been taken/proposed to be taken are as under: Public hearing has not been conducted. Mine was running on CTO.
- (xxv) Consent to Operate for the existing capacity (5.25 MTPA) was obtained from the State PCB no. 3163/TS/CECB/2022 dtd. 29.07.2022 and was valid till 31.07.2023.
- (xxvi) Kohlar nallah is flowing along boundary of lease and drain into Ahiran river.. The nallah will not be diverted without consultation with the Water Resource Department of the State Government.
- (xxvii) Regular monitoring of ambient air quality is being carried out on fortnightly basis. 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.
- (xxviii) No court cases, violation cases are pending against the project of the PP.
- (xxix) The coal production from the mine at 0.456 MTPA was started from the year 1962 onwards. The coal production, realized from the project, from the year 1993-94 is as follows:

Year	CTO sanctioned capacity (MTPA)	Actual production (MTPA)	Excess production beyond the EC sanctioned capacity
1993-94	0.456	0.312	Nil
1994-95	0.456	0.401	Nil
1995-96	0.456	0.367	Nil
1996-97	0.456	0.348	Nil
1997-98	0.456	0.349	Nil
1998-99	0.456	0.333	Nil
1999-20	0.456	0.343	Nil
2000-01	0.456	0.335	Nil
2001-02	0.456	0.352	Nil
2002-03	0.456	0.301	Nil
2003-04	0.456	0.341	Nil
2004-05	0.456	0.392	Nil
2005-06	0.456	0.418	Nil
2006-07	0.456	0.378	Nil
2007-08	0.456	0.435	Nil
2008-09	0.456	0.495	0.039

2009-10	0.456	0.495	0.039
2010-11	0.456	0.392	Nil
2011-12	0.456	0.377	Nil
2012-13	0.456	0.294	Nil
2013-14	0.456	0.248	Nil
2014-15	0.456	0.268	Nil
2015-16	0.456	0.267	Nil
2016-17	0.456	0.191	Nil
2017-18	0.456	0.184	Nil
2018-19	0.456	0.255	Nil
2019-20	0.456	0.287	Nil
2020-21	0.456	0.232	Nil
2021-22	0.456	0.167	Nil
2022-23	0.456	0.056	Nil
2023-24 (up till 3 1.07.2023)	0.456	0.033	-

- (xxx) No R&R is involved in the project.
- (xxxi) Total cost of the project: Rs 63.51 Crore as on 31.03.2023, Cost of production: Rs. 33783.66 per tonne (FY 22-23), Sale Price: Rs. 1309.92 per tonne (FY 22-23). CSR cost: As per CIL CSR policy, 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 or Rs. 2.00 per tonne of coal production of previous year, whichever is higher.
R&R cost: Nil; R&R is not involved
Environment Management Cost: Environment Management Cost will be included in EIA/EMP which will be prepared after obtaining ToR
- (xxxii) Consent to establish/Consent to Operate (CTO) for 5.25 MTPA was obtained from the State Pollution Control Board vide certificate no. 5969/TS/CECB/2022 dtd. 28.11.2022 and is valid till 30.11.2023.
- (xxxiii) Past Production details comparison with existing EC: Surakachhar underground coal mine of South Eastern Coalfields Ltd. is an ongoing mine which started production in 1963, i.e. prior to the EIA Notification dated 1994 (regularization case) The mine had been running on CTE and CTO with subsequent renewals obtained from the MPPCB/CECB.

48.1.3 The Committee during the deliberations noted the:

- Proposal was earlier considered in the 48th EAC meeting held during 3-4 October 2019 wherein proposal has been identified as violation of EIA Notification 2006. However, PP did not return with reply of deferred points since there was no window for violation projects during that time but now applied under SOP dated 28.01.2022.
- Kholar Nalla is the main drainage of the area supported by Laxman Nalla. The nallas traverse through area from west to east and join Ahiran river in the North-Eastern direction.
- No forest land involved in the ML area for diversion for non-forestry activity.

- iv. The instant project is an old underground mine, which has been operating based on consent granted under the Water (Prevention and Control of Pollution) Act, 1974 and under section 21 of the Air (Prevention and Control of Pollution) Act, 1981.
- v. Production from the mine was found to be exceeding beyond the base production capacity in the year 2008-09 and 2009-10 w.r.t. the year 1993-1994 i.e. 0.456 MTPA.
- vi. Life of mine is approximately 12 years as on 01.04.2023 @ 0.256 MTPA.
- vii. Groundwater NOC has been obtained vide NOC no. CGWA/NOC/MIN/ORIG/ 2020/8121. Application for obtaining ground-water NOC renewal is under consideration with CGWA.
- viii. It is to noted that PP has not obtained any EC and conducted Public hearing for the project and accordingly considered as first EC proposal.
- ix. Consent to Operate for the existing capacity (4.56 MTPA) was obtained from the State PCB no. 3163/TS/CECB/2022 dtd. 29.07.2022 and was valid till 31.07.2023.
- x. Coal mining operation has been discontinued since 01.08.2023 due to non-issuance of valid CTO.

48.1.4 *The EAC after deliberations observed that the instant project was earlier submitted by PP for ToR and it was found that project was being operated without EC and had exceeded the CTO capacity. Since there was no window available, proposal was not taken forward. Now, PP has submitted application under Violation category as per the Ministry's OM dated 7th July, 2021 read with 28.01.2022 (i.e SOP for handling Violation cases). The proposal is reported to be exceeded the base production capacity w.r.t. the year 1993-1994 i.e. 0.456 MTPA in the year 2008-09 and 2009-10. The EAC emphasized that the project need to prepare Damage assessment report, Remediation plan, Natural & Community Resource Augmentation plan (NCRAP) and the compliance report as per the OM dated 28.01.2022.*

The Committee asked the PP to submit the status of progressive mine closure along with the status of plantation in the mine lease area with the help of real-time aerial footage & video of the mining lease area. PP was directed to protect the Kholar Nallah & Laxman Nallah passing through the ML area and complete the Hydrogeological study by a reputed Indian institute (such as IIT or other institute having more than 5 years of work experience on hydrology with the latest technology). As per the kml file, it was found that the streams flowing across the ML area is almost dried due to weak vegetation along the stream. Therefore, the committee was of the view that PP shall make efforts to rejuvenate & restore the streams as it was flowing earlier without diverting it. Further it was advised to connect the coal transportation to nearest railway siding with in situ coal transportation system.

*Based on the above, EAC **recommended** the proposal for grant of Terms of Reference (violation Category) to Surakachhar Underground Coal Mine for Production Capacity of 0.456 MTPA in the project area of 1045.86 ha of M/s South Eastern Coalfields Limited located at Bhairota, District Korba (Chhattisgarh) under MoEFCC's OM dated 7th July, 2021 read with 28.01.2022 (SOP) with following specific conditions along with standard conditions under the provisions of EIA Notification, 2006:*

Specific conditions: -

- i. *PP should submit the certified authenticated/Audited production figures from the revenue department or department of mining and geology of State Government or certificate from Coal Controller for production capacity since 1993-94.*
- ii. *PP should submit the real-time aerial footage & video of the mining lease area including transportation route, streams passing through ML area, and plantation status.*
- iii. *PP shall conduct the public consultation with public hearing after issuing public notice in local media, newspapers (English, Hindi and local language) and draft EIA-EMP Report shall be submitted through concerned SPCB in the concerned districts as per the provisions/procedure contained in the EIA Notification, 2006 along with written submission from the concerned persons having plausible stake in the environmental aspects of the project or activity and their redressal.*
- iv. *PP shall submit the action plan with an appropriate budgetary provision for addressing the issues arising during the public hearing.*
- v. *PP shall assess the damage assessment of environment against the excess production in the year 2008-09 and 2009-10 against the base production capacity w.r.t. the year 1993-1994 of 0.456 MTPA and accordingly PP shall prepare Remediation plan, Natural & Community Resource Augmentation plan (NCRAP) etc.*
- vi. *The State Government/SPCB to take action against the project proponent under the provisions of section 19 of the Environment (Protection) Act, 1986, and other criteria mentioned in SOP for handling violation cases (OM dated 7th July, 2021 read with 28.01.2022) shall be followed*
- vii. *PP shall prepare Mine Plan including Mine Closure Plan for Peak production capacity as per latest guidelines of Ministry of Coal.*
- viii. *Study on subsidence including modeling for prediction, mitigation/prevention of subsidence, continuous monitoring measures, and safety issues should be carried out and should be furnished with risk assessment and prediction analysis in EIA/EMP report.*
- ix. *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.*
- x. *PP shall submit the point-wise compliance report to the conditions of Consent to Operates through concerned SPCB.*
- xi. *PP shall provide plan to implement the inpit belt conveyor system to stop the road transportation.*
- xii. *Wind rose pattern in the area should be reviewed and the collection of air quality data to be incorporated in the EIA-EMP report. Monitoring location for collecting baseline data should cover overall the 10 km buffer zone i.e. dispersed in 10 km buffer area Monitoring location for collecting baseline data should cover overall the 10 km buffer zone i.e. dispersed in 10 km buffer area.*
- xiii. *PP shall submit the plan for installation of CAAQMS which is to be installed within six months from date of issuance of ToR in consultation with concerned SPCB after reviewing the wind rose pattern in the area as well as by collecting the air quality data. PP shall share the data generated*

- from the installed monitoring station to the concerned SPCB & CPCB as well as with MoEf&CC.
- xiv. PP shall submit the plan for installation of wind barrier sheet & fixed sprinkler all along the railway siding and deployment of mobile water tanker for dust suppression within the six months from date of issuance of ToR letter.
- xv. PP shall have ETP for treatment of surplus clear mine water passing after settling tank. It should not be directly discharged into natural drainage of the area.
- xvi. The PP should submit the photograph of monitoring stations & sampling locations. The photograph should bear the date, time, latitude & longitude of the monitoring station/sampling location. In addition to this PP should submit the original test reports and certificates of the labs, which will analyze the samples.
- xvii. PP shall propose to use LNG/CNG based mining machineries and trucks for mining operation and transportation of coal.
- xviii. Project proponent to prepare Environmental Cost Benefit Analysis for the project in EIA/EMP Report.
- xix. PP shall provide the details of mining technology/methodology already using in the existing Underground Mine area for coal mining operations and its associated environmental benefits of using from Climate Change perspective.
- xx. The project proponent shall be required to submit a bank guarantee equivalent to the amount of remediation plan and natural and community resource augmentation plan with the SPCB prior to the grant of EC. The quantum shall be recommended by the EAC and finalized by the regulatory authority. The bank guarantee shall be released after successful implementation of the EMP, followed by recommendations of the EAC and approval of the regulatory authority.
- xxi. The remediation plan and the natural and community resource augmentation plan to be prepared as an independent chapter (13) in the EIA report by the accredited consultants.
- xxii. Assessment of ecological damage with respect to air, water, land and other environmental attributes. The collection and analysis of data shall be done by an environmental laboratory duly notified under the Environment (Protection) Act, 1986, or an environmental laboratory accredited by NABL, or a laboratory of IIT/CSIR institution working in the field of environment.
- xxiii. Budget of remediation plan and natural and community resource augmentation plan corresponding to the ecological damage shall be completed within three years and to prepare accordingly.
- xxiv. PP should submit rejuvenation plan for seasonal water courses/ seasonal water bodies and financial commitments need to be submit for the protection of river. PP shall carry out regular monitoring of Ground water level and quality and measures to be taken.
- xxv. PP shall be submitting R & R in respect of SCs/STs and other weaker sections of the society in the study area, a need based sample survey, family-wise, should be undertaken to assess their requirements, and action programmes prepared and submitted accordingly, integrating the sectoral programmes of line departments of the State Government.
- xxvi. 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.

- xxvii. *PP should submit the detailed mineralogical and chemical composition of the mineral in percentage from a NABL/MoEF&CC accredited laboratory.*
- xxviii. *Clarification from PCCF that mine does not fall under corridors of any National Park and Wildlife Sanctuary and does not involve any violation of forest area and wild sanctuary.*
- xxix. *The PP should submit the number of saplings to be planted in area to be covered under afforestation & green belt, location of plantation, target for survival rate and budget earmarked for the afforestation & green belt development. In addition to this PP should show on a surface plan (5-year interval for life of mine) of suitable scale the area to be covered under afforestation & green belt clearly mentioning the latitude and longitude of the area to be covered during each 5 years. The capital and recurring expenditure to be incurred needs to be submitted. Plantation plan should be prepared in such a way that 80% of the plantation to be carried out in first 5 years and for the remaining years the proposal for gap filling. The seedling of height not less than 2 meters to be selected and accordingly cost of plantation needs to be decided. In addition to this plantation in the safety zone at lease boundary the plantation should be completed within 2 years only.*
- xxx. *PP shall submit legal undertaking by way of affidavit to comply with all the statutory requirements and judgment of Hon'ble Supreme Court dated 2nd August, 2017 in Writ Petition (Civil) No. 114 of 2014 in the matter of Common cause vs Union of India and Ors.*
- xxxi. *In case of violation of above said undertaking to comply with all the statutory requirements and judgment of Hon'ble Supreme Court dated, the ToR/Environmental Clearance shall be liable to be terminated forthwith.*

AgendaNo. 48.2

Conversion of Underground (UG) to Opencast (OC) operation of Mahamaya Project with increase in capacity from 0.48 MTPA to 1.5 MTPA along with increase in ML area from 762.47 ha to 1065.218 ha of M/s South Eastern Coalfields Limited located at Village Jarhi, Tahsil Pratappur, District Surajpur (Chhattisgarh) – For Terms of Reference – reg.

[Online proposal no. IA/CG/CMIN/433599/2023; File No. J-11015/17/2020-IA-II (M)]

48.2.1 The proposal is for Terms of Reference for Conversion of UG to OC operation of Mahamaya Project with increase in capacity from 0.48 MTPA to 1.5 MTPA along with increase in ML area from 762.47 ha to 1065.218 ha of M/s South Eastern Coalfields Limited located at Village Jarhi, Tahsil Pratappur, District Surajpur (Chhattisgarh).

48.2.2 The Committee during deliberations noted the following:

- i. The instant proposal was considered in the 3rd EAC meeting held on 27.10.2020 wherein the committee returned the proposal for exploring possible technology available in the world in view of making instant mining Techno-economic and environmentally feasible.
- ii. Environment Clearance was granted by Ministry on 18th February, 2011 to Mahamaya UG coalmine Expansion project from 0.34 to 0.48 MTPA and ML area from 460.467 to 762.470 ha

of M/s South Eastern Coalfields Limited located in village Jarhi, Tehsil Pratappur, District Surguja (Chhattisgarh).

- iii. Massan nallah (length of 4.0 Km) flowing from West to East of the proposed OCP. PP has proposed to divert the Massan Nallah along the Northern mine boundary. The Massan nallah is connected to the Mahan river situated approximately 2-3 Km.

48.2.3 *The EAC after deliberations observed that the instant proposal is for converting underground to opencast mining method. This proposal was already discussed in the earlier EAC meeting wherein the committee returned the proposal for exploring possible technology available in the worldwide since the project involved diversion of the 200.226 ha of forestland by virtue of changing the mining method. Further, it was observed that the instant mine has higher Stripping ratio i.e. 1:12.69, which means for extraction of 1 tonne of coal needs to remove approximately 12.69 tonne of Overburden and environmentally unsustainable.*

EAC remarked that PP should have done the study properly when they came last time. However, no efforts have been made in this regard. EAC asked the PP to first Evaluate ecological losses due to de-forestation of 200.226 ha of forest area and calculate the cost in comparison to the existing coal reserve available by converting underground to Opencast mining method and further make overall assessment w.r.t. Climate change by engaging reputed institution specially working on climate change. The committee also asked to engage the experts having experience in the geology & submit the exact status of available reserve below the forest area. It was desired to consult a reputed institution/expert for exploring the latest underground mining technology to maximize the extraction of coal.

In view of the above, the project proponent shall submit the following details for further compliance:

- i. *PP shall submit the latest underground mining technology available in the worldwide to maximize the coal extraction from existing UG mine and submit the report.*
- ii. *Drone video to be submitted for complete Mine lease area including the Forest area, Habitation, Nallah passing through ML area and mine face area.*
- iii. *Evaluate the ecological loss due to de-forestation of 200.226 ha of forest area and calculate the environmental/ecological loss cost in comparison to the existing coal reserve available after converting underground to Opencast mining method and an overall assessment w.r.t. Climate change by engaging reputed institution specially working on climate change.*
- iv. *PP to engage the experts having experience in the geology & submit the exact status of available reserve below the forest area.*

Agenda No. 48.3

Expansion of Khairaha Underground Coal mining project for increase in production capacity from 0.819 to 0.8775 MTPA (increase of 10% w.r.t 0.585 MTPA) in the mining lease area of 472.065 ha by M/s South Eastern Coalfields Limited with Production capacity from 0.819 to 0.8775 MTPA in the ML area 472.065 Ha located at Tehsil Burhar, District Shahdol (Madhya Pradesh) - For Environmental Clearance dated 12.12.2022 issued under OM vide no. F. No. [A3-

22/10/2022-IA.III 07.05.2022- [Availed total 50% relaxation of OM under clause 7 (ii) of EIA notification] – reg.

[Online proposal no. IA/MP/CMIN/432717/2023; File No. J-11015/72/2004-IA-II(M)]

48.3.1 The proposal is for Environmental Clearance issued under OM dated 07.05.2022, which has availed total 50% relaxation for project “Khairaha Underground Coal mining project for increase in production capacity from 0.819 to 0.8775 MTPA (increase of 10% w.r.t 0.585 MTPA) in the mining lease area of 472.065 ha by M/s South Eastern Coalfields Limited with Production capacity from 0.819 to 0.8775 MTPA in the ML area 472.065 Ha located at Tehsil Burhar, District Shahdol (Madhya Pradesh)”.

48.3.2 Committee observed the following during the EAC meeting:

- i. EIA-EMP report has been prepared based on the standard ToR & submitted to the Ministry through Parivesh.
- ii. CTO for enhanced production capacity from 0.819 to 0.8775 MTPA has been obtained vide AWH-57838 from M.P. Pollution Control Board, which is valid up to 29.02.2024.
- iii. Baseline data was collected during post monsoon period i.e. from December 2022 to February 2023.
- iv. PP has submitted the certified compliance report vide dated 23.08.2023 for issued EC vide file no. J-11015/72/2004-IA-II (M) dated 11.01.2019 (Expansion in EC), dated 10.01.2020 (Validity extension in EC) and latest EC under aforesaid OM was issued on 13.12.2022.

48.3.3 *The EAC after deliberations observed that instant project has been submitted in compliance of Ministry’s OM dated 7th May, 2022 wherein expansion in capacity was granted in advance due to shortage of coal in the country and as per the condition contained therein. PP is required to submit the proposal within six months with preparation of EIA/EMP based on standard ToR. The EAC observed that EC under this OM was granted on 13th December, 2022.*

Earlier, Ministry issued EC vide letter dated 28.07.2005 (with Public Hearing), 11.01.2019 (Expansion in EC) & 10.01.2020 (Validity extension in EC) and latest EC under aforesaid OM was issued on 13.12.2022.

The Committee found that no air quality monitoring station has been installed in the ML area, therefore asked the PP to immediately start the installation process under the supervision of concerned SPCB. The Committee also advised to complete the important compliances before the month of December 2023 for the validation of prior EC dated 13.12.2022. Few of the concern noted by the committee are: deployment of 35 to 40 tonne of trucks, installation of sensor based fixed sprinkler system, wind barrier, road side plantation, lab establishment in the ML area, Distribution of drinking water through dedicated pipeline system, Management of pond, and adequate expenditure on EMP budget and public hearing.

In view of the above, the project proponent shall submit the following details for further compliance:

- i. *PP shall immediately install CAAQMS within two months in consultation of SPCB and submit the report to IRO.*

- ii. PP shall install the permanent water sprinkling system along the permanent haul road connecting the mine to the main road in order to avoid deposition of Coal dust in the agricultural lands adjoining the road.
- iii. PP shall strengthen the Garland drain-settling pond network all around the coal stockyard area.
- iv. PP shall submit the operational status of ETP.
- v. PP shall submit the status of plantation within the ML area and in the near village area.
- vi. PP shall submit the detail expenditure status already spent on education or planning to spend in future along with the expenditure detail related to health infrastructure.
- vii. PP shall deploy 35 to 40 tonnes of trucks to reduce the fleet size
- viii. PP shall install wind barrier arrangement wherever required such as near to habitation and dust affected place.
- ix. PP shall start road-side plantation with the native and medicinal tree only as mentioned in the below table:

Tree type	Tree name
Native tree	Sal, Arjun, Neem, Tendu, Mahua, Jamun, Eucalyptus, Bamboo
Medicinal tree	Amala, Ashwagandha, Amaltas, Palash, Karanj, Maharukh

- x. PP shall establish in-situ laboratory for regular monitoring of drinking water to be supplied to near villagers through dedicated pipeline system.
- xi. PP shall submit the details of water recharge through ponds within and outside the mine lease area.
- xii. PP shall submit the detail expenditure status of EMP and public hearing budget.

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

Agenda No. 48.4

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.

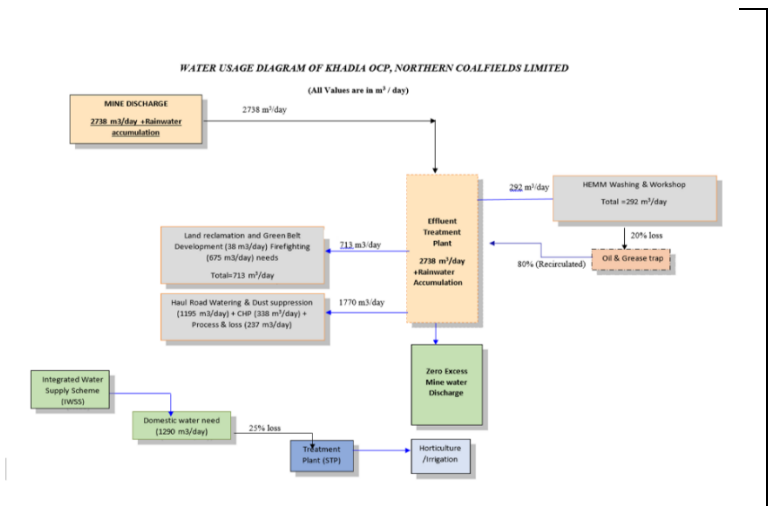
[Online Proposal No. IA/UP/CMIN/413536/2023; File No. J-11015/255/2006-IA-II(M)]

48.4.1 The proposal is for 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)”.

48.4.2 The proposal was earlier considered in the 46th EAC meeting held during 26 - 27 June, 2023, wherein committee deferred the proposal for submission of reply to its observation. The PP has submitted the following ADS reply vide letter dated 29.07.2023 on PARIVESH Portal:

S.No.	Observation of EAC	Reply by PP
1	PP needs to complete incomplete works within 6 months and submit the implementation of non-complied EC conditions in time bound manner.	PP has submitted the action taken report against partially complied EC conditions in the Certified Compliance Report of IRO, Bhopal dated 07.06.2023.
2	PP needs to complete the mechanized coal transportation system with proof of drone video.	<p>For the purpose of mechanised coal transportation, Khadia Area, NCL is equipped with coal handling plants of 04 MTPA and 06 MTPA through which coal is being transported via Merry-Go-Round arrangement (a completely mechanised system).</p> <p>Besides that, about 2 MTPA coal is being transported through Jhingurdah Wharfwall (via rail mode) and 2.19 MTPA coal is being transported through Coal Handling Plant of Krishnashila OCP (via rail mode). The transportation of coal to both Jhingurdah Wharfwall and Krishnashila CHP is being done through mine to mine and not through public road.</p> <p>Additionally, an RLS (4.0 MTPA) has been planned to be constructed, for which tendering is under process.</p>
3	PP needs to submit functional status ETP and ensure that no untreated wastewater shall be discharged beyond the mine lease area or into the existing water bodies.	Effluent Treatment Plant (ETP) of Khadia OCP is in operation and wastewater from Coal Handling Plant, Workshop and mine water is being treated through ETP. The treated waste water is being re-used in dust suppression, green belt development, firefighting and other purposes.

4 PP needs to submit complete water balance system including consumption of water in the Mine lease and its utilization.



48.4.3 The EAC observed that instant project has been submitted in compliance of Ministry’s OM dated 7th May, 2022 wherein expansion in capacity was granted in view of shortage of coal in the country and 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 after deliberation observed that PP without adhering to compliance to observations of EAC has again submitted the application for ratification. In continuation to the previous discussion, committee again raised the concerns for not submitting the certified copy of annual production from CCO. Also on enquiry, PP did not give adequate reasons for not implementing the surface miner. The committee in the last meeting emphasized to complete the work of the Silo for capacity of 10 MTPA, however, it is stated that it will be commissioned by October 2023. While in case of 15 MTPA mechanized system, which was commitment by to implement, but no timeline has been submitted with documentary proof for award of works.

Further, considering the overcapacity of ETP, it was desired that PP shall explore the possibility of using surplus water to nearby village after tertiary treatment, if required for their specific use.

In view of the above, committee asked the project proponent to submit compliance for the following details by November 2023:

- i. PP needs to submit the certified copy of annual production from CCO along with the justification for non-implementation of surface miner.
- ii. PP shall submit the proof of implementation of silo loading facility for 10MTPA and 15 MTPA separately without considering the option of road transportation.
- iii. PP shall plan to start Sal nursery plantation with capacity of 10,000 plants in an area of 10 ha.
- iv. PP shall start immediately mine boundary plantation with safe distance from the adjacent mine boundary. Also Drain side plantation to be done near to the Ambedkar road of 6.1 km.
- v. 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.

- vi. *PP shall conduct Source apportionment studies to identify pollution sources and the amount they contribute to air pollution.*

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

Agenda No. 48.5

Kalyan Khani Opencast coal mine project for production capacity of 2 MTPA in the ML area of 945.21 ha of M/s The Singareni Collieries Company Limited located in District Adilabad (Telangana) - Amendment in Environmental Clearance dated 19.03.2015 – reg.

[Online proposal no. IA/TG/CMIN/437945/2023; File No. J-11015/21/2009-IA.II (M)]

48.5.1 The proposal is for amendment in Environmental Clearance dated 19.03.2015 for Kalyan Khani Opencast coal mine project for production capacity of 2 MTPA in the ML area of 945.21 ha of M/s The Singareni Collieries Company Limited located in District Adilabad (Telangana).

48.5.2 The EAC during deliberation noted the following:

- The Ministry of Environment, Forest and Climate Change, vide letter of even no. dated 19th March, 2015 has granted environmental clearance to the Kalyan Khani Opencast coal mine project of 2 MTPA in an ML area 945.21 ha of M/s The Singareni Collieries Company Limited, located in District Adilabad (Telangana) subject to compliance of certain terms and conditions, which *inter-alia* included the following:-

4(A) (iv) *“Mechanically covered truck shall be used for transportation of coal within 5 years. Conveyor belt should be installed in the 5th Year”.*

- Amendment in Environment Clearance was granted for compliance of said condition by extending the validity of specific conditions no (iv) “to transport the coal by road mode up to Coal Handling Plan (CHP) for further 2 years i.e. upto 19th March, 2022 vide letter dated 24th January, 2020.
- Again, extension in above amendment of condition was granted on 2nd May, 2022 for further period of 2 years only i.e. upto till 31st December, 2023 for road transportation and to implement the railway siding with conveyor belt on railway line of M/s Orient Cement Ltd.
- Now, PP has now again applied to amend the above condition for extension for another two years i.e. till 31st December, 2025.
- PP has submitted the following “Reason for Amendment”:
 - SCCL had planned to establish a centrally located KK1 Siding on the Balharshah-Kazipet rail route of South Central Railway. However, belt conveyor could not be laid, as railway authorities have not agreed to erect a support between track lines for rail over bridge. Further, the delay occurred due to the pandemic COVID-19.
 - SCCL identified an alternate nearby private railway siding of M/s Orient Cement Company for implementation of railway siding. SCCL requested railway authorities to review the

earlier proposed KK1 CHP siding, for which Railway Authorities have agreed and permitted for laying of conveyor belt through an under pass below the Railway track. Required land is in possession of SCCL for implementation of proposed KK1 CHP siding.

48.5.3 *The Committee after deliberations observed that repeated extension in timeline for implementation of the said condition is not virtuous on part of Project Proponent and desired this is the last extension being considered. Project Proponent submitted its apology and requested the committee for relaxation of the conditions since it was delayed due not getting permission from the Railway authority. It was also observed that separately PP under this project has obtained the ToR for expansion. By knowing this fact, the committee asked the PP to complete the work before submitting the application for Terms of Reference for expansion of coal mine from 2 to 3.375 MTPA. EAC desired that PP shall integrate mechanized system with EIA-EMP report after assessing the impact.*

Further, EAC enquired about the status of compliance of other conditions stipulated in EC and amendments in EC. It was desired that PP shall submit latest compliance with its six monthly report to IRO.

*Based on the above discussion, EAC **recommended** the proposal for extension of EC dated 19.03.2015, the specific condition no. 4(A) (iv) for Kalyan Khani Opencast coal mine project for production capacity of 2 MTPA in the ML area of 945.21 ha of M/s The Singareni Collieries Company Limited located in District Adilabad (Telangana) upto October, 2025 under the provisions of EIA Notification, 2006 and subsequent amendments/circulars thereto subject to the compliance of the following terms & conditions / specific conditions for environmental safeguards:*

- i. Tarpaulin covered truck shall be used for transportation of coal by road mode upto coal handling plant (CHP) till October, 2025, accordingly SPCB shall grant CTO*
- ii. PP to implement the specific condition of belt conveyor with railway siding till October 2025. The CTO shall be granted for road transportation till the period of implementation of belt conveyor system.*
- iii. PP shall submit the application for environmental clearance only after implementing the mechanized transportation system.*
- iv. No village road shall be used for transportation of coal and no road transport route shall be adopted, which is passing through any sensitive location such as schools, hospitals etc. PP shall take legal undertaking from its consumers accordingly*
- v. All other terms and conditions stipulated in the Environmental Clearance dated 19.03.2015, Amendment in EC dated 24.01.2020 & 02.05.2022 shall remain unchanged.*

Agenda No. 48.6

Amalgamated Yekona I & II OC (Phase-I) with increase in production capacity from 1.0 MTPA to 2.75 MTPA/3.44 MTPA (Normative/Peak) of M/s Western Coalfields Limited and increase in land area from 680.06 ha to 1679.39 ha located in Tehsil Warora, District Chandrapur

(Maharashtra) - For Amendment of Environment Clearance dated 01.01.2021 – reg. [Online proposal no. IA/MH/CMIN/438539/2023; File no. J-11015/381/2015-IA.II(M)]

48.6.1 The proposal is for amendment in Environmental Clearance dated 01.01.2021 for Amalgamated Yekona I & II OC (Phase-I) with increase in production capacity from 1.0 MTPA to 2.75 MTPA/3.44 MTPA (Normative/Peak) of M/s Western Coalfields Limited and increase in land area from 680.06 ha to 1679.39 ha located in Tehsil Warora, District Chandrapur (Maharashtra).

The project proponent vide letter no. 5-G/969-970 dated 28.07.2023 requested Ministry for amendment of following specific condition no. 4 (vi) & 4 (xviii) of EC letter dated 01.01.2021 as:

(vi) “Transportation of coal from Coal Handling Plant shall be through mechanized covered trucks for 3 years. No transportation by trucks after 3 years and proposed railway siding/pipe conveyor system.”

Amendment proposed - Transportation of Coal from the mine shall be through tarpaulin covered trucks till the commissioning of proposed railway Siding i.e by December 2026. No transportation by trucks after Dec’2026 except for small scale industry/ consumers.

Justification for proposed Amendment:

- i. The mechanized cover trucks are not feasible on techno economical basis. Thus, transportation of coal to be allowed from tarpaulin covered trucks.
- ii. The work of construction of Railway Siding is under process. However due to delay in land acquisition and other works, the Railway Siding could not be commissioned within 3 years i.e. 31.12.2023. Thus, additional three-year period upto 31.12.2026 may be provided for commissioning of Railway Siding. However, all efforts will be made for early commissioning of Railway Siding and avoiding road transportation of coal.

Brief details of work completed till date for commissioning of Railway Siding is detailed below:

- Work order has been awarded to M/s Indian Port Rail & Ropeway Corporation Ltd (IPRCL), Mumbai vide letter dt 07.05.2022 for construction of railway siding and the target date of completion is 06.11.2023.

However, as on date, the work of survey is completed. However, land acquisition and other works for laying of railway tracks by M/s IPRCL is under process and it may take additional three years from Dec’2023. Construction of the railway siding requires acquisition of 35.4 Ha land out of which 10.00 ha already belongs to WCL and the remaining land is to be acquired under ‘Gati Shakti Multi Model Cargo Terminal Scheme’ of Railways. As the land acquisition is under process and physical possession of land for construction cannot be decided at this stage. As such it would be prudent to go for three years exemption.

Till the construction of railway siding, it is proposed to construct a by-pass road of 2.3 km length for Warora town connecting Warora – Madheli Road to Warora-Wani Road. The work order has been awarded to M/s Agrico Steel Engineering Works vide work order no:

NGP/WCL/CIVIL/WORK ORDER /2022/11 dated 29/04/2022 and expected to be completed by 31.12.2023.

Details of Bypass road are detailed below:

As per the approval for Government land for this road issued by Dy. Secretary, Revenue and Forest Department, Govt. of Maharashtra, Mumbai vide letter no. संकीर्ण-२०२२/प्र. क्र. ५६/अ -1 दिनांक २३ फरवरी २०२३, this road will serve the purpose of local transport and public use also and decongest the traffic in Warora town.

- This road will help in easy access for the Management / Employees of Amalg. Yekona I & II OC Mine to reach mine residing in from WCL Kuchna housing Complex as well as employees residing in Warora & Wani Town. At present the employees have to travel from within the Warora Town. This takes considerable time.
- This road will act as by-pass for Warora town. Apart from avoiding heavy traffic, this road will also provide an alternate arrangement for coal evacuation in future

(xviii) “Toe wall of atleast 15 mts to 20 mts height should be constructed along the OB dump to protect yekona village.”

Amendment proposed - Construction of toe wall with adequate dimensions along the OB dump to protect the Yekona village and check runoff and siltation in regard to the rainfall data.

Justification for proposed amendment:

- The toe wall of 15-20 meters is not feasible to construct techno-economically in this mine.
- There is a gap of about 100 mtrs between the OB/ Top soil dump and Yekona Village & the gap is also planted with tree plantation (10,000 nos. in an area of 4 ha).
- Only Top Soil overburden dump is present against the habitation of Yekona Village. Height of Top Soil dump is only 36 mtrs & same is finalised, no further dumping or heightening will be done. Plantation and grass seeding of top soil dump is being done, which helps in stabilisation of the dump.
- Garland Drains have been provided in mine for the length of about 4650 m with width of 2 m and depth of 2 m. Catch drains of dimension 3300 length, 2 m width and 2 m depth are also provided against OB dump. Dumps are provided with siltation pond at the bottom to prevent siltation in nearby water body. This help in arresting any loose material of the dump.
- Dumping was done by removing the black cotton soil layer upto 3 mtr depth at the toe/ floor of the dump, this help in stabilisation and possibility of floor failure and upheaving is totally avoided.
- A scientific study has been carried out for OB dump stability in the respective mine by IIT Kharagpur. The safety measures proposed in the report does not include the construction of toe wall.
- In CMR, 2017 there is no mention of the dimensions for the construction of toe wall.

48.6.2 *The Committee after deliberations noted that the instant proposal is primarily for extension of timeline for implementation of mechanised system and construction of Toe wall for adequate height along the OB dump. With regard to transportation of coal , the committee observed that PP could not*

produce the documentary proof, which indicates that PP has taken adequate steps to complete the works of belt conveyor and silo loading. From the submission it is noted that Work order has been awarded to M/s Indian Port Rail & Ropeway Corporation Ltd (IPRCL), Mumbai vide letter dt 07.05.2022 for construction of railway siding and the target date of completion is 06.11.2023. However, as on date, the work of survey is completed. PP did not inform the committee about tentative timeline for revised work order which is ending in November 2023, which should have been on the basis of adequate planning. With regard to construction of toe wall, no work has been commenced. With regard to toe wall request, the committee agreed to maintain the height of 2.5 mt around the OB bump area with proper design. Further adequate wind barrier shall be installed near habitat area in order to arrest the movement of dust towards villages.

The Committee took a note of the court case titled Smt. Kamladevi Manakchand Maloo Education Foundation & Anr. Versus Union of India & Ors. (WRIT PETITION No. 2470 of 2022) pending before the Hon'ble Bombay High Court, Nagpur Bench, wherein the petitioner has filed the petition to prohibit the M/s Western Coalfields Limited (WCL) from using the disputed road (i.e. road acquired under the Dindora Barage Pipeline Project) because the said disputed road passes through the school and when heavy vehicles carrying the coal, affects the health of the students. It has also been contended that M/s Western Coalfields Limited (WCL) is currently transporting the coal over the disputed road and has started to construct the same. To authenticate the allegations of the petitioner the Ministry vide letter dated 07.06.2023 directed Integrated Regional Office, Nagpur to conduct the site inspection and prepare the report. Thereafter, the site inspection report was prepared by the Integrated Regional Office (WCZ), MoEF&CC.

Based upon the above-stated site inspection report, the Ministry has filed an affidavit on 09.08.2023 in the WRIT PETITION No. 2470 of 2022, before the Hon'ble Bombay High Court, Nagpur Bench. The Ministry in para no. 18 and 19 of the affidavit submitted that:

“...the Environment Clearance letter has been stipulated with the condition to implement the belt-conveyor system to transport the coal from silo to railway siding within 3 years (December 2023) and till that period PP to transport coal by road with safety measures. However, no specific route is defined in EC during the transit period. Also, based on the observation of IRO, it is now recognized that the coal transportation is passing through the contended zone. That, in the meanwhile, PP vide application dated 28.07.2023 has applied for amending the EC conditions of letter dated 01.01.2021 highlighting the reasons of delay in construction of belt conveyor & railway siding due to land acquisition, which will impede the time prescribed for said construction by the Ministry. However, if the said amendment in EC had not applied to by the PP, then this would have been a violation category case under EIA notification, 2006, as the conditions prescribed in EC with regard to the construction of rail transport mechanism is not complied within timeline.”

During meeting, the committee informed PP to submit the MoU signed for coal transportation to various user, however, PP failed to submit the same. The committee noted that coal transportation being done with miscellaneous coal consumer and power plant but quantities were not provided to the Committee. The committee was, therefore, opined that in order to avoid the road transportation to multiple users by different road, PP must submit the plan for 90% coal movement through rail and 10% by road with

firmed timeline and documentary proof. Further, till the mechanised system put in place, the Committee asked PP to submit a dedicated transportation of coal through road, avoiding the sensitive areas, after conducting traffic study within one months.

In view of the above, the Committee asked the project proponent to submit compliance for the following details by November 2023:

- i. Current status and preparedness of proposed railway siding/pipe conveyor system as per specific condition no. 4 (vi) of EC letter dated 01.01.2021 with documentary proof (pipe conveyor plan comprising of layout, NIT and tendering details with date for the Railway siding alongwith Feasibility Study Report, Engineering Scale Plan, Detailed Project Report etc.)*
- ii. PP shall submit the plan for coal transportation upto 90% to its peak capacity i.e .3.44 MTPA to dedicated users only including M/s MAHAGENCO thermal power plant as proposed in EIA-EMP report.*
- iii. The Writ Petition No. 2470 of 2022 is sub-judice. However, the contentions alleged in the petition are authenticated by the site inspection report. Therefore, PP should plan to avoid the usage/construction of road for transportation of coal near the sensitive zone such as school, hospital, etc. and submit the alternative route till mechanised system is put in place. The proposed route should be supported by traffic study for one month (with baseline ambient air quality in alternate route) along with the mitigation measures to control the dust pollution till the period of completion of mechanised system.*
- iv. PP shall submit the drone video of OB dump along with the construction of Toe-wall all around the OB dump.*
- v. PP to submit copies of MoU signed for coal transportation to various user including thermal power plant*

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

Agenda No. 48.7

Expansion of Jhingurda Opencast Coal Project of 3 to 5 MTPA capacity in ML area of 1200 ha for M/s Northern Coalfields Limited located in Jhingurda, Tehsil Morwa, District Sidhi (Madhya Pradesh) – For Amendment of Environmental Clearance dated 12.02.2021 - reg.

[Online Proposal No. IA/MP/CMIN/424691/2023; F. No. J-11015/171/2003-IA.II (M)]

48.7.1 The proposal for amendment in Environmental Clearance dated 12.02.2021 for Expansion of Jhingurda Opencast Coal Project of 3 to 5 MTPA capacity in ML area of 1200 ha for M/s Northern Coalfields Limited located in Jhingurda, Tehsil Morwa, District Sidhi (Madhya Pradesh).

48.7.2 The EAC during deliberations noted the following:

- Earlier, the Environment Clearance to the project was obtained under EIA Notification, 2006 vide Ministry's letter No. J-11015/171/2003-IA.II (M) dated 11.05.2005 for 5 MTPA. The revalidation of EC was granted vide letter no. J-11015/171/2003-IA.II (M) dated 12.02.2021 under EIA

Notification, 2006 based on Ministry's Notification dated 6th April, 2018.

- Extension in validity of EC was granted by Ministry for a period of two years vide its letter dated 4th March, 2022 with certain terms and conditions.
- Now, the proposal is for extension in EC validity up to 2031-32 for extraction of balance coal reserve and processing of 1.7 MCum Overburden/Quartzite/Hard Stone as a part of sustainable mining initiative. There won't be any change in mine lease area and mining technology.

Reasons for Extension of Environmental Clearance:

- As per an assessment of balance coal reserve done within the existing lease area of Jhingurda h OCP, the project has balance coal reserves of 18.77 MT including Jhingurda h top and bottom seam as on 01.04.2023.
- Also, it is found that during Mining operation in eastern part of mine, some portion of upper benches with hard stone (Quartzite) has been found which will be extracted for production of balance coal of Jhingurda OCP.
- Accordingly, a Mining Plan including Mine Closure Plan for Jhingurda h OCP has been approved by NCL Board on 08.12.2022 for extraction of balance coal reserve from Top and Bottom seam along with Quartzite Stone of 1.7 Mm³.
- Present proposal is for extension of the validity of Environmental Clearance along with amendment in EC for extraction of the balance coal reserve along with Quartzite Stone within existing lease area of 1200 ha.
- There is no change in Existing total lease area, Mining method and technology i.e. no additional land/water/power requirement.

48.7.3 *The Committee after detailed deliberation observed that the instant proposal for the extension of validity of EC for Jhingurda OCP along with the permission to mine Quartzite/Hard stone.*

During the discussions, the Committee observed that the greenbelt has not been developed satisfactorily in the total ML area of 1200 ha and the Committee emphasized to develop green belt area in 748 ha, which equals to the already acquired forest area. In addition, PP was instructed to submit the acquisition letter for 748 ha of forest area under CBA Act. The Committee also enquired about the detail justification for extension of the EC until 2032, while the reserve available for approximately 4 years only.

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

- PP shall submit the of Greenbelt development plan (within 2 yrs) in area of 748 ha which equals to the previously acquired forest area under CBA act and also provide no. of trees to be cut for extraction of balance coal reserve.*
- PP shall submit the total reserves availability within the ML area including coal and Quartzite/Hard stone.*
- PP shall submit the revised mine plan after incorporating mining & processing of Quartzite/Hard stone.*

- iv. *PP shall submit one-month monitoring data showing the impact of the mining of Quartzite/Hard stone and coal.*
- v. *Details of Coal and Quartzite/Hard stone evacuation plan to be submitted along with processing plan of Quartzite/Hard stone.*
- vi. *Water balance sheet including Mine water, ground water and other water associated in the mining activity shall be submitted in a presentable form. It should also involve the quantity of water passing through ETP.*
- vii. *Justification for extension of EC until 2032 while the availability of reserve for approximately 4 years only.*
- viii. *PP shall submit the drone video of the complete ML area covering the Earlier Forest area, existing OB dump, Coal evacuation route, ETP, CAAQMS, Chatka Nallah flowing through the ML area, plantation of Sal trees on 250 ha and Sal nursery in 5 ha.*
- ix. *Layout plan for handling/processing of Quartzite/Hard stone within the ML area and their evacuation plan.*
- x. *Expenditure status of the specific condition no. (iv) Of the EC letter dated 04.03.2022 along with status of expenditure involved in CSR, EMP & Public Hearing.*
- xi. *Current status of the specific condition no. (v) Of the EC letter dated 04.03.2022 related to the construction of check dams & Chath Ghat on the banks of Chatka Nalla supported by Drone video.*
- xii. *PP shall submit the status of Mine closure, which should be certified from the Ministry of coal.*
- xiii. *PP shall share the online data generated from the already installed CAAQMS within the ML area.*
- xiv. *PP shall submit the pointwise compliance in time bound manner for conditions of ECs dated 11.05.2005, 12.02.2021 & 04.03.2022 mentioned as agreed to comply as per the certified compliance report dated 27.07.2023.*
- xv. *All above condition shall be supported by recorded videography and photographs.*

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

Agenda No. 48.8

Chandragupta Opencast Coal mine for production capacity of 15 / 20 MTPA (Normative/Peak) in mine lease area of 1495 Ha by M/s Central Coalfield Ltd. located at Village Badhaikhap, Bukru, Chatti-Bariyatu, Jordag, Nawakhap, Pachra/Pachanda, Peto, Sijhua in District Hazaribagh and in Village Ursu, District Chatra (Jharkhand) - For Environmental Clearance – reg.

[Online proposal no. IA/JH/CMIN/438586/2023; File No. IA-J-11015/43/2021-IA-II(M)]

48.8.1 The proposal is for environmental clearance for Chandragupta Opencast Coal mine for production capacity of 15 / 20 MTPA (Normative/Peak) in mine lease area of 1495 Ha by M/s Central Coalfield Ltd. located at Village Badhaikhap, Bukru, Chatti-Bariyatu, Jordag, Nawakhap, Pachra/Pachanda, Peto, Sijhua in District Hazaribagh and in Village Ursu, District Chatra (Jharkhand).

48.8.2 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. 73A/13 and 73E/1 and is bounded by latitudes Latitude: 23°51'30''N to 23°54'45''N and Longitude: 85°01'15''E to 85°03'15''E.
- (ii) Coal linkage of the project is proposed for energy sector through Basket linkage.
- (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, project is source to direct employment of about 2068 persons.
- (vi) The project is reported to be beneficial in terms of Environmental benefit that Reclamation activities will be carried out throughout the life of mine and post closure as per progressive and final mine closure plan. Socioeconomic benefits of the Project will accrue through direct and indirect employment to local population and financial benefit in terms of contribution to exchequer etc.
- (vii) No prior environment clearance was granted to the project.
- (viii) Terms of reference were granted vide F. No IA-J-11015/43/2021-IA-II(M) Dt. 13.09.2021.
- (ix) Total mining lease area as per block allotment is 1495 Ha. Mining Plan (Including Progressive Mine Closure Plan) has been approved in the 518th CCL Board held on 31.08.2022.
- (x) The land usage pattern of the project is as follows:

Pre-mining Land Use:

S.No.	Type of Land	Area in Ha
1	Forest Land	341
2	Scrubs	321
3	Agricultural land	762
4	Mining Area	0
5	Settlement	40
6	Water Body	16
7	Waste Land	15
	Total	1495

Post-mining land use:

S. No.	Particulars	Total Area in Ha.	Water body	Plantation	Public Use	Undisturbed
1	Quarry	1333.15	33.59	1299.56	0	0
2	CHP	7.86	0	7.86	0	0
3	Infrastructure (W/S,S/S etc.)	11.56	0	11.56	0	0
4	Road	18.58	0	0	18.58	0
5	Stream Diversion	1.66	1.66	0	0	0

6	Embankment & Greenbelt	16.43	0	16.43	0	0
7	Greenbelt	92.54	0	92.54	0	0
8	Water Body	10.32	10.32	0	0	0
9	Safety Zone	2.9	0	2.90	0	0
Total Project Area		1495	45.57	1430.85	18.58	0

- (xi) Total geological reserve reported in the mine lease area is 709.260 MT with 527.30 MT mineable reserve. Out of total mineable reserve of 527.30 MT are available for extraction. Percent of extraction is 100%.
- (xii) 12 seams with thickness ranging from 0.16 mtr to 14.69 mtr are workable. Grade of coal is G-11, stripping ratio 1.89, while average gradient is 6 Degree (1 in 15).
- (xiii) The method of mining to extract coal and OB in Chandragupt OCP is with Surface miner for 75-80% of coal and remaining coal through shovel- dumper combination, considering the geo-mining characteristics of this area.
- (xiv) Life of mine is 41 years.
- (xv) No external OB dump has been proposed within the project area of Chandragupt OCP (1495 Ha). However, initial OB of 48.38 Mm³ would be stored within the existing dump of Amrapali OCP. One internal OB in an area of 1299.56 ha with 15 to 20 m AGL and 946.96 Mm³ of OB is envisaged in the project.
- (xvi) Total quarry area is 1333.15 ha out of which backfilling will be done in 1266.56 Ha area. Final mine void will be created in an area of 33.59 Ha with average depth of 200 m. Backfilled quarry area of 1266.56 Ha shall be reclaimed with plantation. Final mine void will be converted into a water body.
- (xvii) The coal conveying plan from the mine has been revised by incorporating in-pit belt conveying system from in-pit to pit head. Further, coal transportation from pit head CHP to Amrapali railway siding is proposed by closed conveying system and silo loading at Amrapali railway siding. However, commissioning of pit-head CHP would take around 3 years from the date of issuance of EC of this present proposal, or 2 years from acquisition of land for construction of Amrapali railway siding, whichever is later. Hence, for the initial period of mine operation, coal will be dispatched through a dedicated coal transportation route to nearby Shivpur railway siding which is at around 7 kms away from the project by tipping trucks.
- (xviii) Reclamation Plan in an area of 1430.85 Ha comprising of 1299.56 Ha of internal dump, 16.43 Ha of Embankment, 95.44 Ha of green belt and safety zone, 19.42 Ha land for Infrastructure has also been proposed for reclamation.
- (xix) 699.38 Ha forest land has been identified in the project. Application of forestland of 699.38 Ha falling in both Chatra and Hazaribagh Districts vide proposal no: FP/JH/MIN/140599/2021 submitted on 09.04.2021. The proposal has been approved by the state forest department and is being forwarded to the MoEFCC New Delhi for Stage-I approval.
- (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 species has been prepared and submitted to DFO.

- (xxii) The ground water level has been reported to be varying between 6 m (Pre-monsoon) to 14 m (Pre-monsoon). Total water requirement for the project is 3590 KLD including water demand of colony.
- (xxiii) Application for obtaining the NOC of the Central Ground Water Authority has been submitted vide application no: 21-4/928/JH/MIN/2022 Dated: 21.07.2022.
- (xxiv) **Details of Public Hearing & related issues:** The project area of Chandragupt OCP falls into two districts of Jharkhand namely, Chatra and Hazaribagh. Therefore, public consultation of Chandragupt OCP (15/20 MTPA and 1495 Ha.) was conducted in both the districts as per EIA Notification 2006 and Terms of Reference (ToR) granted by the MoEFCC. Public hearing for the project of 15/20 MTY capacity in an area of 1495 Ha was conducted Purana Devi Mandap, Ursu village, Tandwa Block, Chatra Dist. on 23.02.2023 and Bazar Tand, Chatti Bariatu Village, Keradari Block, Hazaribagh Dist. on 21.02.2023 respectively. Under the Chairmanship of Shri. Gaurang Mahto, District land Acquisition Officer for Chatra district and Shri. Shri Vinod Kumar, District Land Acquisition Officer for Hazaribagh District. Major issues raised in the public hearing include environment, employment, R&R, compensation, health, road, electricity, education, afforestation, coordination between PAFs and project management etc. It has been proposed to spend around 147.5 Lakhs towards compliance of the issues raised during the public consultation of Chandragupt OCP.
- (xxv) 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:

	Major Issue Raised	Compliance	Additional Measures Proposed for Compliance of PH	Budgetary Provision in Rs. Lakhs	Tentative Timeli ne
Chatra District					
1	Control of pollution and Protection of Environment	The project has been planned in such way to have minimal impact on the surrounding environment. In this regard around Rs. 12699 Lakhs has been allocated in the EIA EMP towards protection of environment. This includes Air pollution control measures like fixed and mobile Fog canons, wind curtains and CAAQMS for monitoring of air quality etc., Water pollution control measures like ETP, STP, Toe wall and garland drains, check dams, RWH structures etc and progressive reclamation through plantation of native species.	This activity is related to pollution control and thus covered in the Environmental Management plan	-	-

	Major Issue Raised	Compliance	Additional Measures Proposed for Compliance of PH	Budgetary Provision in Rs. Lakhs	Tentative Timeli ne
2	Direct and indirect employment through project	As per the tentative R&R estimates prepared on household survey and secondary sources, it has been estimated that direct employment (Permanent + contractual) will be provided for around 800 PaPs. Furthermore, it is expected that this project will be a major source for indirect employment for nearby villagers. In addition to this, around 27 PAFs were given HMV training in FY 2022-23.	Skill development training will be provided for PAFs in various trades i.e. Electrician, Welder, HMV, Fitter etc. for at least 150 PAFs next 3 years	52.5	50 PAPs every year
3	Verification and land authentication for employment and R&R	In order to ease the land authentication process by State Govt., village wise camps are being conducted in co-ordination with the State Govt., wherein, physical verification and land authentication is being done on site through a Keradari Anchal Amin. At present, this land authentication process is being carried out at Chatti bariatu village.	Not Applicable		
4	Employment benefits to GM Land owners and subsequent authentication	Documents related to authentication of GM land viz. Hukumnama, Furd Amin report, Form-M etc. have been submitted to the CO office, Keradari block for authentication. Subsequently, the rightful owners of GM land shall be provided will all eligible compensations as per the R&R policy of CIL.	Not Applicable		
5	Education of Children and adopting schools in this area	Several activities related to education of project-affected children have been taken up CCL. This include up gradation of 728 anganwadi to Model Anganwadi schools, establishment of 54 smart classes in 30 schools in Chatra Dist. under project PEHAL are to name a few. Further, schooling facility upto XII th	Basic amenities in schools i.e. benches, Tables, chair and notebooks to be provided to schools in Keradari block	18.25	within 3 years

	Major Issue Raised	Compliance	Additional Measures Proposed for Compliance of PH	Budgetary Provision in Rs. Lakhs	Tentative Timeline
		standard shall be provided at R&R colony as per the R&R Policy. fund allocation shall be done under CSR for Education			
6	Provision for land less villagers for alternate livelihood	As per the CIL R&R Policy, direct employment (permanent) shall be provided @1 job for 2 acres of land, which would come to around 985 PAPs will be provided with direct permanent employment by CCL. Whereas, the land less villagers will be provided employment as per the employment policy of Jharkhand Govt., which states that 75% of the total labor requirement shall be fulfilled by the localities. As per this policy around 1090 PaPs will be provided with direct employment by PP on contractual basis. In addition to above, subsistence allowance will be provided for displaced families for one year @State SOR rates. Furthermore, it is expected that this project will be a major source for indirect employment for nearby villagers.	Skill developed shall be provided as detailed at pt no. 2		
7	Returning of land to villagers after closing of mine	This land has been acquired under CBA Act 1957, under which no provision for returning of land was made. Whereas, the degraded land shall be reclaimed with plantation and possibility for alternate usage of degraded land for alternate economical operations like agriculture, renewable energy, social infrastructure shall be explored at the stage of Final mine closure of this mine			

	Major Issue Raised	Compliance	Additional Measures Proposed for Compliance of PH	Budgetary Provision in Rs. Lakhs	Tentative Timeline
		as per the mine closure guidelines issued by MoC.			
Hazaribagh District					
SN	Major Issue Raised	Compliance	Additional Measures Proposed for Compliance of PH	Budgetary Provision in Rest. Lakhs	Tentative Timeline
1	Basic facilities like electricity, road, medical facilities etc. in Chatti Bariatu village	Chatti Bariatu village is a habitat on coal bearing land which falls partly within the working area of proposed Chandragupt OCP and the rest of which is part of NPTC's Chatti Bariatu Coal Mine. Therefore, this village is likely to be shifted to R&R site, and all basic amenities shall be provided in accordance with the R&R action plan.	Few additional measures for in-term benefits like periodic health checkup, developing of schools in Keradari block, solar powered bore wells etc.		
2	Destruction of Forest land and damage to natural resources	The project has been planned in such a way that at any point of time of mine operation, at least 50% of the project area will be under green cover through progressive reclamation by fruit bearing plants and native species. In addition to above, the impact of proposed mine on natural resources like air, water, land etc. have been studied and suitable mitigation measures have been proposed in this EIA EMP.	Distribution of native fruit bearing saplings to nearby villagers	6.75	within 3 years

	Major Issue Raised	Compliance	Additional Measures Proposed for Compliance of PH	Budgetary Provision in Rs. Lakhs	Tentative Timeline
3	Authentication of land Ownership	In order to ease the land authentication process by State Govt., village wise camps are being conducted in co-ordination with the State Govt., wherein, physical verification and land authentication is being done on site through a Keradari Anchal Amin. At present, this land authentication process is being carried out at Chatti bariatu village.			
4	Employment to villagers	As per the tentative R&R estimates prepared based on household survey and secondary sources, it has been estimated that direct employment (Permanent + contractual) will be provided for around 800 PaPs. Furthermore, it is expected that this project will be a major source for indirect employment for nearby villagers.	Skill developed shall be provided as detailed at above points.		
5	Proper R&R Facilities for villagers	R&R facilities shall be provided to villagers as per the RFCTLARR Act / CIL R&R Policy. As per the tentative R&R estimates prepared based on household survey and secondary sources, R&R site of approx. 50 Acres will be developed for accommodating 800 PAFs and R&R package of approx. 192 Crs. will be implemented			
6	Compensation as per RFCTLARR Act, 2013	PAFs are being offered to choose between two options i.e. compensation as per RFCTLARR Act 2013 and CIL R&R Policy. However, many villagers have been opting of CIL R&R policy due to the provision of direct permanent employment against 2 acres of land.			

	Major Issue Raised	Compliance	Additional Measures Proposed for Compliance of PH	Budgetary Provision in Rs. Lakhs	Tentative Timeli ne
7	Skill Development program for villagers	Around 27 PAFs were given HMV training in FY 2022-23.	Skill development training will be provided for PAFs in various trades i.e. Electrician, Welder, HMV, Fitter etc. for at least 150 PAFs next 3 years	52.5	50 PaPs every year
8	Proper relocation and employment to Farmers	As per the tentative R&R estimates prepared by PP, around 1090 landless project affected persons will be given direct employment in compliance to the Jharkhand Govt. employment policy. In addition to above, 1 year minimum wage salary would be given to PAFs against subsistence allowance for loss of livelihood	Skill development training will be provided for PAFs in various trades i.e. Electrician, Welder, HMV, Fitter etc. for at least 150 PAFs next 3 years	52.5	within 3 years
9	Protection of surface water bodies and rivers	A detailed study has been carried out and suitable measures for strengthening and protection of Barki river like strengthening of banks, construction of embankment and development of green belt etc. have been proposed	Efforts have been made to protect the surface water bodies in and around the mine		
10	Strengthening of Health system in Keradari block	Several health related activities like ICU equipment, Oxygen Pipe Line, Generator, Medicine have been taken up under CSR with a budgetary provision of Rs 817.98 Lakh. Well-equipped and Specialized doctors will be provided in the Dispensary established in R&R Site.	Health camps will be organized in different villages at a regular interval and also provided medicine facilities with Specialized doctors	10	within 3 years

	Major Issue Raised	Compliance	Additional Measures Proposed for Compliance of PH	Budgetary Provision in Rs. Lakhs	Tentative Timeli ne
11	Provision of drinking water facilities for Keradari	Presently 02 numbers of Solar operated Deep Boring have been done in Pachhra Village. 06 numbers of Solar operated Deep Boring are proposed for Project affected villages of Chandragupt Project.	Proposal for installation of Solar Power operated Bore Hole at 6 locations in the villages are identified for in Chattibariyat, Jordag, Bukru, Badhaikhap and Peto etc.,	60	within 3 years
Total Additional Financial Provision for Compliance of Issues Raised in PH				147.5	

(xxvi) Consent to Operate shall be obtained after grant of EC.

(xxvii) The Chundru River flows the southern boundary of the block whereas Barki River is the western limit of the boundary at 60m. The study area also shows the presence of the Garhi River. The Barki River and Chundru River are the major tributaries of Garhi River. The southerly flowing Garhi River is the master drainage and perennial source of water for the area. Chotki stream flowing across the project boundary is proposed for diversion along the north-west boundary of the project along with straightening notch of Barki River.

(xxviii) Regular monitoring of ambient air quality shall be carried out on fortnightly basis. The documented report shall be submitted to JSPCB and also to MOEF&C along with half yearly EC compliance report.

(xxix) No court cases, violation cases are pending against the project of the PP.

(xxx) The project does not involve violation of the EIA Notification, 2006 and amendment issued thereunder.

(xxxii) The project involves approx. 1612 project affected families. R&R of the PAPs will be done as per CIL R&R policy and RFTCLAAR Act.

(xxxiii) Total cost of the project is Rs. 973.50 Crores. Cost of production is Rs.602.91/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. Capital Cost of Environmental Control Measures is Rs. 126.99 Crores and Revenue Cost of Environmental Control Measures is Rs.2.65 Crores.

(xxxiii) **CONTROL OF POLLUTION: (A) AIR & (B) WATER**

- a. Environmental Baseline data was generated in the Pre-monsoon season from 01.03.2022 to 31.05.2022. The result indicates that the maximum and minimum values of PM10 are in the range of 93.2 µg/m³ to 54.6 µg/m³, whereas the PM2.5 are in the range of 52.4 µg/m³ to 27.9

µg/m³. The SO₂ concentrations within the study area are in the range of 34.6 µg/m³ to 8.00 µg/m³ and the NO_x are in the range of 38.4 µg/m³ to 16.3 µg/m³. The observed pollutant levels were compared with CPCB National Ambient Air Quality Standards & Standards for Coal Mines issued by MoEF&CC, GSR-742 E dt. 25.09.2000 and found to be under limit.

- b. Surface water Monitoring was done at 02 locations. The results indicate that the max. DO (mg/l) ranges from 6.1 to 7.2, TDS (mg/l) ranges from 326.0 to 375.0, TSS (mg/l) 10.2 to 18.4, Total Hardness as CaCO₃ (mg/l) from 196.0 to 212.0.

48.8.3 The EAC during deliberations noted the following:

- i. The project was granted Terms of reference by Ministry vide its letter F. No IA-J-11015/43/2021-IA-II(M) Dt. 13.09.2021.
- ii. Total mining lease area as per block allotment is 1495 Ha. Mining Plan (Including Progressive Mine Closure Plan) has been approved in the 518th CCL Board held on 31.08.2022.
- iii. Application for stage-I FC for 699.38 ha of forest area has been submitted vide proposal no: FP/JH/MIN/140599/2021 submitted on 09.04.2021.
- iv. No National Parks, Wildlife Sanctuaries and Eco-Sensitive Zones fall within 10 km boundary of the project.
- v. Wildlife conservation plan for schedule – I species has been prepared and submitted to DFO.
- vi. Application for NOC of the Central Ground Water Authority has been submitted vide application no: 21-4/928/JH/MIN/2022 dated 21.07.2022.
- vii. Public consultation for Chandragupt OCP (15/20 MTPA and 1495 Ha) has been conducted on 21.02.2023 & 23.02.2023 in Hazaribagh and Chatra District respectively.
- viii. Chotki stream flowing through the project boundary & proposed for diversion along the north-west boundary of the project along with straightening of Barki River. Chundru river flowing in the southern direction whereas Barki river is flowing at distance of 60m in western direction. Barki River and Chundru River are the major tributaries of Garhi river.

48.8.4 *The Committee after detailed deliberation noted that the instant project is Greenfield project having ML area of 1495 ha which falls in two-districts namely Hazaribagh & Chatra. The PP has conducted the public consultation in the two districts after obtaining ToR vide letter dated 13.09.2021.*

Upon discussions, it revealed that PP has not adhered fully with the conditions of ToR wherein it was suggested by EAC to prepare the Mine Plan and sequence of mining such as no diversion of river or stream shall be carried out for initial 10 years and also PP did not obtain amendment in ToR conditions also. During the discussions, Committee observed that the Chotki stream flowing through the ML area, Committee asked to not divert it for next 10 years after starting the mining operations and have a safe distance of 100m from existing

Stream/Nallah/River. Protection plan of Stream/Nallah/River shall be prepared & submit before Committee. About 699.38 ha of forest area lie within the ML area, committee asked the PP not to construct any non-essential infrastructure in forest area. Complete videography of the forest area shall be submitted to the committee. PP shall also submit the plan for the dense plantation by Miyawaki method.

Regarding implementation of inpit conveyor belt and silo loading system, PP informed that common railway siding at Amrapali is being constructed and 3 years timeline has been proposed. EAC observed that earlier EC of Amrapali OCP was given time of two or three years to implementation i.e. till January, 2025 but in this case PP is again proposing 3 years (i.e. 2026) which itself is contradictory. Construction of railway siding and railway is being done by RITES however laying of mechanized system is in the domain of PP and accordingly conveyor and silo loading system should be expedited within 1 year. Accordingly, PP shall submit the plan of action for its implementation.

Further, action regarding issues raised during public hearing also needs to be revised by incorporating dedicated water supply pipeline to nearby 5 villages which are proposed to be displaced after 10 years. Village wise mitigation measures for air pollution till R&R is completed.

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

- i. Protection plan for the streams passing through the ML area considering no diversion of stream for next 10 years from the commencement of mining operation. Cleaning/ de-siltation programme shall be part of study.*
- ii. Ecological assessment report of the river/streams passing through the ML area with monitoring of flora & fauna mainly dependent on the streams from the reputed organization.*
- iii. Land use plan shall be submitted prohibiting construction of any non-essential infrastructure on forestland.*
- iv. Latest Video recording shall be submitted for the forest area and streams lying inside the ML area.*
- v. Detailed report on total carbon sink/absorption happening due to the presence of forest cover in area of 699.48 ha and its loss after cutting and further, rate of carbon sequestration with progressive backfilling, plantation and implementation of electric vehicle.*
- vi. Nomination letter for appointment of District Land Acquisition Officer as Chairman of public hearing from District Magistrate.*
- vii. Detailed plan for dedicated inpit belt conveyor system with silo loading system as part of Mechanized Coal evacuation needs to be submitted for its completion within 1 year. Accordingly, timeline shall be proposed in form of CPM/PERT chart considering all eventuality involved for implementation of mechanized system*
- viii. District and village wise Pond rejuvenation & restoration plan needs to be submitted.*

- ix. *PP needs to submit certificate from the District Magistrate for verifying the existence of forest land covered under the Forest Right Act, 2006 and consequential forest land shall be required for diversion.*
- x. *PP needs to submit the protection plan for villagers lying inside the mine lease area from the mining activities during overlapping period of mining and rehabilitation.*
- xi. *The PP shall submit the progressive reclamation plan of mine in time bound manner and approved Standard Operating Procedure for handing over the land to land allottees and Forest Department*
- xii. *PP shall submit the clarification whether project falls within severely polluted area or outside the area from State Pollution Control Board*
- xiii. *PP shall submit the details related to the destruction of the Agro-forestry area lying inside the Mine lease area as per the approved mine plan. PP must submit the alternatives in terms of compensation (in Rs.) and in terms of Agriculture land*
- xiv. *PP shall submit the road map to resolve the R&R issues particularly for the persons completely dependent on the Forest.*
- xv. *PP shall submit the number of trees to be cut in non-forest area and steps/SOP to protect these trees.*
- xvi. *Activity wise public hearing cost to be revised and submitted. It should not be less than 1% of total project cost. Activities such as dedicated water supply through dedicated pipeline system to 5 near villagers, Village wise mitigation measures to be submitted*
- xvii. *PP shall submit air quality predication with & without the control measures.*
- xviii. *Pre-utilization of water to be submitted with proper schematic diagram with ETP & STP of 1.2 MLD.*
- xix. *Clarification from PCCF was desired regarding mine not falling under corridors, sanctuary, ESZs with certified Maps*

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

Agenda No. 48.9

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 coal washery of 2.5 MTPA of M/s Bharat Coking Coal Limited located in Jharia Coalfields, Village Gopinathdih, District Dhanbad (Jharkhand) - For Environmental Clearance – reg.

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

48.9.1 The proposal is for Integrated project for Expansion of capacity 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 coal washery of 2.5 MTPA of M/s Bharat Coking Coal Limited located in Jharia Coalfields, Village Gopinathdih, District Dhanbad (Jharkhand).

48.9.2 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) The project area is covered under Survey of India Topo Sheet No 73 I/6 and is bounded by the geographical coordinates ranging from 230 44' 13.21" to 230 44' 27.54" N and longitudes 860 21' 9.21" and 860 21' 20.94" E.
- (ii) Coal linkage of the project is proposed for Moonidih UG Mine project from seam XV (Top & Bottom) use for various Steel & Power Plant.
- (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. – No
- (v) Employment generation, 251 employments to 251 persons will be provided from the project.
- (vi) The project is reported to be beneficial in terms of a) The Washery will produce environmental friendly metallurgical grade coal to be used in steel plants thus resulting in huge savings to the national exchequer in conjunction with minimizing pollution levels. b) It will reduce volume of coal transportation which will reduce pollution. c) There will be spontaneous economic stimulus in the area with the expansion of project. Traders and private enterprises will grow in the area with this economic growth. Besides, the State exchequer will derive financial revenues through levy of royalty, IGST etc. and Central Government will also be benefited by way of CGST, Income Tax, Cess etc. d) Development of ancillary industries around the cluster thus bringing about holistic local development. Business opportunity in Secondary & Tertiary sectors will increase. e) Creation of social infrastructure like schools, hospitals, etc. f) The project will create employment opportunities both for skilled and semi- skilled persons in the area. g) Sharing benefits of growth with society through CSR activities as per existing CSR policy of Coal India Limited.
- (vii) Earlier, the 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.
- (viii) Terms of Reference granted on 1st January 2021
- (ix) Desired quantum of ROM coal will be transported through pipe conveyor systems from the Moonidih Underground mine to the screen-cum-crusher house at washery end. The washed coal will be stocked in Silos (2x4000t capacity) (within the washery premises) and will be loaded into railway wagons through a Loading Hopper of the Fast Loading System (FLS) mechanism for quick loading and delivery to BCCL's consumers through the railway siding. Storage of 2nd Product (middlings) in a 4000t Silo inside washery premises and thereafter its reclamation & conveying by belt conveyor to Loading Hopper of Fast Loading System of Clean/Metallurgical Coal & loading into Railway wagons by Fast Loading System (FLS) for onward dispatch to BCCL's Customer(s) has been envisaged
- (x) The ground water level has been reported to be varying between 1.09 m to 8.47 m during pre-monsoon and between 0.34 m to 3.87 m during post-monsoon. Total water requirement for the project is 1360 KLD

- (xi) The Washery will not abstract ground water but will use mine water. The source of water is mine water will be mine water from Moonidih Colliery situated near the washery site. The average mine water discharge per month is 1.0 Million Gallon available at Pit Top and will be used in the proposed washery. The quantity of water required for the proposed washery is about 0.30 MGD (1360 KLD)
- (xii) Public hearing for the Moonidih coking coal washery of 2.5 MTPA capacity in an area of 18 ha was conducted on 4 th March 2023 at Playground D.A.V Public School, Moonidih Project, under the Chairmanship of Mr. Nandkishore Gupta, Additional Collector, Dhanbad Major issues raised in the public hearing include employment, electricity, water, health medical facility, repair of community building, repair of road and demands were made for cleanliness, arrangement of water sprinkling, construction of drains and cleaning of drains etc. Appropriate action to address the issues raised in the Public Hearing have already been taken/proposed to be taken
- (xiii) 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
- (xiv) No court cases, violation cases are pending against the project of the PP
- (xv) Environmental Baseline data was generated in the winter season from 9 the December. 2020- 9 th March. 2021 at 8 Air & Noise, 3 Surface Water & Soil quality and 01 GW locations

48.9.3 The committee during deliberations noted the following:

- i. Terms of Reference to instant proposal was granted by Ministry vide its letter dated 01.01.2021.
- ii. Earlier, 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.
- iii. The proposed additional washery for Moonidih UG Mine project for seam XV (Top & Bottom) for various Steel & Power Plant.
- iv. The ground water level has been reported to be varying between 1.09 m to 8.47 m during pre-monsoon and between 0.34 m to 3.87 m during post-monsoon. Total water requirement for the project is 1360 KLD.
- v. The Washery will not abstract ground water but will use mine water. The source of water is mine water will be mine water from Moonidih Colliery situated near the washery site. The average mine water discharge per month is 1.0 Million Gallon available at Pit Top and will be used in the proposed washery. The quantity of water required for the proposed washery is about 0.30 MGD (1360 KLD).
- vi. Public Hearing was conducted on 4th March 2023 for Moonidih coking coal washery of 2.5 MTPA capacity.
- vii. No excess production of coal from 1993-94 onwards.
- viii. Baseline data was generated in the winter season from 9th December 2020 to 9th March 2021 for Air & Noise, Surface Water & Soil quality.

- ix. IRO, MoEFCC has conducted Inspection of Cluster XI, BCCL on 3rd -4th April 2023. The certified EC compliance report of Cluster-XI, BCCL was issued by the office of Integrated Regional Officer vide letter no.103-430/pt/1179 dated 13.06.2023.

48.9.3 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. The Public hearing was conducted on 4th March, 2023 after obtaining ToR vide letter dated 01.01.2021. It was observed that instant coal washery is proposed within the Cluster XI mine lease area, however revised Mine Plan has not been submitted as there is change in land use pattern. Further, on enquiry, PP could not certify that area chosen does not come under coal bearing areas and no forest land is required to be diverted in the mine lease area.

During the discussions Committee observed that the PP did not work on environmental control measures. As per the KML file meager plantation was observed within the ML area. The Committee noted that the proposed environmental control measures was not adequate and requires revision in the mitigation plan and revision in the allocated budget. Circulation of mine water within the ML area has not been properly planned, it shall re-used after the treatment only. Therefore, complete water balance sheet will be required for ML area and coal washery. The Committee observed that the Forest clearance for 80.44 ha has not been obtained by PP, therefore proper justification is required. Alternatively, committee asked the project proponent to submit the 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).

It was further observed that 49.5% ash content (0.6125 MTPA) in the rejects from coal washery is proposed to be disposed off to L1 bidder, however it was desired that PP shall submit the MoU/Agreement to the reject utilizer in the Thermal Power Plant. Regarding plantation, it was desired that since the land is already in possession to the proponent and there is already number of trees present in the proposed washery area, PP shall submit the details of number of trees to be cut and measures to protect the existing trees by suitable layout of plant facilities.

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

- i. Environmental control measures needs to submit with proper mitigation plan along with adequate budget.*
- ii. Water balance sheet to be prepared considering the water discharge from Mine water and as per the water requirement for coal washery.*
- iii. Public Hearing plan to be revised with required activity and budgetary allocation.*
- iv. Integrated coal evacuation plan to be submitted which includes the coal from mining and as well as from coal washery.*
- v. 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*

- vi. *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.*
- vii. *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.*
- viii. *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.*
- ix. *Status Employment to be submitted as per the issue raised in Public Hearing.*
- x. *PP shall submit authenticated or certified list of species present in 10 km buffer and core area (mine lease area).*
- xi. *PP shall submit Action Taken report with time line for non-compliance and partial compliance highlighted in Certified compliance report by Ministry's IRO.*
- xii. *PP shall submit the certificate from translator regarding authentic translation of public hearing minutes/records.*
- xiii. *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.*

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

Agenda No. 48.10

Expansion of Dulanga Coal Mining Project for increasing production capacity from 7.0 to 8.0 MTPA in the ML area of 785.37 ha of M/s NTPC Limited located in Ib Valley Coalfields, District (Odisha) - For Environmental Clearance under OM vide F. No. IA3-22/10/2022-IA.III [E 177258] dated 11.04.2022– reg.

[Online proposal no. IA/OR/CMIN/434835/2023; File no. J-11015/1140/2007-IA-II (M)]

48.10.1 The proposal is for expansion of Dulanga Coal Mining Project for increasing production capacity from 7.0 to 8.0 MTPA in the ML area of 785.37 ha of M/s NTPC Limited located in Ib Valley Coalfields, District (Odisha) under para 7 (ii)(a) of O.M. dated 11.04.2022 wherein PP has applied for 20% expansion.

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

- (i) The project area is covered under Survey of India Toposheet no. 64 O/13 (open series map F44R13; R.F. 1:50,000) and is bounded by the geographical coordinates ranging from Latitudes (N): 21° 55' 8.381" to 21° 56' 56.676" and Longitude (E): 83° 46' 42.740" to 83° 50' 10.960".
- (ii) Coal linkage of the project is proposed for Super Thermal Power Plant, at Darlipalli, Sundergarh as well as outside sale is permitted.

- (iii) Joint venture: Not Applicable
- (iv) The Ib valley coal field is the nearest critically polluted area situated at the distance of 2.7 km, S from the project boundary. As per latest status of NGT order dated 14.11.2019, the status has been changed to severely polluted area based on CEPI score.
- (v) Employment generation- Present manpower for 7.0 MTPA production is 1026 and additional manpower requirement for the expansion of mine to 8.0 MTPA shall be 99 including outsourced. Thus, the total has been estimated as 1125 persons after expansion.
- (vi) The project is reported to be beneficial in terms of :
- **Social:** Direct and Indirect employment generation and development of social infrastructure facilities under CSR activities in nearby villages
 - **Financial:** Income generation to employee and associated persons, revenue generation to state etc.
 - **Environmental:** Remediation of Potential Environmental Impacts, Afforestation of backfilled and dump areas, 100% reuse of mine seepage water, use of railway for evacuation of Coal.
- (vii) Earlier, the Environment Clearance to the project was obtained under EIA Notification, 2006 vide MoEF&CC's letter no. J-11015/1140/2007-IA-II(M) dated 03.03.2014 for 7 MTPA capacity for an area of 785.37 Ha in respect of Dulanga Coal Mine and the same was revalidated vide letter dated 28.10.2015. There have been amendments in 09.02.2016, 08.08.2018, 04.07.2019 & 07.01.2020.
- (viii) Total project area is 762.42 ha. The Mining Plan for 7 MTPA production was prepared and approved by Ministry of Coal (MOC) vide letter no. 13016/29/2003-CA-I (Vol. II) dated 30.07.2009. Revised Mining Plan and Mine Closure Plan for 7 MTPA of Dulanga Coal Mine was approved by Ministry of Coal (MoC) vide letter no. 13016/27/2012-CA-I dated 14.08.2012.
- (ix) The land usage pattern of the project is as follows:

Pre-mining land use details (Area in Ha)

Land use pattern	Within Block Area (ha)	Outside Block area (ha)	Total
Agricultural Land	186.91	144.07	330.98
Forest land	273.68	31.07	304.75
Waste Land	-	-	-
Grazing Land	-	-	-
Surface water Bodies	-	-	-
Settlements	-	-	-
Others (Govt. Non forest land)	106.60	20.09	126.69
Total	567.19	195.23	762.42

Post Mining Land Use details (in Ha.)

Sl. No.	Description of area	Land use (Ha.)				
		Plantation	Water body	Public use	Undisturbed	Total
I.	ML Area					
1	External OB Dump	76.86				76.86
2	Topsoil Dump	2.89				2.89
3	Excavation					
(a)	Backfilled Areas	351.23 (304.75 returned back to forest Deptt.)				351.23
(b)	Excavated void		159.55			159.55
4.	Road	33.32				33.32
5	Built-up area					
6	Green Belt	82.64				82.64
7	Undisturbed area				10.93	10.93
8	Safety Zone/Rationalization Area				2.61	2.61
9	Diversion / Below River / Nala /Canal		17.65			17.65
10	Water Body	1.53				1.53
11	Staff Colony					
12	Others					
(a)	Haul Road between quarries	13.19				13.19
(b)	Embankment			10.02		10.02
TOTAL		561.66	177.20	10.02	13.54	762.42

- (x) Total geological reserve reported in the mine lease area is 243.116 MT with 156.76 MT mineable reserve. Out of total mineable reserve of 156.76 MT, 152.05 MT are available for extraction. Percent of extraction is 78%.
- (xi) 15 seams with thickness 0.10 - 68.16 m. Grade of coal varies from Grade varying from D to G and the average grade is F & G. Stripping ratio 2.70 (Cum:Tonne), while gradient is 5 to 10 degree.
- (xii) Method of mining operations envisages by Opencast mechanized method.
- (xiii) Life of mine: Reduction of 7 years; 26 years (as per approved MP) to 19 years.
The project has 4-external OB dumps Beldihi OB dump (45.98 ha, 8.29 Mm³) I, Khuntijhar ia Dump (15.46 ha, 3.7 Mm³), OB Dump 1A (15.37 ha, 2.6 Mm³) & OB Dump B (21.46 ha, 4.5 Mm³) with maximum 60 m height and at the end of the mine life only 1 OB dump shall be there

which is OB Dump (1A+B) with an area of 79.84 ha and 28.78 Mcum. Balance OB 362.16 Mm³ is proposed to be dump in internal dump.

- (xiv) Total quarry area is ha 510.78 ha out of which backfilling will be done in 351.23 ha while final mine void will be created in an area of 159.55 Ha with a depth of 40 m. Backfilled quarry area of 351.23 ha shall be reclaimed with plantation. Final mine void will be converted into a water body.
- (xv) Transportation of coal has been proposed through Push Pull arrangement via rail to Super Thermal Power Plant at Darlipali-I. Coal from mine to CHP at pit head by 50 T/60 T dumpers and by Wagon loading by Silo from Siding to Loading.
- (xvi) Reclamation Plan in an area of 748.88 ha, comprising of 79.75 ha of external dump & Top Soil Dump 351.23 ha of internal dump (backfill) and 82.64 ha of green belt, 159.55 ha void, 13.19 ha haul road, 17.65 a Nala diversion, 1.53 ha water body, 33.32 ha road and 10.02 ha embankment.
- (xvii) 304.75 ha of forest land has been reported to be involved in the project. Approval under the Forest (Conservation) Act, 1980. FC was obtained vide F.No. 8-23/2013-FC dated 23.12.2015.
- (xviii) No National Parks, Wildlife Sanctuaries and Eco-Sensitive Zones fall within 10 km boundary of the project.
- (xix) Wildlife conservation plan for schedule – I species has been submitted to competent authority and approved vide letter no. 7480/1WL(C)SSP-270/2012 dated 30.09.2014.
- (xx) Ground water table Pre-monsoon is 6.89 to 8.84 meter below ground level (m bgl) and Post-Monsoon is 4.45 to 5.5 meter below ground level. Total water requirement for the project is 1289.7 KLD envisaging peak requirement.
- (xxi) NOC no. for Ground Water Clearance by Central Ground Water Authority is CGWA/NOC/MIN/REN/2/2022/7124 dated 04.12.2021.
- (xxii) Public hearing for the project of 7.0 MTPA capacity IB Valley Coal Fields over an area of 944.92 Ha. in the district of Sundargarh at Gram Panchayat Office, Sanghumunda, Sundargarh, Odisha on 02.07.2010 under the Chairmanship of Sri Rabi Nandan Nayak, OAS (S), Project Administrator, ITDA, Sundargarh and Er. S. K. Sahu, Regional Officer, Office of Odisha State Pollution Control Board, Sambalpur. Major issues raised in the public hearing and Appropriate action to address the issues raised in the Public Hearing have already been taken/proposed to be taken:
- (xxiii) 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 (In Lakhs) 2014-15	Year-2 (In Lakhs) 2015-16	Total (In Lakhs)
1.	Infrastructure creation for Drinking Water	Dulanga, Manoharpur, Kathpali, Beldihi, Khuntijharia, Majhapada, Khapuri Kachhar, kalamegha,	85.00	-	85.00

	supply	Dhumamunda,Sanghmunda, Durubaga GP, Kanaktura GP			
2.	Sanitation		-	-	-
3.	Education		30.14	25.40	55.54
4.	Skill Development		24.0	20.0	44.0
5.	Roads		-	-	-
6.	Cross drains		-	-	-
7.	Electrification including solar power		-	-	-
8.	Solid waste management facilities		-	-	-
9.	Scientific support and awareness to local farmers to increase yield of crop and fodder		-	-	-
10.	Rain water Harvesting		-	-	-
11.	Soil moisture conservation works		-	-	-
12.	Avenue plantation		-	-	-
13.	Plantation in community areas		-	-	-
14.	Infrastructure		220.0	225.0	445.0
15.	Health		30.0	6.50	36.50
16.	Art, Culture & Sports		-	-	-
17.	Livelihood		-	-	-
18.	Agricultural programme		-	-	-
19.	Community empowerment /need based		65.86	73.10	138.96
20.	Periphery area development activities		195.0	150.0	345.00
21.	Total		650.0	500.0	1150.0

(xxiv) Consent to Operate for the existing capacity was obtained from the Odisha State Pollution Control Board vide letter no. letter no. 4169/Ind-I-CON-6623 dated 20.03.2023 and valid up to

31.03.2024.

- (xxv) Garia Nala flowing through the middle of the property almost along the strikes line of seams. It is a tributary to Basundhara Nala which finally joins Ib River on which the Hirakud Reservoir is built around 30 km south of the project. Existing width of Garia Nala is approximately 29 meters at its high bank, which more or less resembles a river. While Nala-B is virtually non-existence as the satellite images indicate. Baidhara nala is seasonal in nature, the measured span is approximately 15 m.
- (xxvi) Regular monitoring of ambient air quality is being carried out through NABL accredited laboratory on fortnightly basis. The documented report is submitted to Integrated Regional Office, Bhubaneswar of MoEF&CC along with half yearly EC compliance report. In general, the results of ambient air quality monitoring data were found within prescribed limits.
- (xxvii) No court cases with respect to the environment and forest, no violation cases are pending against the project of the PP. Certified Compliance report enclosed.
- (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 2018 onwards. No excess production of coal from the sanctioned capacity has been realized since the commencement of mining operations.
- (xxix) The project involves 874 project-affected families. R&R cost of the PAPs is 266.47 Crores.
- (xxx) Total cost of the project is Rs. 100 crore. Cost of production is Rs 1083.6 per tonne (approximately). Proposed CSR activities for FY-2023-24 is Rs. 2 crores. Environment Management Cost is Rs. 1,647.93 lakhs & Recurring 763.01 lakhs per year.
- (xxxi) Consent to Operate for the existing capacity was obtained from the Odisha State Pollution Control Board vide letter no. letter no. 4169/Ind-I-CON-6623 dated 20.03.2023 and valid up to 31.03.2024.
- (xxxii) Past Production of the mine was always within 7.0 MTPA, as per the EC issued by MoEF vide letter no. J-11015/1140/2007-IA-II(M) dated 03.03.2014.
- (xxxiii) Coal Produced in Last five years are as follows:

S. No.	Year	Production (tonnes)
1.	FY 18-19	5,00,948.49
2.	FY 19-20	15,40,002.71
3.	FY 20-21	31,23,840.00
4.	FY 21-22	52,92,094.00
5.	FY 22-23	70,00,00,000

- (xxxiv) Environmental Baseline data was generated in the post - monsoon season i.e from 01.10.2022 to 31.12.2022 at 9 locations. The result indicates that the maximum and minimum values are 47.2 to 124 µg/m³ for PM₁₀, 26.2 to 71.8 µg/m³ for PM_{2.5}. The SO₂ concentrations are in the range of BDL to 15.1 µg/m³ and NO_x in the range of BDL to 20.1 µg/m³. The incremental increase is projected to be -1.88 to 9.65 µg/m³ for PM₁₀, -1.08 to 5.55 µg/m³ for PM_{2.5}, 0.02 to 0.51 µg/m³ for SO₂, and 0.17 to 4.53 µg/m³ for NO_x. The value of total GLC is estimated to be 54.31 to 122.12 µg/m³ for PM₁₀, 30.84 to 70.72 µg/m³ for PM_{2.5}, 7.14 to

15.21 µg/m³ for SO₂, and 8.89 to 21.53 µg/m³ for NO_x. The observed pollutant levels are compared with CPCB National Ambient Air Quality Standards.

- (xxxv) Surface water Monitoring was done at 8 locations. The result indicates that the pH value in the range of 6.92 to 7.8 and its turbidity value is BDL to 7.623 NTU, dissolved oxygen in the range of 6.9 to 9.1 mg/l, dissolved solids ranged 68 to 386 mg/l, total hardness in range of 44 to 228 mg/l. All the parameters of surface water are well within the acceptable limits except manganese in Lilari Nala near Chaurimal village. However, it is within permissible limits as per IS 10500: 2012

48.10.3 The committee during the deliberation noted the following:

- Earlier, Environment Clearance was granted for 7 MTPA in ML area of 785.37 Ha vide letter dated 28.10.2015 and subsequently amendments vide dated 09.02.2016, 08.08.2018, 04.07.2019 & 07.01.2020. Amendments were taken in lieu for transportation of coal by road from Dulanga CMP to ACB Railway siding (Over a distance of 29.2 km) for 12000 TPD for a period of one year i.e. upto October, 2020.
- Approved Mine plan has been obtained from Ministry of Coal (MoC) for capacity of 7 MTPA vide letter no. 13016/29/2003-CA-I (Vol. II) dated 30.07.2009. Subsequently Revised Mine Plan and Mine Closure Plan for 7 MTPA of Dulanga Coal Mine was approved by Ministry of Coal (MoC) vide letter no. 13016/27/2012-CA-I dated 14.08.2012.
- 304.75 ha of forest area and Forest Clearance has been granted vide File No. 8-23/2013-FC dated 23.12.2015.
- Wildlife conservation plan for schedule – I species has been approved vide letter no. 7480/1WL(C)SSP-270/2012 dated 30.09.2014.
- Total water requirement for the project is 1289.7 KLD.
- PP has obtained NOC from CGWA for withdrawal of Ground water vide NOC no. CGWA/NOC/MIN/REN/2/2022/7124 dated 04.12.2021 valid up to 03.12.2023 for 91 KLD fresh water and 318 KLD dewatering from mine.
- Public hearing was conducted on 02.07.2010 for capacity of 7.0 MTPA over an area of 944.92 Ha. in the Sundargarh district (Odisha).
- Consent to Operate for the existing capacity was obtained from the Odisha State Pollution Control Board vide letter no. 4169/Ind-I-CON-6623 dated 20.03.2023 and valid up to 31.03.2024.
- Garia Nala flowing through the middle of the property almost along the strikes line of seams. It is a tributary to Basundhara Nala, which finally joins Ib River on which the Hirakud Reservoir is built around 30 km south of the project. Existing width of Garia Nala is approximately 29 meters at its high bank, which more or less resembles a river. While Nala-B is virtually non-existence as the satellite images indicate. Baidhara nala is seasonal in nature, the measured span is approximately 15 m.
- Environmental Baseline data was generated in the post - monsoon season i.e from 01.10.2022 to 31.12.2022.
- Project is approved by Regional Executive Director on 04.05.2023 and amended on 23.07.2023

as per power vested by the Board of NTPC on 25.02.2015.

- 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 Dulanga Coal Mining Project of M/s NTPC Limited:

Criteria as Per OM dated 11.04.2022	Reply
The project 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.	Hearing (PH) was conducted on 02.07.2010 for the existing EC capacity of 7 MTPA on which capacity expansion is being sought to 8 MTPA (14.3% enhancement).
There should not be change in Category of the project from "B2" to "B1" or 'A' due to proposed modernization or expansion.	The mine at present is in Category 'A' and shall remain in Category 'A' in future also.
There is 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.	<p>There is no additional land acquisition or forestland diversion involved for the proposed capacity enhancement vis-à-vis the area mentioned in the EC (785.37 ha), based on which Public Hearing (PH) was held earlier.</p> <p>It may be noted that NTPC had planned the project in two phases, total of which was 890.63 ha, as mentioned in Table 9.6 of Approved Mining Plan of 2012. The EC dated 03.03.2014 (7 MTPA) was, however, granted for first phase of 803.91 ha, in which only 785.37 ha was permitted due to lack of FC in 18.34 ha. Subsequently, in the land acquired by NTPC Ltd. for 7 MTPA, there have been some changes in the project boundary due to exclusion of plots along the boundary.</p> <p>These changes have led to reduction in the overall area of the project as follows: Project area as per EC for 7 MTPA = 785.37 ha Project area as per NTPC's Board approved Mine Plan and Mine Closure Plan (Second Modification) of March 2023 in which 8 MTPA is planned= 762.42 ha NTPC's undertaking is enclosed (Annexure II) stating that the project area under 762.42 ha as per Mine Plan and Mine Closure Plan</p>

	(Second Modification) of March 2023 falls inside the project area which was approved in the environmental clearance dated 03.03.2014 for 7 MTPA.
The 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.	capacity enhancement shall not be more than 50% of production capacity as mentioned in the EC letter No. J-11015/1140/2007-IA.II (M) dated 03.03.2014, since enhancement is proposed for 14.3%.
Predicted environmental quality parameters arising out of proposed expansion / modernization shall be within the prescribed norms and the same shall be maintained as per Prescribed norms.	environmental quality parameters arising out of proposed capacity enhancement shall be within the prescribed norms (as detailed in Chapter 4) and the same shall be maintained as per prescribed norms.
The 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%.	in the safety zone shall not be reduced. There is decrease in the project area from 785.37 ha to 762.42 ha. Therefore, the green belt percentage has increased from 10.64% to 10.83%.
The project 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	The compliance to EC conditions is being carried out and the latest certified report from the IRO has been provided. certified Compliance Report of Regional Office of the MoEF dated 27.06.2023 vide File No:- 101-669/23/EPE
Public 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.	Not applicable since the proposed capacity enhancement is for 14.3%.
Effluent monitoring including air quality monitoring systems as specified in the existing EC, if stipulated, should have been installed.	The monitoring of air and water is being carried out as per conditions.

48.10.4 *The committee after deliberations observed that instant proposal is for expansion under*

OM dated 11.04.2022 (Stage-I). During the discussion, the committee observed variations between total mine lease area, approved mine plan and area granted as in EC letter. It has been verified from the EIA-EMP report which was prepared for 762.42 ha and reduced from 785.37 ha. Further the Mine plan has been prepared for ML area of 849.34 ha. It was informed that the Mine plan shall be co-terminus with the mine lease area, which is mandatory requirement of OM dated 11.04.2022 and there shall not be any change in area as per the said OM.

It is further observed that IRO in its report did not mention the satisfactory compliance of existing EC, which is mandatorily required as per above said OM. Further, as per EC condition no. 31, PP was to implement conveyor belt from surface to silo loading however no conveyor belt has been installed. EAC desired that PP to submit the specific timeline and budget for compliance of this condition. From the IRO-report, it can be seen that PP has only constructed oil & grease tank for collecting effluent however condition of ETP has not been complied. EAC observed that the instant mine come under Ib Valley coalfields and as per NGT order Ib Valley dated 10th July, 2019, the CEPI score of Ib Valley is 66.35 which is Severely Polluted Area. PP shall also require to submit the details of action taken for dust mitigation measures.

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

- i. PP shall submit the Mine lease area documents and other valid documents clarifying for different ML area with the valid documents. Land use discrepancies may first be removed by taking amendment of EC or correction of records.*
- ii. Status of forest clearance for the area within the mine lease area since PP has submitted that there is 304.75 ha (273.68 ha within block area + 31.07 ha outside block area)*
- iii. Drone video of the project site mainly focused on OB dump, existing river flowing, forest area and coal transportation route.*
- iv. Action plan for the previous EC conditions, mainly non-complied, partial complied as per the certified compliance report.*
- v. Status of implementation of surface miner for mining within the ML area.*
- vi. Expenditure status (break up activity wise) and separate implementation plan with budgetary provision for EMP and public hearing shall be submitted.*
- vii. PP shall complete the compliance as per the OM dated 11.04.2022 w.r.t expansion under 7 (ii) (a) Stage I (20%) for Dulanga coal mine.*
- viii. PP shall submit the expenditure incurred towards Wildlife conservation plan (4.49 crores deposited amount)*
- ix. PP shall submit the dust control measures at railway siding with its photograph*
- x. PP shall justify the reason of diversion (in combination with 3m high bundh) of Garia Nala and its tributaries along the whole length of the NW and NE boundary and its impact on hydrogeology of the area, aquifer and whether it was part of original EC*
- xi. PP shall submit mitigation measures for villages present in the mine lease area till R&R is completed and adjoining villages (within 500 mtrs)*
- xii. Advance Air Pollution mitigation measures since the area comes under Severely Polluted Area of Ib Valley.*

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

Agenda No. 48.11

Expansion of Kulda Opencast Coal Mine Project from 19.6 to 21 MTPA (increase of 10% w.r.t. 14 MTPA) in an ML area of 634.205 ha M/s Mahanadi Coalfields Limited, located at village Balinga, Tumulia, Siarmal, Kulda & Bankibahal, Tehsil Hemgir, District Sundargarh (Odisha) - Reconsideration of Environmental Clearance dated 24.05.2022 issued under OM vide no. 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/OR/CMIN/416510/2023; File No. J-11015/10/1995-IA-II(M)]

48.11.1 The proposal is for ratification Environmental Clearance issued under OM dated 07.05.2022, which has availed 50% relaxation for project “Expansion of Kulda Opencast Coal Mine Project from 19.6 to 21 MTPA (increase of 10% w.r.t 14 MTPA) in Mine Lease area of 634.205 ha for M/s Mahanadi Coalfields Limited, located at village Balinga, Tumulia, Siarmal, Kulda & Bankibahal, Tehsil Hemgir, District Sundargarh (Odisha).”

The proposal was earlier considered in the 40th EAC meeting held on 16-17 February 2023 wherein committee deferred the proposal for submission of information. Now, the PP has submitted the reply compliance of observation made in the 40th EAC meeting are detailed below:

S. No.	Observation of EAC	Reply of Project Proponent
1	Submission of relevant tendering documents, ensuring that coal transportation through belt conveyor from Kulda system shall be completed in a time bound manner	<u>Mines to the CHP/Rapid loading arrangement (U/C):</u> <ul style="list-style-type: none"> • The raw crushed coal will be transferred from 12 nos of Truck receiving Hoppers of 100Te capacity each through two sets of belt conveyor and a pipe conveyor(4.325 km) to a surge bunker(300 te) near Sardega CHP(U/c). • From the surge bunker, the coal will be transferred to two sets of conveyors(U/c) of Sardega CHP <u>Mines to ATLS:</u> <ul style="list-style-type: none"> • The raw crushed coal will be received at 4 nos. of Truck receiving Hoppers of 100Te capacity each. • Coal from Truck receiving Hoppers will be transferred through two sets of conveyors to two nos. of Surge bin (400 te capacity each) with Pre-weigh Automatic Truck Loading system.
2	Status of non-compliance of major conditions of the previous EC	PP has submitted the details of the non-compliance of the major EC conditions.

48.11.2 The EAC after deliberations observed that instant project has been submitted in compliance of Ministry's OM dated 7th May, 2022 wherein expansion in capacity was granted in advance (10% beyond 40% from the existing capacity) subject certain conditions related to submission of EIA-EMP report and compliances of existing EC conditions within six months along with other statutory requirements. This EC was granted on 24th May, 2022 by MoEF&CC due to shortage of coal in the country.

While discussing, PP informed that tender has been floated for Construction of 16.5 MTY CHP for Design, Supply Erection, Commissioning, Trial Run, Testing, Operation and Maintenance for coal evacuation arrangement (12.5 Mty) from Kulda- Garjanbahal Mines by Pipe/Trough Conveyor to Sardega CHP (U/C) and Construction of 4.0 MTY ATLS for road sale at Integrated Kulda Garjanbahal OCP of Basundhara Area, Mahanadi Coalfields Ltd. The committee specifically emphasized that PP must submit the plan for instant mine for which EC was granted, however, PP submitted the integrated plan with other mine, which is still in tendering stage and no works has been awarded and hence no physical progress. PP repeated submitting the works of sardega siding which is connected to other mines. In this case, the major transportation is still going on by road. The committee finally opined that PP must submit the physical progress upto 50% w.r.t. construction of mechanized system for 16.5 MTPA with CHP.

Further, the Committee emphasized to comply with condition of carry coal with truck capacity from 40-50 tonnes. PP shall also implement the other non-complied EC conditions w.r.t. EMP measures while executing road transportation.

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

- i. PP to submit the application after physical progress of 50% work w.r.t. construction of mechanized system for 16.5 MTPA with CHP by submitting documentary proof with photograph and video footage.
- ii. PP to deploy immediately truck size of 40-50 tonnes till the mechanized put in place. In this regard proper accounting in the form of log book, certified by SPCB.
- iii. PP shall submit the status of rest of the work to be completed w.r.t. EMP measures:
 - a. 192 nos. of mist type water sprinklers
 - b. Wind Barrier of dimension 1000m x 10m
 - c. 1 CAAQMS for monitoring of air quality.
 - d. Plantation of 80000 numbers as a part of green belt development.
 - e. Concrete external coal transportation road of length 30 Km
 - f. Rapid Loading system at Sardega

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

Agenda No. 48.12

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)]

48.12.1 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).*

The proposal was earlier considered in the 43rd EAC meeting held on 24th April 2023 wherein committee deferred the proposal for submission of information. Now, the PP has submitted the reply compliance of observation made in the 43rd EAC meeting are detailed below:

S. No.	Observation of EAC	Reply of Project Proponent																																			
1	PP shall submit the updated report on the implementation of fully automated system for 20 MTPA i.e in-pit conveyor and silo loading system till railway siding.	<p>DIPKA OCP - EXISTING DISPATCH SYSTEM</p> <table border="1" data-bbox="488 999 1471 1398"> <thead> <tr> <th>S. No.</th> <th>Description</th> <th>Capacity</th> <th>Consumer</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>02 Nos Silos (1&2) of 3200 Te with RLS- MGR</td> <td>15 MTY</td> <td>NTPC, Seepat</td> </tr> <tr> <td>2</td> <td>RAIL (Platform 2&3)</td> <td>18 MTY</td> <td>Distant consumers</td> </tr> <tr> <td>3</td> <td>Rail Platform-1</td> <td>2.75 MTY</td> <td>Distant consumers</td> </tr> <tr> <td>4</td> <td>Road</td> <td>2.25 MTY</td> <td>Distant consumers</td> </tr> <tr> <td colspan="2">Total</td> <td>38 MTY</td> <td></td> </tr> </tbody> </table> <p>DIPKA OCP - PROPOSED DISPATCH SYSTEM (ADDITIONAL)</p> <table border="1" data-bbox="488 1444 1471 1619"> <tbody> <tr> <td>1</td> <td>02 nos. Silo (3&4) of 3000 Te with RLS along with In-pit belt conveyor system</td> <td>25 MTY</td> <td>Sept -23</td> </tr> <tr> <td colspan="2">Total</td> <td>25 MTY</td> <td></td> </tr> </tbody> </table> <p>First Mile Connectivity Project:-</p> <ul style="list-style-type: none"> ▪ The LoA was awarded to McNally-AML on 18.01.2021 for a total work value of Rs. 211.22 Crores (Annexure-2). The construction activities of mechanized siding to handle coal handling capacity of 25 MTPA, having 02 no. of RCC silo 3000 T capacity each with Rapid Loading system of 4500-8500 TPH capacity, truck receiving 				S. No.	Description	Capacity	Consumer	1	02 Nos Silos (1&2) of 3200 Te with RLS- MGR	15 MTY	NTPC, Seepat	2	RAIL (Platform 2&3)	18 MTY	Distant consumers	3	Rail Platform-1	2.75 MTY	Distant consumers	4	Road	2.25 MTY	Distant consumers	Total		38 MTY		1	02 nos. Silo (3&4) of 3000 Te with RLS along with In-pit belt conveyor system	25 MTY	Sept -23	Total		25 MTY	
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		<p>station, RCC overhead Bunker of 20000 T and associated belt conveyors with Transfer Points is in progress. The progress report as on 01.08.2023 (Annexure-3).</p> <ul style="list-style-type: none"> The physical completion of the FMC project is 88.50% and financial completion is 87.50% with an expenditure of Rs. 194.71 Crores. The construction activities of the FMC project will be completed by the end of Sept'23. 																																																		
2	PP shall submit the current status on reclamation and progressive mine closure of the mine with incurred expenditure.	<p>Presently, the overburden removed by Dipka Opencast Coal Mine Project is 100% backfilled in internal dumps. The status on land reclamation as on 31.07.2023 shown below.</p> <p>Progressive mine closure plan is incorporated in 37.50 MTPA Mine Plan approved by CoFD on 07.07.2022. Yearly mine closure compliance report is submitted to Coal Controller Officer, Kolkata. The mine closure reports are enclosed as Annexure-5. The fund deposited in escrow account till 01.7.2023, claim against mine closure activities and the reimbursement against the claim from 2009-2020, activity wise expenditure is enclosed in Annexure-6.</p> <table border="1"> <thead> <tr> <th colspan="10">TECHNICAL & BIOLOGICAL RECLAMATION (As on 31.07.2023)</th> </tr> <tr> <th colspan="5">INTERNAL DUMP/ BACKFILLED AREA DETAILS (HA)</th> <th colspan="3">EXTERNAL OB DUMP DETAILS (HA)</th> <th colspan="2">TOTAL RECLAIMED AREA (HA)</th> </tr> <tr> <th>Total quarri-able area of the project as per approved EMP</th> <th>Void to be left at the closure of the project as per EMP</th> <th>Total area excavated as on date</th> <th>Total area technically reclaimed/backfilled</th> <th>Area already biologically reclaimed</th> <th>Total area of external OB dump</th> <th>Area of External OB dump technically reclaimed</th> <th>Area already biologically reclaimed</th> <th>Total technically reclaimed area</th> <th>Total biologically reclaimed area</th> </tr> <tr> <th>1</th> <th>2</th> <th>3</th> <th>4</th> <th>5</th> <th>6</th> <th>7</th> <th>8</th> <th>9=4+7</th> <th>10=5+8</th> </tr> </thead> <tbody> <tr> <td>1002.053</td> <td>222.053</td> <td>745.73</td> <td>223</td> <td>127.66</td> <td>206</td> <td>204.26</td> <td>204.26</td> <td>427.26</td> <td>331.92</td> </tr> </tbody> </table>	TECHNICAL & BIOLOGICAL RECLAMATION (As on 31.07.2023)										INTERNAL DUMP/ BACKFILLED AREA DETAILS (HA)					EXTERNAL OB DUMP DETAILS (HA)			TOTAL RECLAIMED AREA (HA)		Total quarri-able area of the project as per approved EMP	Void to be left at the closure of the project as per EMP	Total area excavated as on date	Total area technically reclaimed/backfilled	Area already biologically reclaimed	Total area of external OB dump	Area of External OB dump technically reclaimed	Area already biologically reclaimed	Total technically reclaimed area	Total biologically reclaimed area	1	2	3	4	5	6	7	8	9=4+7	10=5+8	1002.053	222.053	745.73	223	127.66	206	204.26	204.26	427.26	331.92
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3	PP shall submit the expenditure status of already allocated budget	<p>Separate budget allocation has not been made for the earlier Public Hearing held for Dipka Opencast Coal Mines in 2008. However, till date total expenditures incurred Rs. 208.78 cr against various issues raised in PH, R&R activities, CSR works, etc. is provided in Annexure-7 & 8.</p>																																																		

	in the Public Hearing. Along with the expenditure status for the activities involved in EMP and R&R.	Expenditures against PH issues raised= 125.89 Cr. R&R activities = 14.23 Cr. (Period- 2009-2023) CSR Works = 68.66 Cr. (Period- 2009-2023) Capital & Revenue Expenditure Status against Environmental control measures as per the EIA/EMP is enclosed as Annexure-9 . Capital Expenditure = 175.02 Crs. against 126.08 Cr. Revenue Expenditure = 138.03 Crs. for last five years. It is to be noted that many of the R&R infrastructures were developed before 2005. Expenditures on R&R sites are one-time expenditures after which it is handed over to the panchayat. However, the project still takes up repair, renovation and sometimes maintenance of those infrastructures under revenue expenditures upon requests from Sarpanch.
4	PP shall submit the status of expenditure spent for CSR activities.	<ul style="list-style-type: none"> ▪ The CSR activities are taken up by Dipka Opencast Coal Mines based on the recommendation of the District Collector and in line with the CSR Policy. The CSR expenditures was taken up by SECL till 2014-15. ▪ However, since 2015-16 identification of CSR works, and allocation of funds are decided by the District Administration against which SECL sanction fund. The district administration is the executing authority of CSR works. ▪ CSR Works = 68.66 Cr. (Period- 2009-2023) <p>The detailed fund allocation and expenditure for CSR activities are enclosed as Annexure-8.</p>
5	PP shall complete the construction of wind barrier wall as per the EC condition along the railway siding.	Wind Barrier Wall of 20 ft height has been constructed using GI sheet and brick work covering the entire 750 m length of Railway Siding of Dipka Opencast Coal Mines. The total expenditure incurred was Rs. 3.06 Crores.
6	PP shall maintain the check/garland drains and siltation ponds	<ul style="list-style-type: none"> ▪ Garland/Catch drains in the form of pucca and kachha drains have been constructed around mines, coal stock and dumps for channelling of runoff water during monsoon season. Catch Drains for a total length of 28,146 m have been provided along the toe of dumps, around the quarry, along haul roads and approach roads in the OCP area. ▪ The Catch Drains and Garland Drains are desilted and maintained before onset of monsoon. ▪ Check dams and bunds were constructed at Jingatpur Dump (25,800 cum) and at Renki Dump (8000 cum) to arrest siltation and protect the dumps from rain cuts.

		<ul style="list-style-type: none"> ▪ An embankment (400m length) is provided along Lilagarh Nallah using stone masonry in cement sand mortar. (Photograph attached) ▪ There are 02 mine water sedimentation ponds and 14 rainwater harvesting ponds constructed by the project. De-siltation/ deepening of ponds are taken up from time to time based on the level of silt deposition. (Photograph attached)
7	PP shall submit the status of implementation of the action plan for conservation and protection of endangered flora/fauna from Forest Department	<p>The Wildlife Conservation plan for Dipka Opencast Coal Mine Project prepared through TFRI Jabalpur was approved by APCCF (Wildlife) vide letter no: 187, dated: 04.11.2022.</p> <p>A Demand Note for Rs.1547 lakhs was raised by DFO Katghora on 08.12.2022 which was paid to Chhattisgarh CAMPA on 01.03.2023.</p> <p>The PP submitted a request letter on 20.07.2023 and had approached Chief Executive Officer, CAMPA of CG State Forest Department, Raipur for schedule of implementation of the Wildlife Conservation Plan.</p> <p>State Forest Department has informed that work has been approved and will be included in the CAMPA APO of FY 2023-24.</p>
8	PP has to submit the IRO certified compliance report for the Ministry's letter dated 03.06.2009, 12.02.2013, 06.02.2015, 20.02.2018, 20.03.2019, 09.03.2020 and 05.09.2022.	<p>The site inspection of Dipka Opencast Coal Mine Project was carried out by Scientist-D, IRO, MoEF&CC, Raipur on 09.06.2023. The site inspection was conducted to certify the compliances against EC letters dated: 03.06.2009, 12.02.2013, 06.02.2015, 20.02.2018, 20.03.2019, 09.03.2020 and 05.09.2022.</p> <p>The Certified Compliance Report from IRO, MOEF&CC and the ATR presented in coming slides.</p>

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

While discussing, the committee observed that silo loading system (02 Nos Silos for 15 MTPA & 02 Nos Silos for 25 MTPA) at advance stage the final stage. However, EAC noted that 15 MTPA silo with belt conveyor is in advance stage but 25 MTPA works for construction of belt conveyor/pipe conveyor is still pending and will take time to fully operationalize the mechanized system. It was desired that belt conveyor with silo loading system shall be completed for full capacity and application to be submitted accordingly

As stated by PP within mine total 7 km of road transportation is involved which shall be through dedicated pucca road with the fixed sprinkling system. The committee desired to check the road transportation within mine and fully operationalised the mechanized system insitu as well as outside the mine lease area with proper mining plan. The Committee also found that the no closure activity has been initiated till today.

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

- i. 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.*
- ii. PP to use dedicated pucca road with the fixed sprinkling system till the mechanization put in place.*
- iii. PP shall submit status of mine closure as on today and future plan for progressive mine closure.*
- iv. Status of stage II FC for forest area of 409.056 Ha involve within the ML area.*
- v. Status of online sharing of CAAQMS data and plan for installation of another 2 CAAQMS system in consultation of SPCB.*
- vi. Plan to setup in-situ laboratory within the ML area.*
- vii. Drone video clip for 5 minutes shall be submitted for total ML area including mechanized system.*

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

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/PM2.5) such as haul road, loading/unloading and transfer points. Fugitive dust emissions from all sources shall be controlled regularly. It shall be ensured that the Ambient Air Quality parameters conform to the norms prescribed by the Central/State Pollution Control Board.

- (iv) The transportation of coal shall be carried out as per the provisions and route envisaged in the approved Mining Plan or environment monitoring plan. Transportation of the coal through the existing road passing through any village shall be avoided. In case, it is proposed to construct a 'bypass' road, it should be so constructed so that the impact of sound, dust and accidents could be appropriately mitigated.
 - (v) Vehicular emissions shall be kept under control and regularly monitored. All the vehicles engaged in mining and allied activities shall operate only after obtaining 'PUC' certificate from the authorized pollution testing centres.
 - (vi) Coal stock pile/crusher/feeder and breaker material transfer points shall invariably be provided with dust suppression system. Belt-conveyors shall be fully covered to avoid airborne dust. Side cladding all along the conveyor gantry should be made to avoid air borne 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 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 & it's RO on six-monthly basis.

(ii) The project proponent shall undertake occupational health survey for initial and periodical medical examination of the personnel engaged in the project and maintain records accordingly as per the provisions of the Mines Rules, 1955 and DGMS circulars. Besides regular periodic health check-up, 20% of the personnel identified from workforce engaged in active mining operations shall be subjected to health check-up for occupational diseases and hearing impairment, if any, as amended time to time.

(iii) Personnel (including outsourced employees) working in core zone shall wear protective respiratory devices and shall also be provided with adequate training and information on safety and health aspects.

(iv) Implementation of the action plan on the issues raised during the public hearing shall be ensured. The project proponent shall undertake all the tasks/measures as per the action plan submitted with budgetary provisions during the public hearing. Land oustees shall be compensated as per the norms laid down in the R&R policy of the company/State Government/Central Government, as applicable.

(v) The project proponent shall follow the mitigation measures provided in this Ministry's OMNo.Z-11013/5712014-IA.II (M) dated 29th October, 2014, titled 'Impact of mining

activities on habitations-issues related to the mining projects wherein habitations and villages are the part of mine lease areas or habitations and villages are surrounded by the mine lease area’.

(i) **Corporate Environment Responsibility**

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

(j) **Miscellaneous**

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

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

Annexure-II

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

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

I. Statutory compliance:

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

II. Air quality monitoring and preservation

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

Ministry/Regional Office and to the CPCB/SPCB.

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

III. Water quality monitoring and preservation

- i. The effluent discharge (mine waste water, workshop effluent) shall be monitored in terms of the parameters notified under the Water Act, 1974 Coal Industry Standards vide GSR 742 (E) dated 25.9.2000 and as amended from time to time by the Central Pollution Control Board.
- ii. The monitoring data shall be uploaded on the company's website and displayed at the project site at a suitable location. The circular No. J-20012/1/2006-1A.11 (M) dated 27.05.2009 issued by Ministry of Environment, Forest and Climate Change shall also be referred in this regard for its compliance.
- iii. Regular monitoring of ground water level and quality shall be carried out in and around the mine lease area by establishing a network of existing wells and constructing new piezometers during the mining operations. The monitoring of ground water levels shall be carried out four times a year i.e. pre-monsoon, monsoon, post-monsoon and winter. The ground water quality shall be monitored once a year, and the data thus collected shall be sent regularly to MOEFCC/RO.
- iv. Monitoring of water quality upstream and downstream of water bodies shall be carried out once in six months and record of monitoring data shall be maintained and submitted to the Ministry of Environment, Forest and Climate Change/Regional Office.
- v. Ground water, excluding mine water, shall not be used for mining operations. Rainwater harvesting shall be implemented for conservation and augmentation of ground water

resources.

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

VIII. Public hearing and Human health issues

- i. Adequate illumination shall be ensured in all mine locations (as per DGMS standards) and monitored.
- ii. The Project Proponent shall undertake Occupational Health survey for initial and Periodical medical examination of the workers engaged in the Project and maintain records accordingly as per the provisions of the Mines Rules, 1955 and DGMS Circulars. Besides carrying out regular periodic health check-up of their workers, 20% of the workers engaged in active mining operations shall be subjected to health check-up for occupational diseases and hearing impairment, if any.
- iii. Personnel (including outsourcing employees) working in dusty areas shall wear protective respiratory devices and shall also be provided with adequate training and information on safety and health aspects.
- iv. Skill training as per safety norms specified by DGMS shall be provided to all workmen including the outsourcing employees to ensure high safety standards in mines.
- v. Effective arrangement shall be made to provide and maintain at suitable points conveniently situated, a sufficient supply of drinking water for all the persons employed.
- vi. Implementation of Action Plan on the issues raised during the Public Hearing shall be ensured. The Project Proponent shall undertake all the tasks as per the Action Plan submitted with budgetary provisions during the Public Hearing. Land oustees shall be compensated as per the norms laid out R&R Policy of the Company/ or the National R&R Policy/ R&R Policy of the State Government, as applicable
- vii. The project proponent shall follow the mitigation measures provided in this Ministry's 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 approve 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 clearance portal.
- v. The project proponent shall submit the environmental statement for each financial year in Form-V to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently and put on the website of the company.

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

Standard EC Conditions for Coal Washery Project

I. Statutory compliance:

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

II. Air quality monitoring and preservation

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

- iii. Transportation of coal by road shall be carried out by covered trucks/conveyors. The transportation of clean coal and rejects shall be by rail with wagon loading through silo. Effective measures such as regular water sprinkling shall be carried out in critical areas prone to air pollution and having high levels of particulates such as roads, belt conveyors, loading/unloading and transfer points. Fugitive dust emissions from all sources shall be controlled at source. It shall be ensured that the ambient air quality parameters conform to the norms prescribed by the Central/State Pollution Control Board
- iv. All approach roads shall be black topped and internal roads shall be concreted. The roads shall be regularly cleaned. Coal transportation shall be carried out by covered trucks.
- v. Covered trucks shall be engaged for mineral transportation outside the washery up to the railway siding, shall be optimally loaded to avoid spillage en-route. Trucks shall be adequately maintained and emissions shall be below notified limits.
- vi. Facilities for parking of trucks carrying raw material from linked mine shall be created within the unit.
- vii. Vehicular emissions shall be kept under control and regularly monitored. The vehicles having 'PUC' certificate from authorized pollution testing centres shall be deployed for washery operations.
- viii. Hoppers of the coal crushing unit and other washery units shall be fitted with high efficiency bag filters/mist spray water sprinkling system shall be installed and operated effectively at all times of operation to check fugitive emissions from crushing operations, transfer points of closed belt conveyor systems and from transportation roads.
- ix. The raw coal, washed coal and coal wastes (rejects) shall be stacked properly at earmarked site (s) within stockyards fitted with wind breakers/shields. Adequate measures shall be taken to ensure that the stored mineral does not catch fire.
- x. The temporary reject sites should appropriate 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 mwidth shall be developed all along the washery area to check fugitive dust emissions and to render aesthetic to neighbouring stakeholders. A 3-tier green belt comprising of a mix of native species or tree species with thick leaves shall be developed along vacant areas, storage yards, loading/transfer points and also along internal roads/main approach roads.
- ii. The project proponent shall make necessary alternative arrangements, if grazing land is involved in core zone, in consultation with the State government to provide alternate areas for livestock grazing, if any. In this context, the project proponent shall implement the directions of Hon'ble Supreme Court with regard to acquiring grazing land.

VII. Public hearing and Human health issues

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

VIII. Corporate Environment Responsibility

- i. The project proponent shall comply with the provisions contained in this Ministry's OM vide F.No. 22-65/2017-IA.III dated 1st May 2018, as applicable, regarding Corporate Environment Responsibility.
- ii. The company shall have a well laid down environmental policy duly approve 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 n
- ii. 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.
- iii. 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.
- iv. 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.
- v. 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.
- vi. 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 MOEF&CC 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.

Generic ToR for coal washery

- i. Siting of washery is critical considering to its environmental impacts. Preference should be given to the site located at pit head; in case such a site is not available, the site should be as close to the pit head as possible and coal should be transported from mine to the 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 transport by train as far as possible. Road transport of washed coal and rejects should generally be avoided. In case, the TPP is within 10km radius, it should be through conveyer belt. If transport by rail

is not feasible because of the topography of the area, the option for transport by road be examined in detail and its impacts along with the mitigation measures should be clearly brought out in EIA/EMP report.

- xii. Details of various facilities proposed to be provided in terms of parking, rest areas, canteen etc. to the personnel involved in mineral transportation, workshop and effluents/pollution load from these activities should be provided.
- xiii. Impacts of CHP, if any, on air and water quality should also be spelt out along with Action Plan.
- xiv. O.M.no.J-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 mayalso 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.

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

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

(xii) Break-up of lease/project area as per mining plan should be provided.

(xiii) Impact of changes in the land use due to the project if the land is predominantly agricultural land/forestland/grazing land, should be provided.

(xiv) One-season (other than monsoon) primary baseline data on environmental quality - air (PM10, PM2.5, SO_x, NO_x and heavy metals such as Hg, Pb, Cr, As, etc), noise, water (surface and groundwater), soil - along with one-season met data coinciding with the same season for AAQ collection period should be provided.

(xv) Map (1: 50, 000 scale) of the study area (core and buffer zone) showing the location of various sampling stations superimposed with location of habitats, other industries/mines, polluting sources, should be provided. The number and location of the sampling stations in both core and buffer zones should be selected on the basis of size of lease/project area, the proposed impacts in the downwind (air)/downstream (surface water)/groundwater regime (based on flow). One station should be in the upwind/upstream/non-impact/non-polluting area as a control station. The monitoring should be as per CPCB guidelines and parameters for water testing for both ground water and surface water as per ISI standards and CPCB classification wherever applicable. Observed values should be provided along with the specified standards.

(xvi) Study on the existing flora and fauna in the study area (10km) should be carried out

by an institution of relevant discipline. The list of flora and fauna duly authenticated separately for the core and study area and a statement clearly specifying whether the study area forms a part of the migratory corridor of any endangered fauna should be given. If the study area has endangered flora and fauna, or if the area is occasionally visited or used as a habitat by Schedule-I species, or if the project falls within 15 km of an ecologically sensitive area, or used as a migratory corridor then a Comprehensive Conservation Plan along with the appropriate budgetary provision should be prepared and submitted with EIA-EMP Report; and comments/observation from the CWLW of the State Govt. should also be obtained and furnished.

- (xvii) Details of mineral reserves, geological status of the study area and the seams to be worked, ultimate working depth and progressive stage-wise working scheme until the end of mine life should be provided on the basis of the approved rated capacity and calendar plans of production from the approved Mining Plan. Geological maps and sections should be included. The Progressive mine development and Conceptual Final Mine Closure Plan should also be shown in figures. Details of mine plan and mine closure plan approval of Competent Authority should be furnished for green field and expansion projects.
- (xviii) Details of mining methods, technology, equipment to be used, etc., rationale for selection of specified technology and equipment proposed to be used vis-à-vis the potential impacts should be provided.
- (xix) Impact of mining on hydrology, modification of natural drainage, diversion and channeling of the existing rivers/water courses flowing through the ML and adjoining the lease/project and the impact on the existing users and impacts of mining operations thereon.
- (xx) Detailed water balance should be provided. The break-up of water requirement for the various mine operations should be given separately.
- (xxi) Source of water for use in mine, sanction of the Competent Authority in the State Govt. and impacts vis-à-vis the competing users in the upstream and downstream of the project site. should be given.
- (xxii) Impact of mining and water abstraction from the mine on the hydrogeology and groundwater regime within the core zone and 10 km buffer zone including long-term monitoring measures should be provided. Details of rainwater harvesting and measures for recharge of groundwater should be reflected in case there is a declining trend of groundwater availability and/or if the area falls within dark/grey zone.
- (xxiii) Impact of blasting, noise and vibrations should be given.
- (xxiv) Impacts of mining on the AAQ and predictions based on modeling using the ISCST-3 (Revised) or latest model should be provided.
- (xxv) Impacts of mineral transportation within the mining area and outside the lease/project along with flow-chart indicating the specific areas generating fugitive emissions should be provided. Impacts of transportation, handling, transfer of mineral and waste on air quality, generation of effluents from workshop etc, management plan for maintenance of HEMM and other machinery/equipment should be given. Details of various facilities such as rest areas and canteen for workers and effluents/pollution load emanating from these activities should also be provided.

- (xxvi) Effort be made to reduce/eliminate road transport of coal inside and outside mine and for mechanized loading of coal through CHP/ Silo into wagons and trucks/tippers.
- (xxvii) Details of waste OB and topsoil generated as per the approved calendar programme, and their management shown in figures as well explanatory notes tables giving progressive development and mine closure plan, green belt development, backfilling programme and conceptual post mining land use should be given. OB dump heights and terracing based on slope stability studies with a max of 28° angle as the ultimate slope should be given. Sections of final dumps (both longitudinal and cross section) with relation to the adjacent area should be shown.
- (xxviii) Efforts be made for maximizing progressive internal dumping of O.B., sequential mining, external dump on coal bearing area and later rehandling into the mine void. --to reduce land degradation.
- (xxix) Impact of change in land use due to mining operations and plan for restoration of the mined area to its original land use should be provided.
- (xxx) Progressive Green belt and ecological restoration /afforestation plan (both in text, figures and in the tabular form as per the format of MOEFCC given below) and selection of species (native) based on original survey/land-use should be given.

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

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

* As a representative example

Table 2 : Stage Wise Cumulative Plantation

S. No.	YEAR*	Green Belt	External Dump	Backfilled Area	Others (Undisturbed Area/etc)	TOTAL
1.	1 st year					

2.	3 rd year										
3.	5 th year										
4.	10 th year										
5.	15 th year										
6.	20 th year										
7.	25 th year										
8.	30 th year										
9.	34 th year (end of mine life)										
10.	34-37 th Year (Post-mining)										

* As a representative example

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

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

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

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

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

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

TOTAL ML/PROJECT AREA (ha)	TOTAL FORESTLAND (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			

ANNEXURE -VI

GENERIC TORs FOR AN UNDERGROUND COALMINE PROJECT

- (i) An EIA-EMP Report shall be prepared for MTPA rated capacity in an ML/project area of ha based on the generic structure specified in Appendix III of the EIA Notification, 2006.
- (ii) An EIA-EMP Report would be prepared for MTPA rated capacity to cover the impacts and environment management plan for the project specific activities on the environment of the region, and the environmental quality encompassing air, water, land, biotic community, etc. through collection of data and information, generation of data on impacts including prediction modeling for MTPA of coal production based on approved project/Mining Plan for MTPA. Baseline data collection can be for any season (three months) except monsoon.
- (iii) A Study area map of the core zone (project area) and 10 km area of the buffer zone (1: 50,000 scale) clearly delineating the major topographical features such as the land use, surface drainage pattern including rivers/streams/nullahs/canals, locations of human habitations, major constructions including railways, roads, pipelines, major industries/mines and other polluting sources. In case of ecologically sensitive areas such as Biosphere Reserves/National Parks/WL Sanctuaries/ Elephant Reserves, forests (Reserved/Protected), migratory corridors of fauna, and areas where endangered fauna and plants of medicinal and economic importance found in the 15 km study area should be given.
- (iv) Map showing the core zone delineating the agricultural land (irrigated and un-irrigated, uncultivable land as defined in the revenue records, forest areas (as per records), along with other physical features such as water bodies, etc should be furnished.

- (v) A contour map showing the area drainage of the core zone and 25 km of the study area (where the water courses of the core zone ultimately join the major rivers/streams outside the lease/project area) should also be clearly indicated in the separate map.
- (vi) A detailed Site plan of the mine showing the proposed break-up of the land for mining operations such as the quarry area, OB dumps, green belt, safety zone, buildings, infrastructure, CHP, ETP, Stockyard, township/colony (within and adjacent to the ML), undisturbed area -if any, and landscape features such as existing roads, drains/natural water bodies to be left undisturbed along with any natural drainage adjoining the lease /project areas, and modification of thereof in terms of construction of embankments/bunds, proposed diversion/re-channelling of the water courses, etc., approach roads, major haul roads, etc should be indicated.
- (vii) Original land use (agricultural land/forestland/grazing land/wasteland/water bodies) of the area should be provided as per the tables given below. Impacts of project, if any on the land use, in particular, agricultural land/forestland/grazing land/water bodies falling within the lease/project and acquired for mining operations should be analyzed. Extent of area under surface rights and under mining rights should be specified.

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

Area under Surface Rights

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

- (viii) Study on the existing flora and fauna in the study area (10km) should be carried out by an institution of relevant discipline. The list of flora and fauna duly authenticated separately for the core and study area and a statement clearly specifying whether the study area forms a part of the migratory corridor of any endangered fauna should be given. If the study area has endangered flora and fauna, or if the area is occasionally visited or used as a habitat by Schedule-I species, or if the project falls within 15 km of an ecologically sensitive area, or used as a migratory corridor then a Comprehensive Conservation Plan along with the appropriate budgetary provision should be prepared and submitted with EIA-EMP Report; and comments/observation from the CWLW of the State Govt. should also be obtained and furnished.

- (ix) Details of mineral reserves, geological status of the study area and the seams to be worked, ultimate working depth and progressive stage-wise working scheme until the end of mine life should be provided on the basis of the approved rated capacity and calendar plans of production from the approved Mining Plan. Geological maps and sections should be included. The Progressive mine development and Conceptual Final Mine Closure Plan should also be shown in figures. Details of mine plan and mine closure plan approval of Competent Authority should be furnished for green field and expansion projects.
- (x) Details of mining methods, technology, equipment to be used, etc., rationale for selection of specified technology and equipment proposed to be used vis-à-vis the potential impacts should be provided.
- (xi) Impact of mining on hydrology, modification of natural drainage, diversion and channeling of the existing rivers/water courses flowing through the ML and adjoining the lease/project and the impact on the existing users and impacts of mining operations thereon.
- (xii) One-season (other than monsoon) primary baseline data on environmental quality - air (PM₁₀, PM_{2.5}, SO_x, NO_x and heavy metals such as Hg, Pb, Cr, As, etc), noise, water (surface and groundwater), soil - along with one-season met data coinciding with the same season for AAQ collection period should be provided.
- (xiii) Map (1: 50,000 scale) of the study area (core and buffer zone) showing the location of various sampling stations superimposed with location of habitats, other industries/mines, polluting sources, should be provided. The number and location of the sampling stations in both core and buffer zones should be selected on the basis of size of lease/project area, the proposed impacts in the downwind (air)/downstream (surface water)/groundwater regime (based on flow). One station should be in the upwind/upstream/non-impact/non-polluting area as a control station. The monitoring should be as per CPCB guidelines and parameters for water testing for both ground water and surface water as per ISI standards and CPCB classification wherever applicable. Observed values should be provided along with the specified standards.
- (xiv) Impact of mining and water abstraction from the mine on the hydrogeology and groundwater regime within the core zone and 10 km buffer zone including long-term monitoring measures should be provided. Details of rainwater harvesting and measures for recharge of groundwater should be reflected in case there is a declining trend of groundwater availability and/or if the area falls within dark/grey zone.
- (xv) Study on subsidence including modeling for prediction, mitigation/prevention of subsidence, continuous monitoring measures, and safety issues should be carried out.
- (xvi) Detailed water balance should be provided. The 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 48th MEETING HELD ON 25 &
28th AUGUST, 2023 THROUGH VIDEO CONFERENCING**

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