



सत्यमेव जयते

**Government of India**  
**Ministry of Environment, Forest and Climate Change**  
**IA Division**  
**(Coal Mining)**

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**Minutes of 9th EAC Meeting meeting Coal Mining held from 21/03/2024 to 21/03/2024**

**Date:** 08/04/2024

**MoM ID:** EC/MOM/EAC/168587/3/2024  
**Agenda ID:** EC/AGENDA/EAC/168587/3/2024  
**Meeting Venue:** N/A  
**Meeting Mode:** Virtual  
**Date & Time:**

21/03/2024	10:00 AM	01:00 PM
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**1. Opening remarks**

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. The list of Members who participated in the meeting is at ANNEXURE VIII. The Standard/Generic EC & ToR conditions shall be system generated through the Parivesh Portal. Note -Due to Editor issue, the Final Approved Minutes of the EAC is enclosed herewith in PDF as a [Annexure]. Please refer to this document and Treat it as approved Minutes of the EAC [Coal Sector].

**2. Confirmation of the minutes of previous meeting**

Confirmation of the Minutes of the 8th Meeting of the EAC (Coal): The minutes of the 8th Meeting of the EAC (Coal) held during 28th to 29th February 2024 have been confirmed by the Chairman.

**3. Details of proposals considered by the committee**

**Day 1 -21/03/2024**

**3.1. Agenda Item No 1:**

**3.1.1. Details of the proposal**

<b>Gare Palma Sector-II Coal Mine Project of 23.60 MTPA (OC-22.0 MTPA + UG- 1.6 MTPA) over an area of 258 3.48 ha in District Raigarh, Chhattisgarh. by Maharashtra State Power Generation Co. Ltd. located at RAIGAR H,CHHATTISGARH</b>			
<b>Proposal For</b>		Fresh EC	
<b>Proposal No</b>	<b>File No</b>	<b>Submission Date</b>	<b>Activity (Schedule Item)</b>

<a href="#">IA/CG/CMIN/466451/2024</a>	J-11015/72/2016-IA.II(M)	20/03/2024	Mining of minerals (1(a))
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### 3.1.2. Project Salient Features

#### Agenda No 9.3

#### **Environment Clearance of Gare Palma sector II coal Mine Project of Open Cast 22.0 MTPA+ Underground 1.6 MTPA Capacity in mine lease area of 2583.48 ha of M/s Maharashtra State Power Generation Company Limited- Reg**

**[Proposal No. IA/CG/CMIN/466451/2024; File No. J-11015/122/2007-IA. II(M); Consultant: M/s Vardan EnviroLab]**

The Member Secretary informed the Committee that the Ministry of Environment, Forest and Climate Change (MoEF&CC) granted Environment Clearance on 11.07.2022 to M/s Maharashtra State Power Generation Company Limited (Mahagenco) in respect of the Gare Palma sector II coal Mine Project.

The Hon'ble NGT in the matter of **Kanhai Ram Patel & Ors. v. Union of India & Ors. (OA No. 26 of 2024)**, the Hon'ble NGT (CZ) delivered a judgment dated 15.01.2024 has quashed the Environmental Clearance (EC) granted by the Ministry of Environment, Forest and Climate Change (MoEF&CC) on 11.07.2022 to M/s Maharashtra State Power Generation Company Limited (Mahagenco) in respect of the Gare Palma Sector II (GP-II) coal mine. The Ld. NGT has held that:

*"...Appeal is accordingly allowed. EC dated 11.07.2022 granted to respondent 4 is quashed. MoEF&CC may re-examine the matter from the stage of conducting public consultation afresh and in case, other appropriate study material is placed on record by proponent, the same may be considered / appraised and a fresh order may be passed by MoEF&CC with regard to prior EC in accordance with law and existing state of environment and ecology."*

The aforesaid Judgment dated 15.01.2024 is challenged by the Maharashtra State Power Generation Company Ltd (**MAHAGENCO**) in the **Civil Appeal No. 2104 of 2024** titled Maharashtra State Power Generation Company Ltd v. Rinchin & Ors. Before the Hon'ble Supreme Court of India.

Meanwhile, in accordance with the directives of the Hon'ble NGT, the Project Proponent (MAHAGENCO) has, through a letter dated 24.02.2024, requested the Expert Appraisal Committee – Coal Mining to consider their proposal in the upcoming EAC meeting for further deliberation stating the following:

*●The Ld. NGT has also directed that MoEF & CC may re-examine the matter and in case, other appropriate study material is placed on record by Mahagenco, the same may be considered/appraised and a fresh order may be passed by MoEF&CC with regard to grant of EC for the GP-II coal blocks.*

*●As MoEF&CC is aware that GP- II Coal Mine plays pivotal role in the fuel security of Thermal Power Station of Maharashtra to meet large power demand of public at large. Moreover, to meet the growing power demand in the State of Maharashtra, it is necessary for Mahagenco to start the operation of this coal mine at the earliest. Mahagenco has already made a significant investment of aprox INR 1000 Cr in Gare Palma Sector II project, apart from that Mahagenco has also made huge investment of INR aprox. 25000 crore on the linked TPS to GP-II coal block, and in addition it is projected that an additional investment of over Rs 13000 Crore will be made for the upcoming thermal power stations.*

*In view of the above, MoEF & CC may please re-examine the matter based on materials on record and advise if any other material needs to be placed on record by Mahagenco or any additional study or compliances needs to be done by Mahagenco, to assist MoEF in re-examining the matter, as per Judgment of Ld NGT.*

The matter was examined in the Ministry and it was decided to place the matter before the EAC in its 8<sup>th</sup> EAC Meeting scheduled for 28-29 February, 2024, as an additional agenda item.

The Chairman EAC asked the PP to brief about the issue, the PP informed that Hon'ble NGT in its order dated 15/01/2024 mentioned that *"..that prior EC granted in the case in hand is vitiated in law on account of observations made hereinabove, particularly, with regard to public consultation, non-consideration of ICMR report, Hydrological study and carrying capacity.*

The Committee is of the view that, PP shall first forward/circulate all the relevant documents including Hon'ble NGT Order dated 15/01/2024, to all the Members of the Committee. Henceforth, the matter was **deferred**.

As desired by the Committee the Mahagenco, on 17.03.2024 circulated the relevant documents pertaining to the NGT judgement to the EAC and MoEF&CC. Further, the Ministry vide email dated 19/03/2024 circulated the requisite documents including NGT Judgment dated 15.01.2024 to the EAC. The PP vide proposal number IA/CG/CMIN/466451/2024 also applied on the Parivesh Portal and the proposal is now placed in the 9<sup>th</sup> EAC meeting held on 21/03/2024.

### 3.1.3. Deliberations by the committee in previous meetings

N/A

### 3.1.4. Deliberations by the EAC in current meetings

#### **9.3: Committee after deliberations noted the following:**

During the meeting the PP made a presentation and submitted the following:

- MoC, GoI has allotted the Gare-Pelma Sector-II Coal Mine to Mahagenco on 24.03.2015.
- Mahagenco signed the Allotment Agreement on 30.03.2015 and subsequently signed the Amendment on 31.08.2015.
- Coal mining was proposed in a total lease area of 2583.48 hectares falling in various villages (14 Nos.) of Tehsil Gharghoda, District Raigarh (State of Chhattisgarh).
- The ToR was granted on 8/8/2016.
- Public hearing for the project of 23.60 MTPA capacity in an area of 2583.48 ha was conducted on 27th September 2019 at Village-Dolesara, District-Raigarh, Chhattisgarh.
- Mahagenco submitted proposal no. IA/CG/CMIN/52019/2016 seeking EC under EIA Notification dated 14.09.2006 (hereinafter referred to as 'EIA 2006') for mining of coal to MoEF&CC.

•The first time, the Project was considered & discussed in the 51st EAC meeting on 05.12.2019 and the proposal was returned to PP with few observations. Again, the Proposal was considered in the 2nd EAC meeting held on 28-29th Sep'2020 wherein the proposal was recommended for grant of Environmental Clearance. MoEF&CC granted the Environmental Clearance on 11.07.2022.

•MoEF&CC granted FC –I for diversion of 214.869 ha. Forest land on 02-06- 2022; FC stage- II has also been granted on 27.01.2023.

•CTE applied on 19.01.2023 to CECB and it is in the final stage for final approval.

•Mine lease application submitted on 08.12.2015. Mahagenco has requested to MRD (Mineral Resource Department), Gov. of Chhattisgarh for the execution of the mine lease on 06.02.2023 and 02.08.2023. and as reported by PP it is in the advanced stage of approval.

•Environment Clearance challenged by four appellants in National Green Tribunal (NGT), Bhopal. On 15th January 2024, Hon'ble NGT quashed the Environment Clearance on concerns about Public Hearing, Carrying Capacity study, Hydrology study and ICMR report.

•The Committee noted that PP has filed a Civil Appeal before the Hon'ble Supreme Court. PP reported that they have requested to withdraw the Civil Appeal filed before the Supreme Court and the Hon'ble Supreme Court vide Order dated 15.03.2024, disposed of the case as withdrawn by keeping the other remedies of the Appellant (Mahagenco) open in accordance with the law.

#### **i) Public Consultation:**

•MAHAGENCO submitted the draft EIA report to the State Pollution Control Board i.e. Chhattisgarh Environment Conservation Board (CECB) on 01.08.2019 for intention to conduct the Public Hearing.

•Prior notice was published in local newspapers (Dainik Bhaskar) and English newspaper (Hindustan Times) on 25.08.2019 for awareness of local stakeholders with the date, and venue of the Public hearing.

•Public hearing conducted on 27.09.2019 at Government Primary School Ground, Dolesara, Tehsil Tamnar, District Raigarh in close proximity to the project as per EIA notification, 2006, completing all necessary observations/preparations.

•Public hearing was conducted under the chairmanship of the Additional District Magistrate Mr. R. A. Kuruwanshi and R.O, CECB- R.K. Sharma as its Member Secretary.

•PH for the said project was successfully conducted observing all necessary requisites of it in the presence of the Additional Superintendent of Police and other voluntary organisations.

As per the Public hearing proceedings, around 1000 People assembled to whom ADM requested to render their views. The process concluded smoothly, and 58 persons expressed their views/suggestions regarding the project and even signed in the attendance register kept for the purpose. The majority of the local participants welcomed the company and supported the project.

Equal, fair and adequate opportunity with time was given to the participant to express their views

PH was done with all due processes envisaged under EIA notification-2006 as per the Affidavit filed by CECB during the NGT proceedings.

All objections/views raised in PH have been addressed in Final EIA.

#### ii) ICMR Report:

ICMR Report was prepared for the Tamnar region and submitted to MoEF & CC. Some additional conditions already covered by MoEF & CC in the EC were granted to Mahagenco on 11.07.2022.

It is requested to kindly share the ICMR Report and its findings with Mahagenco. Accordingly, Mahagenco will comply with the recommendations of the ICMR Report.

**Observation of EAC:** *The Committee is of the view that PP shall get the study done from AIIMS Chhattisgarh or reputed Govt. specialised institute for anticipated impact of the project on the health of people living in the surrounding area; suggest remedial measures and the institute should also offer comments on the ICMR report particularly with references in this study on the predicted impact of the project on the health of people living in the surrounding area.*

#### iii) Hydrological study:

The study was conducted by NABET accredited consultant Min-Mec as per the direction of EAC .

Kelo river will not be diverted due to the prevailing topography, shape of the block and presence of other coal blocks all around. Further, a thick greenbelt is proposed for development around the kelo river. • Initially a safety barrier of 17 m to 45 m was proposed. However, while granting the environment clearance, EAC stipulated the condition to observe a barrier of 100 meter from the HFL of the river.

A separate study on hydrology from IIT (ISM) Dhanbad has been additionally proposed to substantiate the findings.

#### iv) Carrying Capacity Study:

We understand that a study has been facilitated by CECB under collaboration with IIT Bhilai & IIT Mumbai.

It is requested to share the report and the findings and accordingly, we shall comply with the conditions as guided by EAC/MoEFCC.

- i) *There is a change in consultant who is required to re-validate the EIA/EMP report. Therefore, the Committee is of the view that fresh baseline data needs to be collected. While revalidating the EIA/EMP if any additional study is required to be done then the same needs to be completed. Consultant should ensure that EIA/EMP should be complete in all respect considering the OMs issues by MoEF&CC from time to time.*
- ii) *Plot the wind rose diagram using the typical meteorological year (TMY) data for the period considered for the study.*
- iii) *The monitoring units shall be deployed in the field based on the coverage area ratio and direction of the wind.*
- iv) *Mathematical model shall be developed for local site rather than using the standard model available in software for both air & water quality modeling.*
- v) *Support generation of renewable/purchase power generated from the renewable sources to the tune of at least 25% of their total power generating capacity.*
- vi) *To align themselves to one/few of the Sustainable Development Goals (SDG) and start working on the mission of net zero by 2050.*
- vii) *Plan for protection of the ecology of the surrounding area and post-mining ecological restoration plan to be prepared by reputed Institute/ University.*
- viii) *Detailed time bound planting plan with native species. PP should submit the detailed plan in tabular format (year-wise for life of mine) for afforestation and green belt development in and around the mining lease. The PP should submit the number of saplings to be planted, 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 planned in such a way that it should be completed within 2 years only.*
- ix) *PP should submit the quantity of surface or ground water to be used for this project. The complete water balance cycle need to be submitted. In addition to this PP should submit a detailed plan for rain water harvesting measures to be taken. The PP should submit the year wise target for reduction in consumption of the ground/surface water by developing alternative source of water through rain water harvesting measures. The capital and recurring expenditure to be incurred needs to be submitted.*
- x) *While preparing the Hydrogeological Study it shall be ensured that guidelines/OMs issued by MoEF&CC are followed.*
- xi) *PP should mention the number and designation of person to be engaged for implementation of environmental management plan (EMP). The capital and recurring expenditure to be incurred needs to be submitted.*
- xii) *A site visits by EAC team along with representatives of SPCB, MoEFCC Regional Office and other experts will be done.*

### 3.1.5. Recommendation of EAC

Deferred for ADS

**4. Any Other Item(s)**

N/A
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**5. List of Attendees**

Sr. No.	Name	Designation	Email ID	Remarks
1	Dr Sharad Singh Negi	Chairman, EAC	sha*****@gmail.com	Present
2	Dr Santoshkumar Hampannavar	Member (EAC)	san*****@yahoo.com	Present
3	Dr Umesh Jagannathrao Kahalekar	Member (EAC)	uka*****@rediffmail.com	Present
4	Shri K B Biswas	Member (EAC)	bis*****@gmail.com	Absent
5	Dr Nazimuddin	Member (EAC)	naz*****@nic.in	Present
6	Shri Mahi Pal Singh	Member (EAC)	mpps*****@nic.in	Absent
7	Amit Vashishtha	Scientist E	ami*****@nic.in	Present
8	Sh Inder Pal Singh Matharu IFS	Member (EAC)	mat*****@gmail.com	Present
9	Sh Lalit Kapur	Member (EAC)	lka*****@yahoo.com	Present
10	Sh Savalge Chandrasekhar	Member (EAC)	sav*****@gmail.com	Present
11	Prof Shyam Shanker Singh	Member (EAC)	sin*****@gmail.com	Present
12	Dr Vinod Agrawal	Member (EAC)	vin*****@yahoo.com	Present
13	Shri Harmeet Sahaney	Member (EAC)	har*****@imd.gov.in	Absent
14	Prof R M Bhattacharjee	Member (EAC)	rmb*****@iitism.ac.in	Present

**MINUTES OF 9<sup>th</sup> MEETING OF THE EXPERT APPRAISAL COMMITTEE FOR ENVIRONMENT APPRAISAL OF COAL MINING PROJECTS HELD DURING 20<sup>th</sup> & 21<sup>st</sup> MARCH, 2024 THROUGH VIRTUAL MODE.**

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. The list of Members who participated in the meeting is at ANNEXURE VIII. The Standard/Generic EC & ToR conditions shall be system generated through the Parivesh Portal.

Confirmation of the Minutes of the 8<sup>th</sup> Meeting of the EAC (Coal): The minutes of the 8<sup>th</sup> Meeting of the EAC (Coal) held during 28<sup>th</sup> to 29<sup>th</sup> February 2024 have been confirmed by the Chairman.

**Agenda No. 9.1**

**Expansion of Nigahi OCP from 22.50 MTPA to 25.00 MTPA (increase in leasehold area from 3018.400 Ha to 3582.723 Ha located at Village Muher & Medhauri, District-, Singrauli, Madhya Pradesh by M/s Northern Coalfields Limited. - Environmental Clearance - Reg.**

**[Proposal No. IA/MP/CMIN/464712/2024; File No. J-11015/79/2013-IAII(M); Consultant: CMPDIL; NABET/EIA/2124/RA 0258 valid till 22/08/2024]**

**9.1.1:** The proposal is for the expansion of Nigahi OCP from 22.50 MTPA to 25.00 MTPA (increase in leasehold area from 3018.400 Ha to 3582.723 Ha located at Village Muher & Medhauri, District-, Singrauli, Madhya Pradesh by M/s Northern Coalfields Limited.

The TOR was issued vide letter no. J-11015/79/2013-IA. II (M) dated 6<sup>th</sup> August 2021 for an increase in coal production from 21.00 MTPA to 25.00 MTPA and with an increase in leasehold area from 3018.400 Ha to 3582.723 Ha. Meanwhile, in order to fulfil the increasing demand for coal of TPPs, EC was obtained for an increase in production to 22.50 MTPA on 26.07.2022 as per Clause 7(ii)(a) of EIA Notification 2006 (Revalidated on 20.07.2023). Thereafter, an amendment in TOR was granted on 04.09.2023 for enhancement in coal production from 22.50 MTPA to 25.00 MTPA with an increase in leasehold area from 3018.400 Ha to 3582.723 Ha.

The project falls under Schedule 1(a) of mining and is a Category - "A" project as per EIA notification on 14<sup>th</sup> September 2006 (as amended) as the mining lease area is more than 500 Ha. The PP applied vide Proposal No IA/MP/CMIN/464712/2024 in Form-1 after conducting a Public Hearing and submitted the EIA/EMP Report for the grant of EC. The proposal is now placed in the 9<sup>th</sup> EAC Meeting scheduled on 20/03/2024.

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

**9.1.2.1: Location:**

- (i) The project area is covered under Survey of India Topo Sheet No 63-L /12 and is bounded by the geographical coordinates ranging from latitude 24°05'58.62" N to 24°11'20.38" N and longitude 82°35'32.33" E to 82°39'51.47" E.
- (ii) The project does not fall in the Critically Polluted Area (CPA), where the MoEF&CC vide its OM dated 13th January 2010 has imposed a moratorium on the grant of environment clearance. However, the project is located in the Singrauli Area, which is under the Severely Polluted Area (SPA) specified by CPCB with a CEPI score of 62.59.

**9.1.2.2: Mining Lease:** PP Submitted the that total mining lease area is 3582.723 Ha. The entire land was acquired under the CBA (A&D) Act, 1957, in the following three phases:

S.No.	Govt. Notification	Acquired Area (Ha)	ML Area (Ha)	Remarks
	Section 9 vide Notification S.O. 660 dated 04.02.1982; Section 11 dated 10.03.1983	2583.88	2440.290	Out of the total acquired 2583.88 Ha area, 2440.290 Ha area is in the lease, whereas the balance area is not in the mine lease and is not being used for the mining operation of Nigahi OCP.
	Section 9 vide Notification S.O. 1430 dated 19.06.2000 and Section 11 dated 23.04.2001	596.110	578.11	18.00 ha Forest Area has been carved out from Nigahi OCP to Jayant OCP of same owner, i.e., NCL, vide EC amendment letter

				no. J-11015/79/2013-IA.II dated 12.10.2018.
	Section 9 vide Notification S.O. 811 dated 24.11.2021 and Section 11 vide Notification S.O. 646 dated 11.07.2022	564.323	564.323	----
	Total		3582.723	

The mine plan is prepared and approved over an area of **3582.723 Ha only** within the acquired area as per the aforesaid notification.

**9.1.2.3: Forest Area:** PP submitted that 1510.011 ha of forest land has been reported to be involved in the project. The details of the diversion of the Forest Land are as follows:

S.No.	Obtained vide letter No.	Area (Ha)	Stage I/ II	Validity	Remark
1	F.No. 8-62/86-FC dated 18.06.1987 and F. No. 8-62/ 1986-FC (Pt.) dt. 16.10.2020. (Renewal)	874.146	Stage II	30 years	Original forest clearance was granted vide F. No. 8-62/86-FC dated 18.06.1987 and Forest Clearance (Stage-II) for Renewal was granted vide F. No. 8-62/ 1986-FC (Pt.) dt. 16.10.2020.
2	F.No. 8-26/2015-FC, dated 12.04.2018	406.517	Stage II	30 years	Forest Clearance (Stage-II) was granted vide F.No. 8-26/2015-FC, dated 12.04.2018, for 424.517 ha Forest Area, out of which 18.00 ha Forest Area has been carved out from Nigahi OCP to Jayant OCP of the same

					owner, i.e., NCL, vide EC amendment letter no. J-11015/79/2013-IA.II dated 12.10.2018.
3	File No. 8-26/2015-FC Vol. dated 29.12.2023.	229.348	Stage I	Co-terminus with the period of mining lease	
	Total Forest land	<b>1510.011</b>			

PP reported that the total broken forest area is 983.187 Ha. PP Further submitted that there is no violation of the FC Act, 1980.

**9.1.2.4: Protected Area:** The project is not located within 10 KM of any ESZ/ ESA/ national park/ wildlife sanctuary/ biosphere reserve/ tiger reserve/ elephant reserve/ tiger corridor. The project is located within 10 KM of Elephant Corridor. As per the working plan of Forest Department, compartment RF 272, RF 273 and RF 274 are located in Elephant Corridor, however as per the recommendation of State Forest Department, there is no movement of elephants in the compartment RF 272, RF 273 and RF 274 in the last 10 years and Stage-1 FC has been granted to Nigahi OCP for 229.348 Ha Forest Area in compartment RF 272, RF 273 and RF 274.

A site-specific conservation plan/ Integrated Wildlife Management Plan (IWMP) was prepared through the Indian Institute of Forest Management (IIFM), Bhopal in September 2020 and is under implementation by the MP forest department. As per the plan, Rs. 21.34 Crores and Rs. 4.99 Crores are to be spent for the conservation of wildlife in MP and UP State respectively. A total of Rs. 26.33 Crores (MP & UP) is to be spent on the conservation of wildlife. An amount of Rs 21.34 Crore was submitted by NCL to the Madhya Pradesh CAMPA account on 21.12.2020 for implementation of the Integrated Wildlife Management Plan in the region.

**9.1.2.4: Previous Approvals:** Previous Approvals (if any) in chronological order:

S.No	Details of Letter No.	EC/ Expansion EC/ Amendment in	Capacity (MTPA)	Area (Ha)

		<b>EC/ Validity extension/Transfer of EC</b>		
1	J-11015/2/8A-EA-5/IA dated 08.10.1987	Fresh EC	4.20	3036.400
2	J-11015/292/94-IA. II (M) dated 28.02.1996	Expansion EC	10.00	3036.400
3	J-11015/235/2006-IA. II (M) dated 08.05.2007	Expansion EC	15.00	3036.400
4	J-11015/79/2013-IA. II (M) dated 19.03.2015	Expansion EC	18.75	3036.400
5	J-11015/79/2013-IA. II (M) dated 12.10.2018	Amendment in EC	18.75	3018.400
6	J-11015/79/2013.IA.II(M) dated 03.02.2020	Expansion EC	21.00	3018.400
7	EC letter no. J-11015/79/2013-IA-II(M) dated 26.07.2022 (EC Identification No. : EC22A042MP180012)	Expansion EC	22.50	3018.400
8	EC letter no. J-11015/79/2013-IA-II(M) dated 20.07.2023 (EC Identification No. :	Expansion EC	22.50	3018.400

	EC23A001MP17013 0)			
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**9.1.2.5: Method of Mining & Mining Plan:**

- i. The mining plan & mine closure plan for the project was approved for 25.00 MTPA, Area 3582.723 Ha by the NCL Board in the 288<sup>th</sup> meeting held on 10.08.2023 and communicated vide board note letter no. NCL/ Board/7C/288/1332 dated 26.09.2023.
- ii. Total geological reserve reported in the mine lease area 430.644 MT and 409.10 MT mineable reserves (as of 01.04.2023). Out of a total geological reserve of 430.644 MT, 409.10 MT are available for extraction. Percent of extraction is 94.99%.
- iii. Three number of seams (namely Purewa Top, Purewa Bottom, Turra; Purewa Top and Purewa Bottom Seams merge to form a thick composite seam, named Purewa Merged Seam, in the Western section of Nigahi OCP) seams with thickness ranging from 0.93 m to 28.30 m are workable. The grade of coal is G-9 (Average Grade), stripping ratio of 4.88 m<sup>3</sup>/t, while the gradient is 2 to 3 degrees.
- iv. Life of mine is 18 years from 01.04.2023.
- v. Method of Mining to be adopted shall be Opencast. The Capacity of the mine applied for Normative capacity peak capacity as per the approved mining plan is 25.00 MTPA.
- vi. The project has 2 number of external OB dumps in an area of 418.00 ha with 150 m height and 229.875 Mm<sup>3</sup> of OB, 2 number of internal OB dumps in an area of 1755.933 ha with 2927.205 Mm<sup>3</sup> of OB are envisaged in the project.
- vii. Total quarry area is 2146.170 ha out of which backfilling will be done in 1755.9333 ha while final mine void will be created in an area of 390.2367 ha (includes batter) with a depth of 40 m. The backfilled quarry area of 1755.9333 ha shall be reclaimed with plantation. In addition, 418.00 Ha External Dump Area will also be reclaimed with plantation, and thereby total reclaimed OB dump area at the post-mining will be 2173.933 Ha. The final mine void will be converted into a water body of 390.2367 Ha at a depth of 40 m.

**9.1.2.6: Land Use Details of Mine:** The land usage pattern of the project is as follows:

**1. Pre-mining land use details:**

SI.No.	LANDUSE	Within ML Area (Ha)	Outside ML Area (Ha)	Total

1.	Agricultural land (Tenancy Land)	188.000 (In Expansion area)	Nil	188.000 (In Expansion area)
2.	Forest Land	229.348 (In Expansion area)	Nil	229.348 (In Expansion area)
3.	Wasteland	0	Nil	0
4.	Grazing land	0	Nil	0
5.	Surface water bodies	0	Nil	0
6.	Settlements	265.000	Nil	265.000
7.	Others(Specify) • Industrial • Government land	2753.400 146.975	Nil	2753.400 146.975
<b>Total</b>		<b>3582.723</b>	<b>Nil</b>	<b>3582.723</b>

## 2. Post Mining land use details:

S.No.	Type	Total Area	Reclaimed Area	Un-reclaimed Area
1	Excavation/ Quarry Area:	2146.1700	1755.9333	390.2367
	(a) Backfilled areas	1755.9333	1755.9333	0
	(b) Excavated Void	390.2367 (including batter)	0	390.2367 (including batter)
2	External dump	418.0000	418.0000	0
3	Safety Zone, sand plant and others	126.6510	0	126.6510
4	Road and infrastructure	74.0000	0	74.0000
5	Garland Drains	5.00	0	5.00

6	Embankment	0	0	0
7	Others (i) Green Belt and Solar Plant	409.410	409.410	0
8	Others (iii) Other built-up area	403.492	138.492	265.00
<b>Total</b>		<b>3582.7230</b>	<b>2721.8353</b>	<b>860.8877</b>

**9.1.2.7: Transportation of Coal:** The coal is proposed to be transported within the outside mining lease in the following manner:

<b>Details of transportation of coal:</b>	
(i) <b>In pit:</b>	Through dumpers up to R/P of CHP
(ii) <b>Surface to siding:</b>	Through covered conveyor belts from R/P of CHP to SILO
(iii) <b>Siding to loading:</b>	Through MGR Rail from SILO to Consumers
(iv) <b>Quantity being transported by Road/Rail/Conveyer/Ropeway</b>	Through MGR Rail mode. A few quantities of coal may be transported through covered trucks, as a basket link, depending on the demand–supply scenario of NCL.
(v) <b>Proposed change in transportation means if any, give details</b>	No change

**9.1.2.8:** PP submitted that the reclamation plan includes the following.

The reclamation plan includes i) Afforestation shall be done progressively covering an area of 2721.8353 Ha at the end of mining. This will include :	
(i) Reclaimed external OB dump	418.00 Ha

(in ha)	
(ii) Reclaimed backfilled area in the form of internal OB dumps (in Ha)	1755.933 Ha
(iii) Green Belt (in Ha)	409.4100 Ha
(iv) Density of tree plantation (in no. of plants)	2,500 no. of plants / Ha
(v) Void (in Ha) at a depth of (in m) which is proposed to be converted into a water body.	Details of the water void are as follows: Area of void: 390.2367 Ha (includes batter area) Depth: 40 m (Area of this water body is not included in the area of afforestation above)
(vi) Others in ha (such as excavation area long ML boundary, along roads and infrastructure, embankment area and in township located outside the lease etc.)	Green belt in the built-up area: 138.492 Ha
(vii) Agriculture and horticulture	Nil
(viii) Fisheries	Nil
(ix) ECO Tourist/ recreation spot	An Eco Park in 8.00 Ha has been developed within the mine area.

**9.1.2.9: R&R:** The expansion project involves 4000 project-affected families (445 Project Displaced Families). The R&R of the PAPs will be done as per the R&R policy of Coal India Limited, which is in consonance with the National R&R policy.

**9.1.2.10:** Coal linkage of the project is proposed for transportation of coal to NTPC, Vindhyachal Super Thermal Power Station (4760 MW) through the MGR system and it will also serve as a Basket Linkage mine to meet the overall demand of power grade coal on NCL.

**9.1.2.11: Baseline data:** Baseline data was generated in the Winter Season 2023 from 01.02.2023 to 30.04.2023 at 8 locations.

Period	01.02.2023 to 30.04.2023 (Winter Season)
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<p>AAQ Parameters at 08 Nos. of locations (02 nos. in core zone and 06 nos. in buffer zone) of Nigahi OCP</p>	<p>The result indicates that the maximum and minimum values of PM10 are in the range of</p> <p>(i) Particulate Matter (PM 10)</p> <p>In the core zone Industrial area varies from 163 to 298 µg/m<sup>3</sup>.</p> <p>In buffer zone in Residential areas varies from 73 to 150 µg/m<sup>3</sup></p> <p>In buffer zone in the Industrial area varies from 85 to 263µg/m<sup>3</sup></p> <p>Particulate Matter (PM 2.5)</p> <p>In the core zone Industrial area varies from 45 to 104 µg/m<sup>3</sup>.</p> <p>In buffer zone in Residential areas varies from 27 to 76 µg/m<sup>3</sup>.</p> <p>In buffer zone in the Industrial area varies from 29 to 84µg/m<sup>3</sup>.</p> <p>Sulphur Dioxide:</p> <p>In core zone under the Industrial area varies from 26 to 39µg/m<sup>3</sup>.</p> <p>In buffer zone in the Residential area varies from 25 to 26.7µg/m<sup>3</sup>.</p> <p>In buffer zone in the Industrial area varies from 25 to 40µg/m<sup>3</sup></p> <p>(iv) Oxides of Nitrogen:</p> <p>In core zone under Industrial area varies from 32 to 69 µg/m<sup>3</sup>.</p> <p>In buffer zone in Residential area varies from 12 to 38 µg/m<sup>3</sup>.</p> <p>In buffer zone in Industrial area varies from 29 to 53µg/m<sup>3</sup></p>					
<p>Incremental GLC Level</p>	<p>Name of Station</p>	<p>Direction</p>	<p>PM 10 Incremental Conc. (µg/m<sup>3</sup>)</p>	<p>PM 2.5 Incremental Conc. (µg/m<sup>3</sup>)</p>	<p>NO<sub>2</sub> Incremental Conc. (µg/m<sup>3</sup>)</p>	<p>SO<sub>2</sub> Incremental Conc. (µg/m<sup>3</sup>)</p>

	Nigahi New Workshop	Within the mine	33	7	0.98	0.03
	Nigahi Power Grid/ substation	Within the mine	24	3	0.95	0.02
	Khirwa Village	8.20 Km North	12	1	0.56	0.01
	Judi Village	6.29 Km South	6	1	0.32	0.01
	Jhingurdah Village	4.09 Km North-East	18	2	0.81	0.02
	Gahilgarh Village	7.10 Km South-East	6	0	0.35	0.004
	Chingi Tola Village	9.85 Km West	20	2	0.77	0.02
	IWSS Shaktinagar	6.17 Km East	17	2	0.63	0.02
Groundwater quality at 4 Locations	Ground Water Quality Status: pH : 6.41 to 7.04 , Total Hardness: 248 to 590 mg/l, Chlorides : 24 to 82 mg/l, Fluoride : 0.22 to 0.83 mg/l. Heavy metals: Fe 1.57 to 4.05 mg/l, Pb-Below Detection Limit (BDL), Mn-0.12 to 0.24 mg/l, Ni-BDL Zn-0.519 to 3.669 mg/l, Cd-BDL.					
Surface water quality at 4 Locations	pH: 7.0 to 8.1; DO: 5.8 to 6.3 mg/l and BOD: 2.1 to 2.7 mg/l					
Noise levels Leq (Day and Night)	Industrial Area: 50.2 to 68.2 for the day time and 41.8 to 61.4 for the Night time.  Residential Area : 42.7 to 53.7 for the day time and 37.8 to 44.2 for the Night time.					

Flora and Fauna	There are no endangered species of flora and fauna.
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**Water Requirement:** PP reported that Water requirement: 8,980 m<sup>3</sup>/day [ Domestic Water Requirement: 3,480 m<sup>3</sup>/day; Industrial Water Requirement: 5,500 m<sup>3</sup>/day]. Source of Water: Water requirement is to be fulfilled from the existing supply of IWSS source, treated water from ETP/STP, Mine water & rain water collected in Bareja pond and other reservoirs constructed in the project within the mining lease. Project/NCL has a permission letter for the withdrawal of water from GBP Sagar for IWSS. Permission from SE (commercial), UPSEB, vide 649-Cu-II/NTPC/79 dated 13.03.1979 for surface water. The project has obtained NOC from CGWA, vide no. CGWA/NOC/MIN/ORIG/2021/12799 dated 07.09.2021, which was valid up to 06.09.2023. Application for renewal of CGWA NOC has been submitted on 27.07.2023.

**Diversion of River/ Nallha:** There are no perennial nalla/ stream flows through the mining area. However, there are two seasonal nallahs in the expansion area.

PP reported that the Laboratory involved in the analysis of water, air, noise & soil quality data, etc. has been accredited by the NABL/ MoEF&CC bearing the Certificate of Accreditation No. TC-7470 dated 16/12/2022 and valid up to 15/12/2024.

**9.1.2.12: Public Consultation:** PP Submitted that Advertisement for Public hearing was published on 28.12.2023 in Times of India (New Delhi), Patrika (Satna) and Dainik Bhaskar (Singrauli). Public Consultation was held on 31.01.2024 at Nigahi Stadium, Singrauli and was chaired by Additional District Magistrate, Singrauli. A total of 225 persons attended the hearing and 93 written objections were received. Major issues raised included Compensation, Dust Control Measures, Blasting, R&R facilities to displaced people, Tree Plantation and Employment.

**Action plan as per MoEF&CC O.M. dated 30/09/2020**

S.No.	Particulars	Activities	Year-1	Year-2	Year-3	Total (Expenditure) Rs. Lakhs
1	Infrastructure creation for drinking water supply	Drinking water facilities in nearby villages	0	5	5	10
		De-siltation/deepening of ponds in nearby villages	0	0	30	30
2	Sanitation	Construction of Bio toilets	0	0	10	10

3	Education	1. Smart classroom upgradation in nearby village schools.	0	30	30	60
		2. Creating awareness among students on environment conservation in nearby schools.	1.5	1.5	1.5	4.5
		3. Providing furniture to primary schools.	0	0	10	10
4	Skill Development	1. Skill development training.	0	10	10	20
		2. Organising camps in nearby villages for women empowerment	0	1.7	0	1.7
5	Electrification including solar power	Installation of Solar lights in nearby villages of Nigahi	2	3	3	8
6	Scientific support and awareness to local farmers to increase yield of crop and fodder	Organising camp in nearby villages for awareness to local farmers	0	0	1.98	1.98
7	Rainwater Harvesting	Construction of Rainwater Harvesting Structure at nearby villages	0	20	20	40
8	Avenue plantation	Development of green belt/Avenue plantation/	1.95	1.95	16.1	20
9	Plantation in community areas	Plantation of fruit bearing and other plants in community areas.				

10	Infrastructure	Construction/Maintenance of community hall in nearby villages	0	25	25	50
11	Health	1. Providing Mosquito net in nearby villages.	1.9	1.9	0	3.8
		2. Dust suppression by one no. of truck mounted fog machine in nearby villages.	50	50	50	150
		3. Installation of outdoor air purifier in nearby villages.	0	11.9	11.9	23.8
12	Art, Culture & Sports	1. Creating infrastructure by providing sports material to primary school in nearby villages.	1.9	1.9	1.9	5.7
		2. Creating infrastructure by providing musical instruments in nearby village schools.	1.9	1.9	1.9	5.7
13	Roads	Construction of PCC road in nearby villages	0	100	100	200
		TOTAL	61.15	265.8	328.28	655.18

**9.1.2.13: EMP Budget:** The existing capital cost of the project was Rs. 2197.37 Crore. The capital cost of the proposed project is Rs. 1729.68 Crore and the capital cost for environmental protection measures is proposed as **Rs. 95.36 Crores**. The annual recurring cost towards the environmental protection measures is proposed as **9.00 crores**. The details of the cost for environmental protection measures are as follows:

Sl. No.	Description of Item	Existing (in Rs. Lakhs)		Proposed (in Rs. Lakhs)	
		Capital Cost	Recurring Cost	Capital Cost	Recurring Cost

i	Technical Reclamation, Biological Reclamation and Green Belt	1565.56	308.94	2547.39	400
ii	Water Environment	954.19	564.30	2201.77	220
iii	Air Environment	1067.23	0.983	4787.81	280
v	Miscellaneous	0	92.28	0	0
<b>Total</b>		<b>3586.98</b>	<b>966.503</b>	<b>9536.976</b>	<b>900</b>

#### 9.1.2.14: Other Details:

- (i) PP reported that there is no legal issue/violation wr.t i) Environment (Protection) Act, ii) Air(P&CP) Act, Water (P&CP), Act, Forest Conservation Act, Wildlife Protection Act, CRZ Notification, MMDR Act, Factories Act. Further, there is no court case on the project.
- (ii) PP Submitted the following details of actual coal production vis-à-vis sanctioned capacity since the inception of the mine in the following format or since 1993-94 as applicable:

Year	EC Sanctioned Capacity (MTPA)	Actual Production (MTPA)	Excess production beyond the EC-sanctioned capacity
1990-1991	4.20	1.05	NIL
1991-1992	4.20	1.90	NIL
1992-1993	4.20	2.21	NIL
1993-1994	4.20	2.87	NIL
1994-1995	4.20	3.60	NIL
1995-1996	4.20	4.20	NIL
1996-1997	10.00	4.20	NIL

1997-1998	10.00	4.00	NIL
1998-1999	10.00	4.13	NIL
1999-2000	10.00	4.50	NIL
2000-2001	10.00	5.40	NIL
2001-2002	10.00	6.06	NIL
2002-2003	10.00	7.59	NIL
2003-2004	10.00	9.50	NIL
2004-2005	10.00	10.40	0.40
2005-2006	10.00	11.05	1.05
2006-2007	10.00	11.10	1.10
2007-2008	15.00	11.30	NIL
2008-2009	15.00	11.66	NIL
2009-2010	15.00	12.36	NIL
2010-2011	15.00	12.02	NIL
2011-2012	15.00	10.88	NIL
2012-2013	15.00	13.52	NIL
2013-2014	15.00	13.65	NIL
2014-2015	15.00	13.66	NIL
2015-2016	18.75	15.01	NIL
2016-2017	18.75	15.52	NIL
2017-2018	18.75	17.13	NIL
2018-2019	18.75	18.48	NIL
2019-2020	21.00	19.59	NIL
2020-2021	21.00	20.66	NIL
2021-2022	21.00	21.00	NIL
2022-2023	22.50	22.50	NIL

No violation in production is observed after the issuance of the last EC.

**9.1.3 Committee based on the documents submitted noted the following:**

- i. The proposal is for the expansion of production capacity of Nigahi OCP from 22.50 MTPA to 25.00 MTPA (increase in leasehold area from 3018.400 Ha to 3582.723 Ha located at Village Muher & Medhauri, District-, Singrauli, Madhya Pradesh by M/s Northern Coalfields Limited
- ii. Terms of Reference granted on 06.08.2021 which is valid till 05.08.2025. and was amended on 26.07.2022. The Committee noted that while seeking amendment in ToR, PP has mentioned that TOR issued was involving 244.536 Ha Forest Land. Out of this Forest Land, 15.188 Ha land was identified as Government Land. Therefore, Forest land has been revised from 244.536 Ha to 229.348 Ha and Government Land has been revised from 131.787 Ha to 146.975 Ha. However, total additional land requirement remains same as 564.323 Ha and total land for 25 MTPA Nigahi Expansion Project also remains same as 3582.723 Ha. Thus, the total forest land requirement is reduced from 1525.199 Ha to 1510.11 Ha.
- iii. Baseline data was generated in the Winter Season 2023 from 01.02.2023 to 30.04.2023.
- iv. The Public hearing was conducted on 31.01.2024 for Singrauli district under the chairmanship of Shri Arvind Kumar Jha, Additional District Magistrate, Singrauli.
- v. The mining plan & mine closure plan for the project was approved for 25.00 MTPA, Area 3582.723 Ha by the NCL Board in the 288<sup>th</sup> meeting held on 10.08.2023 and communicated vide board note letter no. NCL/Board/7C/288/1332 dated 26.09.2023.
- vi. PP has submitted the forest clearance for an area of 1280.663 Ha of the existing project was granted in two phases. Forest Clearance for an area of 874.146 Ha was granted vide F. No. 8-62/86-FC dated 18.06.1987 and renewal was granted vide F. No. 8-62/ 1986-FC (Pt.) dt. 16.10.2020. Further, Forest Clearance (Stage II) was granted vide F.No. 8-26/2015-FC, dated 12.04.2018, for an area of 424.517 Ha, out of which 18.00 ha Forest Area has been carved out from Nigahi OCP to Jayant OCP of the same owner, i.e., NCL, vide EC amendment letter no. J-11015/79/2013-IA. II dated 12.10.2018. PP submitted that the Forest land required for the expansion of the project is 229.348 Ha. The Committee observed that the provision of OM dated 19/06/2014 is applicable in the instant case and the grant of EC is subject to submission of Stage-I FC within a period of 18 months. In the instant case PP has obtained Stage –I FC vide letter No. 8-26/ 2015-FC Vol. dated

29.12.2023.

- vii. PP has submitted that NOC from CGWA was obtained, vide no. CGWA/NOC/MIN/ORIG/2021/12799 dated 07.09.2021, which was valid up to 06.09.2023. Application for renewal of CGWA NOC has been submitted on 27.07.2023.
- viii. PP reported that the project is not located within 10 KM of any ESZ/ ESA/ national park/ wildlife sanctuary/ biosphere reserve/ tiger reserve/ elephant reserve/ tiger corridor. PP further submitted that the project is located within 10 KM of Elephant Corridor. As per the working plan of Forest Department, compartment RF 272, RF 273 and RF 274 are located in Elephant Corridor, however as per the recommendation of State Forest Department, there is no movement of elephants in the compartment RF 272, RF 273 and RF 274 in the last 10 years and Stage-1 FC has been granted to Nigahi OCP for 229.348 Ha Forest Area in compartment RF 272, RF 273 and RF 274.
- ix. PP Submitted that there is no court case pending.
- x. PP Submitted that Certified Compliance report of all earlier ECs from RO, Bhopal
- xi. As regards the transportation of coal PP submitted that the existing Nigahi OCP has a CHP of 15 MTPA in operation and an additional CHP of 10 MTPA is under construction and expected to be completed by 31.03.2025.
- xii. As per the production details provided by PP the production is well within the last granted EC and there is no violation.

The Project Proponent (PP) along with the Consultant accredited by the QCI/ NABET consultant made a detailed presentation on the project. The Committee deliberated on the various aspects of the project viz. compliance with the ToR conditions, public hearing, baseline data, EIA/EMP, CCR, method of mining, transportation, diversion of nallha, etc. and the observation of EAC is as follows:

- 1) The main issues raised during the PH involve compensation, employment, Dust Control Measures, Blasting, R&R facilities for displaced people, Tree Plantation and Employment. The Committee is of the view that PP shall address the issues raised and the commitment made during PH in a time-bound manner. The budget earmarked to address the issues raised during PH is 655.18 Lakh but the same is for 3 years only. The Committee is of the view that PP shall enhance the budget earmarked to address the issues raised during PH. PP vide letter dated 21/03/2024 submitted the revised budget as per which the amount proposed is

691.0 Lakh. Further, PP provided the details of the skill development activities carried out during the last 5 years and photographs of the CSR activities.

The Committee is of the view that the budget proposed is still for 3 years and is of the view that the same shall be extended for 10 years and if required budget from CSR may be used for the same. In addition to this PP shall carry out a survey of the impact of blasting in the nearby area/villages by involving a reputed institute and take remedial measures as proposed by the respective institute. Further, provide compensation if any for any damage caused. PP shall expedite the process of settlements and provide compensation to project-affected families. Additionally, the PP shall review the outcome of the skill development program whether it is providing any benefit or not, and whether it helps the community in getting job/business opportunities. PP shall align the activities as per the present-day needs. A report in this regard shall be submitted to the concerned RO within 6 months.

- The Committee also took note of the carrying capacity study conducted by IIT ISM Dhanbad and observed that the carrying capacity and cumulative impact assessment of surface water bodies in terms of spatial and seasonal variations in physico-chemical parameters is quite variable and predictable where dilution due to rainfall and subsequent surface runoff processes increasing the dissolved load. The presence of high Total Coliform indicates surface water can be used for livelihood purposes after conventional treatment followed by disinfection. Nigahi OCP has two ETPs and STP of 14.50 MLD and 3.00 MLD capacities, respectively. Capacities of the above ETPs are sufficient enough to cater for the effluent generated from the 25 MTPA expansion project. The concentrations of heavy metals in groundwater were found below the desirable and permissible limits (IS: 2296, Class C and IS 10500). This indicates groundwater is free from heavy metal pollution. There is no coal mining impact or impact of thermal power plant emission observed. The WQI results indicate that the majority of the sampling and collection of composite/grab samples of groundwater in different locations of core and buffer zone (10 km radius), in and around the Nigahi OCP are of good to poor quality due to excessive withdrawal of groundwater to meet the agriculture and urban water demand by location population and there is no signature of coal mining impacts on aquifer systems. Concerning Air Quality, it was reported in moderate AQI but the value of PM10 is on the higher side as compared to NAAQS. The mean concentrations of heavy metals in PM10 were found in the order of Al>Zn>Ca>Fe>>Cr>Cd>Cu>Ni>Co. The major sources contributing to heavy metals were the combustion of coal and fuel and the resuspension of dust. The presence of heavy metals (Ni and Cu) also revealed vehicular pollution in the study areas. This indicates that the study area is

experiencing massive urbanization, peri-urban development, and associated increase in transportation activities. Results showed that Fe, Cu, and Zn were recorded in PM10. Higher Fe concentration may be ascribed to crustal origin present in loosely bound dust. When Fe is associated with Zn, air pollution may be related to fossil fuel combustion and incineration. The Committee also noted that for better Management of Air Quality in the study area steps to be taken as proposed in the report include i) Undertake a feasibility study for maintaining a separate transport corridor for mineral transportation in the study area covering all the nearby mines, ii) Mineral transportation through railway only using SILO and covered belt conveyor from pit top, iii) Strengthening the existing transport network by widening the road under the lane system and proper periodic maintenance, iv) More emphasis on roadside avenue plantations with a mechanism for keeping a separate record of roadside avenue plantations to control dust emissions and noise pollution, v) All vehicles, including HEMM, should run in the study area under the standard limit of vehicular pollution as per the pollution control board and vi) Effective implementation of dust suppressing systems in and around the mine premises, such as water sprinklers, fog cannons, mist cannons, automatic wheel/truck washing system, road sweeping machines, and wind barriers in downwind direction.

- 2) The Committee observed that water requirement for the project is mentioned as 8980 KLD [ Domestic 3480 KLD and Industrial 5500 KLD]. PP submitted that the same shall be sourced from 3268 KLD (Ground Water), 3480 KLD from Integrated Water Supply Scheme of NCL from Rihand Reservoir and balance 2232 KLD from the recycled water. The Committee noted that PP already has obtained NOC from CGWA, vide no. CGWA/NOC/MIN/ORIG/2021/12799 dated 07.09.2021 for existing project capacity i.e., 22.50 MTPA where water requirement is 2780 KLD. After expansion to 25.00 MTPA, ground water requirement will increase to 3268 KLD for which application for renewal of CGWA NOC has been submitted vide Application No. 21-4/878/MP/MIN/2019 dated 27.07.2023 for 4115 KLD. PP during the meeting showed the photographs of ETP and STP installed for the treatment of water. PP also showed the photographs of measures taken for the ground water recharge which include construction of i) 6 Nos of rain water harvesting structures and ii) reservoirs [Bareja Reservoir (Area: 8 ha); near 3rd cluster of Miners Quarter at Nigahi Project Township (Area: 0.75 ha) and Reservoir near Sector-6 of Nandgaon Rehabilitation site (Area: 0.25 ha.).The Committee appreciated the efforts made by PP but still of the view that losses mentioned in EIA Report is to the tune of 10% for both (domestic & industrial) and the same needs to be reduced. Committee also noted that depth of void at the conceptual stage is mentioned as 40 meters in form/brief and in the EIA has mentioned as 30 meters. The PP submitted that the average depth is

between 30-40 meters accordingly in EIA it has mentioned as approx. 30 meters. The Committee is of the view that PP shall ensure to keep it at minimum level and in the instant case at 30 meters only, so that water can be easily accessible at later stage. Further, PP shall explore to reduce the void area further so that it can be used for agriculture and grazing purpose. The Committee therefore of the view that i) depth of void shall be restricted to 30 meters and area of void should be reduced, ii) PP shall install water meters at all intake points and take specific measures for reduction in water consumption and generation of alternative source of water through rainwater harvesting measures, and iii) water audit needs to be done every year by a reputed institute for further reduction of water consumption and PP shall implement its recommendations and submit a report to RO annually.

- 3) The Committee observed that as per DSS analysis there are two seasonal nallha is flowing through the lease area. PP did not propose for the diversion of the same. However, for nallha 1 it has mentioned that it will be cut in parts as the mine progress. The Committee also noted that Water Resource Department vide letter dated 8/8/2023 provided the approval for diversion of nallha with certain conditions. In the same letter it has mentioned that diversion is required at 10-15 years later. Therefore, at this stage Committee did not recommend for diversion of same.
- 4) The Committee also took note of the action plan for CEPI Singrauli Region M.P. for NCL and observed that it is for 2023 and PP should provide a copy of the action plan submitted to SPCB during 2024. PP vide email dated 21/3/2024 provided a copy of the letter dated 29/01/2024 vide which an updated action plan was submitted to SPCB. As per the action plan, the main issues are the i) stoppage of coal transportation by road and ii) construction of pucca road, road shoulders and regular cleaning of roads, water sprinkling etc. As per the action plan Nigahi Project has linkage with VSTPS, NTPC, Vindhyanagar and coal is being transported through a dedicated MGR system. Transportation of coal from R/P (CHP) to SILO is done via Closed Belt Conveyor System. Depending upon the demand-supply scenario of NCL, a small quantity of coal is being transported through rail and road mode. Further, in addition to the existing CHP of 15 MTPA, a CHP of 10 MTPA is under construction, which is expected to be completed by 31.03.2024. After commencing of above 10 MTPA CHP, transportation of coal through road will be minimized. Further, CC Road Phase-1 (completed on 30/06/2023) and CC Road Phase II (Under Progress and expected to be completed by 31.03.2024).

The Committee is of the view that the project being located in SPA shall implement the measure proposed in the IIT-ISM Report for air quality

management and also implement the commitments made in the action plan submitted to SPCB. The Committee observed that till January 2024, 67% of work was completed what is the current status? The PP submitted that as of now 69% work of CHP is completed. The Committee therefore asked the PP to submit an undertaking w.r.t to completion of CHP. The PP vide letter dated 21.03.2024 submitted an undertaking that CHP for an additional capacity of 10 MTPA shall be completed by 31/12/2024. The Committee is of the view that inside the core zone the standards are as per GSR 742(E) dated 25.09.2000 and predicted values with control measures is within the limit but for the buffer zone for some villages its slightly high for PM10. As regards the prediction of PM10 parameters in Khirwa and Judi Villages PP submitted the details of PM-10 Predictions in Khirwa and Judi Villages on an annual average basis. PP also submitted the additional measures to be taken for control of air pollution in the nearby villages which include i) Deploying continuous mobile fog cannons on a 20 km stretch of Public Road in the nearby villages (including Khirwa, and Jhingurda Villages) by 31.12.2024, ii) Deploy continuous mobile fog cannons on a 40 km stretch of Public Road in the nearby villages (including Judi Villages) by 31.12.2024,iii) Installation of Protective Screen on selected locations along the railway station road on the upwind side of Khirwa Village by 31.12.2024,iv) Deploying Road Sweeping Machines on Public Roads in the villages (including nearby Khirwa, Jhingurda and Judi Villages) by 31.12.2024 and v) Plantation on available land in Khirwa & Judi Village by 31.12.2024.

- 5) The Committee noted that plantation so far done by PP is 858 Ha (36.98 Lakhs planted) out which 523.23 Ha is on dumps and 335 Ha on other area. PP also showed the photographs of activities taken under plantation which include drip irrigation, bamboo plantation on OB dumps, green belt around coal sub-station, mine premises, along belt conveyor, other steps include mixing of grass seeds in manure, irrigation by customized tanker, spreading seed balls, and use of drone for spreading of seeds on remote locations. The Committee is of the view PP shall ensure that gap plantation should be done in already reclaimed area and implement the reclamation plan in a time bound manner. Further, that audit of the plantation shall be carried out by a reputed institute of MoEF&CC (eg ICFRE) and report shall be submitted to RO.
- 6) The Committee also deliberated on the CCR report dated 28/02/2024 as per the report PP has complied/being complying the EC conditions. PP has also submitted an ATR to Regional Office vide letter dated 13/03/2024 for partially complied conditions. The partially complied conditions are related to the installation of CEQMS and a higher value of air quality parameters PM10 & PM 2.5. The Committee observed that PP is complying with most of the already

stipulated conditions w.r.t SPA. The only issue is regarding the transportation of coal by road for which PP has already submitted an undertaking to complete the CHP work by 31/12/2024 and for the installation of CEQMS already placed an order and submitted an undertaking for completion of CEQMS for ETPs by 30.04.2024. In addition to this Committee also observed that PP has already completed a study through IIT BHU for the dumping of fly ash and as per the report it is not feasible but to explore the further possibility PP has engaged CSIR CIMFR Dhanbad for the same and field trial study has also started. The Committee is of the view that the PP shall ensure that study to be completed in a time-bound manner and the recommendation of the same needs to be implemented. PP shall submit a report in this regard to the concerned RO.

- 7) It was also brought to the notice of the Committee that some observations were received for this project related to CCR, figures mentioned for forest area, requirement of Stage-II FC, difference in buildup area as mentioned in ToR and Form-B, diversion of nallah, depth of mining, height of dump, void depth, excess production, high value of air pollutants, and value of TDS. The Committee is of the view that most of the issues has already covered above in the observation of EAC. However, with respect to variation in figures PP informed that build up area is 403.492 Ha and to comply with the ToR condition no (v), 7.50 Ha has been identified from 403.492 Ha Built-up Area, for construction of OB to Sand Plant. Therefore, in Part-B of Form-1, built up area is mentioned as 395.992 Ha and 7.50 Ha area is given in a different head named as 'Sand Plant'. With respect to depth of mining PP submitted that mining plan is prepared based on EPR 2020. The depth of mining as per EPR 2020 is 320 m, as per previous approved mining plan it was 300 meters but now as per revised mining plan it is envisaged as 315 m which is also provided in EIA report in chapter 11. The height of the dump is 120 m from original average ground level. PP informed that inadvertency the values get interchanged during typing and the lab test report shows that TDS level 590 mg/l and Total hardness (as CaCo3) is 493 mg/l. The Committee is of the view that PP & consultant should be more cautious in future to avoid such type of mistakes.
- 8) The Committee also noted that there is elephant corridor within 10 KM. As per the recommendation of State Forest Department, there is no movement of elephants in the compartment RF 272, RF 273 and RF 274 in the last 10 years and a site-specific conservation plan/ Integrated Wildlife Management Plan (IWMP) has been prepared through Indian Institute of Forest management (IIFM), Bhopal in September 2020 and is under implementation by MP forest department. As per the plan, Rs. 21.34 Crores and Rs. 4.99 Crores are to be spent for conservation of wildlife in MP and UP state respectively. A total of Rs.

26.33 Crores (MP & UP) is to be spent on the conservation of wildlife. An amount of Rs 21.34 Crore was submitted by NCL to the Madhya Pradesh CAMPA account on 21.12.2020 for implementation of the Integrated Wildlife Management Plan in the region.

- 9) The recommendation is subject to uploading the information w.r.t commitment made during the meeting and information submitted on Parivesh Portal.

*Based on the discussion held and the document submitted the Committee **recommended** the proposal for the grant of Environmental Clearance for the Expansion of Nigahi OCP from 22.50 MTPA to 25.00 MTPA (increase in leasehold area from 3018.400 Ha to 3582.723 Ha (2072.712 ha Forest Land and 1510.011 ha non-Forest Land) of Northern Coalfields located in Nigahi Village, Tehsil- Waidhan, District- Singrauli in the state of Madhya Pradesh, as per the provision of EIA Notification 2006 (as amended) subject to compliance of following specific conditions in addition to conditions granted in earlier ECs (including related to SPA) & Amendments and standard EC conditions:*

**Specific conditions: -**

1. *PP shall complete the work of the construction/installation of an additional 10 MTPA CHP before 31/12/2024. There should not be any road transportation of coal from the mines after 31/12/2024.*
2. *The mitigative measures proposed by IIT-ISM in its study report for controlling air pollution shall be implemented.*
3. *Additional measures to be taken for control of air pollution in the nearby villages shall include i) Deploying continuous mobile fog cannons on a 20 km stretch of Public Road in the nearby villages (including Khirwa, and Jhingurda Villages) , ii) Deploy continuous mobile fog cannons on a 40 km stretch of Public Road in the nearby villages (including Judi Villages), iii) Installation of Protective Screen on selected locations along the railway station road on the upwind side of Khirwa Village, iv) Deploying Road Sweeping Machines on Public Roads in the villages (including nearby Khirwa, Jhingurda and Judi Villages) and v) Plantation on available land in Khirwa & Judi Village. PP shall ensure to implement the above measures as committed before 31.12.2024.*
4. *PP shall speed up Green Belt development so as to achieve the targets within the next 5 years. The green belt and plantation plan submitted in the EIA/EMP shall be implemented in a time-bound manner. A survival rate of at least 80% shall be maintained by carrying out gap plantation in case of mortality. Native species should be planted. The budget earmarked for the plantation shall be kept in a separate*

account. PP should annually submit the audited statement of expenditure along with proof of activities viz. photographs (before & after with geolocation date & time), details of expert agency engaged, details of species planted, number of species planted, survival rate, density of plantation etc. to the Regional Office of MoEF&CC and on PARIVESH Portal as the case may be for the activities carried out during previous year.

5. The plantations done by the PP need to be adequately densified and audited by a third party preferably a forestry institution of MoEFCC (e.g. ICFRE) to assess their efficacy.
6. The budget proposed to address the issues raised during PH is Rs. 691.0 Lakh for 3 years. The same shall be extended for 10 years and if required budget from the CSR may be utilized for the same.
7. PP shall provide regular health monitoring services and health services free of cost to people living in 10 km radius.
8. PP shall implement the protective measures proposed in EMP in a time-bound manner. The budget earmarked for the same is Rs 95.36 crores (Capital) and Rs 9.0 crores (recurring) and should be kept in separate accounts and audited annually. The implantation status along with the amount spent with documentary proof shall be submitted to the concerned Regional Office for the activities carried out during the previous year.
9. PP shall strengthen in house environment management unit.
10. PP shall obtain the status of implementation of Wildlife Conservation Plan and also during mining ensure to protect the wildlife. Necessary training/awareness program shall be conducted for the same from time to time.
11. PP shall ensure that No OB dumping is done outside the lease area.
12. PP shall submit an action plan for using and developing Renewable Energy for its consumption in its utilities/machinery/equipment instead of using electricity from Grid/generated from Thermal Power Plants. PP shall Install additional solar power generation units.
13. PP shall minimize mine voids in the post mining phase so that maximum area post-mining is under green belt or agriculture/ grazing land and depth of void shall not be kept more than 30 meters.
14. PP shall ensure submission of the compliance report to the Regional Office in a timely manner and in case of any non-compliance identified so far/in future in the

CCR then the same shall be complied with on priority and action taken report in this regard shall be submitted to concerned RO and get it closed.

15. PP shall obtain a 5-star rating in terms of Environment Compliance from the Ministry of Coal as per the rating system implemented by the Ministry of Coal.
16. PP shall ensure that all types of plastic waste generated from the mines shall be stored separately in isolated areas and disposed of strictly adhering to the Plastic Waste Management Rules 2016. In pursuant to the Ministry's OM dated 18/07/2022, PP shall also create awareness among the people working in the project area as well as in its surrounding area on the ban on Single Use Plastic(SUP) in order to ensure compliance of the Ministry's Notification published by the Ministry on 12/08/2021. A report along with the photographs of the measures taken shall also be included in the six monthly compliance reports being submitted by PP.
17. NoC from Central Ground Water Authority (CGWA)/ concerned local authority, as the case may be, shall be obtained before drawing the groundwater for the project activities, state pollution control board/pollution control committees shall not issue the consent to operate (CTO) under Air (prevention and control of Pollution) Act and Water (Air (prevention and control of Pollution) Act till the project proponent shall obtain such permission.
18. The additional specific conditions w.r.t Severely Polluted Area already stipulated in earlier EC shall be complied with.
19. PP shall carry out a survey of the impact of blasting in the nearby area/villages by involving a reputed institute and take remedial measures as proposed by the respective institute. Further, provide compensation if any for any damage caused.
20. PP shall expedite the process of settlements and provide compensation to project-affected families.
21. PP shall review the outcome of the skill development programs whether it is providing any benefit or not, and whether it helps the community in getting job/livelihood opportunities. PP shall align the activities as per the present-day needs. A report in this regard shall be submitted to the concerned RO within 6 months.
22. PP shall ensure that studies being carried out by CSIR-CIMFR Dhanbad regarding flyash utilization in a time-bound manner and the recommendation of the same needs to be implemented. PP shall submit a report in this regard to the concerned RO.
23. PP shall install water meters at all intake points and take specific measures for

*reduction in water consumption and generation of alternative source of water through rainwater harvesting measures. Water audit needs to be done every year by a reputed institute for further reduction of water consumption and PP shall implement its recommendations and submit a report to RO annually.*

24. PP shall ensure that nallha should not be diverted.

## **Agenda No. 9.2**

**Expansion of Krishnashila Opencast Coal Mine with capacity 7.5 MTPA in land area of 851.78 ha submitted in compliance of OM dated 07.05.2022 after 10% enhancement in capacity, located at Village Koharaul, Paraswara Raja, Mishra, Bhairwa, Jogi Chaura, Marrak and Koharauliya, Sub District Dudhi, District Sonbhadra, Uttar Pradesh by M/s Northern Coalfields Limited - Environmental Clearance - Regarding**

**[Online Proposal No. IA/UP/CMIN/415714/2023; File No. J-11015/243/2011-IA-II(M)]**

**[Consultant: CMPDIL; NABET/EIA/2124/RA 0258 valid till 22/08/2024]**

**9.2.1:** The proposal is for revalidation of Environmental Clearance granted vide Letter no. J-11015/243/2011-IA-II(M) dated 26.07.2022 for Krishnashila Opencast Coal Mine of M/s Northern Coalfields Limited, from 7.0 MTPA to 7.5 MTPA in land area of 851.78 ha, located at Village Koharaul, Paraswara Raja, Mishra, Bhairwa, Jogi Chaura, Marrak and Koharauliya, Sub District Dudhi, District Sonbhadra, Uttar Pradesh.

The PP obtained EC under OM dated 07.05.2022 after a 10% enhancement in capacity. As per clause 6(iv) of the OM PP shall submit a Certified Compliance Report of the EC granted for 40% expansion, along with an EIA/EMP report, prepared based on standard TORs for the additional capacity of 10% shall be submitted on PRIVESH portal within six months of enhancement of production beyond 40%. PP applied to vide proposal no. IA/UP/CMIN/415714/2023 dated 24/01/2023 along with Form-1 within the 6 months of the grant of EC dated 26.07.2022. An EDS was raised and PP vide letter dated 5/2/2023 provided a reply to EDS. The Ministry again raised in EDS on 14/02/2023 and PP replied to the same on 16/01/2024. PP vide EDS dated 5/02/2024 requested to apply on the Parivesh 2.0 portal along with a reply of all EDS. The PP accordingly submitted this application and the proposal is now placed in the 9<sup>th</sup> EAC meeting held on 20.03.2024.

The project falls under Schedule 1(a) of mining and is a Category - "A" project as per EIA notification 14th September 2006 (as amended) as the mining lease area is more than 500 Ha and require appraisal at Central Level.

**9.2.2** *The Project Proponent (PP) along with the Consultant accredited by the QCI/ NABET consultant made a detailed presentation on the project. The Committee deliberated on the various aspects of the project and is of the view that:*

*i) Presentation is not complete in all respects and PP shall ensure that a complete presentation is made before the EAC.*

*ii) The Committee observed that there is some mismatch in the data submitted and presented by PP and the Committee is of the view that PP shall verify the same and in future ensure the consistency of the same.*

*iii) It is observed that in the CAF on PARIVESH portal, PP has submitted that no litigation is pending. However, in the Annexure-II PP reported that a case vide no. 1799/2014 under section 15/16 of EPA Act 1986 is currently under consideration at court of CJM Sonebhadra. Application to obtain relief was filed at Hon'ble High Court of Allahabad to quash the proceedings of court of CJM Sonebhadra and order was passed by Hon'ble High Court on 26.08.2014 to apply the objection/ discharge petition in the District Court, Sonebhadra. Accordingly, a discharge petition was filed on 20.09.2014 at the court of CJM Sonebhadra and which is currently under consideration. PP may submit the correct details. The Committee is of the view that PP and consultants should be more cautious in future while filling out the form.*

*iii) The Committee observed that there are some partly complied conditions as per the CCR. The PP also submitted an ATR in this regard. The submission of the PP is not in line with the observation of RO. Due to the difference, the EAC is of the view that this Committee will rely on the observation of the RO and not that of a consultant. PP shall get the latest certified report from the concerned RO after addressing all the issues.*

*iv) The Committee also observed that permission from CGWA was not obtained. In this regard, PP submitted Mine is located in UP state for which approval is not regulated by CGWA. Also, there is no provision in the portal of UP Ground Water Department for NOC for coal mines. The Committee discussed this issue and suggested that they should apply to CGWA for the same.*

*Based on the discussion and held and document submitted the Committee **return the proposal in present form** and is of the view that proposal may be considered only after submission of the following:*

- 1) PP shall submit fresh certified compliance report of RO since there are many non-or partial compliances.*
- 2) PP shall ensure that application w.r.t groundwater abstraction/intersection shall be*

made to CGWA and submit the compliance w.r.t to Ministry's OM dated 23//05/2019.

- 3) *PP shall ensure that PPT is complete in all respects including compliance with ToR conditions.*
- 4) *PP should submit the detailed plan in tabular format (year-wise for life of mine) for afforestation and green belt development in and around the mining lease. The PP should submit the number of saplings to be planted, 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. Native species should be planted. 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 planned in such a way that it should be completed within 2 years only.*
- 5) *PP should submit the quantity of surface or ground water to be used for this project. The complete water balance cycle need to be submitted. In addition to this PP should submit a detailed plan for rain water harvesting measures to be taken. The PP should submit the year wise target for reduction in consumption of the ground/surface water by developing alternative source of water through rain water harvesting measures. The capital and recurring expenditure to be incurred needs to be submitted.*
- 6) *PP should clearly bring out the details of the manpower to be engaged for this project with their roles /responsibilities/designations. In addition to this PP should mention the number and designation of person to be engaged for implementation of environmental management plan (EMP). The capital and recurring expenditure to be incurred needs to be submitted.*
- 7) *PP should submit the year-wise, activity wise and time bound budget earmarked for EMP, occupational health surveillance, and activities proposed to address the issues raised during Public Hearing. The capital and recurring expenditure to be incurred needs to be submitted.*
- 8) *PP shall submit the additional mitigative measures to be taken for control of air quality in core and buffer zone as the values of pollutants are exceeding the prescribed limits.*

### Agenda No 9.3

#### **Environment Clearance of Gare Palma sector II coal Mine Project of Open Cast 22.0 MTPA+ Underground 1.6 MTPA Capacity in mine lease area of 2583.48 ha of M/s Maharashtra State Power Generation Company Limited- Reg**

**[Proposal No. IA/CG/CMIN/466451/2024; File No. J-11015/122/2007-IA. II(M); Consultant: M/s Vardan EnviroLab]**

The Member Secretary informed the Committee that the Ministry of Environment, Forest and Climate Change (MoEF&CC) granted Environment Clearance on 11.07.2022 to M/s Maharashtra State Power Generation Company Limited (Mahagenco) in respect of the Gare Palma sector II coal Mine Project.

The Hon'ble NGT in the matter of **Kanhai Ram Patel & Ors. v. Union of India & Ors. (OA No. 26 of 2024)**, the Hon'ble NGT (CZ) delivered a judgment dated 15.01.2024 has quashed the Environmental Clearance (EC) granted by the Ministry of Environment, Forest and Climate Change (MoEF&CC) on 11.07.2022 to M/s Maharashtra State Power Generation Company Limited (Mahagenco) in respect of the Gare Palma Sector II (GP-II) coal mine. The Ld. NGT has held that:

***“...Appeal is accordingly allowed. EC dated 11.07.2022 granted to respondent 4 is quashed. MoEF&CC may re-examine the matter from the stage of conducting public consultation afresh and in case, other appropriate study material is placed on record by proponent, the same may be considered / appraised and a fresh order may be passed by MoEF&CC with regard to prior EC in accordance with law and existing state of environment and ecology.”***

The aforesaid Judgment dated 15.01.2024 is challenged by the Maharashtra State Power Generation Company Ltd (**MAHAGENCO**) in the **Civil Appeal No. 2104 of 2024** titled Maharashtra State Power Generation Company Ltd v. Rinchin & Ors. Before the Hon'ble Supreme Court of India.

Meanwhile, in accordance with the directives of the Hon'ble NGT, the Project Proponent (MAHAGENCO) has, through a letter dated 24.02.2024, requested the Expert Appraisal

Committee – Coal Mining to consider their proposal in the upcoming EAC meeting for further deliberation stating the following:

- *The Ld. NGT has also directed that MoEF & CC may re-examine the matter and in case, other appropriate study material is placed on record by Mahagenco, the same may be considered/appraised and a fresh order may be passed by MoEF&CC with regard to grant of EC for the GP-II coal blocks.*
- *As MoEF&CC is aware that GP- II Coal Mine plays pivotal role in the fuel security of Thermal Power Station of Maharashtra to meet large power demand of public at large. Moreover, to meet the growing power demand in the State of Maharashtra, it is necessary for Mahagenco to start the operation of this coal mine at the earliest. Mahagenco has already made a significant investment of aprox INR 1000 Cr in Gare Palma Sector II project, apart from that Mahagenco has also made huge investment of INR aprox. 25000 crore on the linked TPS to GP II coal block, and in addition it is projected that an additional investment of over Rs 13000 Crore will be made for the upcoming thermal power stations.*
- *In view of the above, MoEF & CC may please re-examine the matter based on materials on record and advise if any other material needs to be placed on record by Mahagenco or any additional study or compliances needs to be done by Mahagenco, to assist MoEF in re-examining the matter, as per Judgment of Ld NGT.*

The matter was examined in the Ministry and it was decided to place the matter before the EAC in its 8<sup>th</sup> EAC Meeting scheduled for 28-29 February, 2024, as an additional agenda item.

The Chairman EAC asked the PP to brief about the issue, the PP informed that Hon'ble NGT in its order dated 15/01/2024 mentioned that “..that prior EC granted in the case in hand is vitiated in law on account of observations made hereinabove, particularly, with

*regard to public consultation, non-consideration of ICMR report, Hydrological study and carrying capacity.*

The Committee is of the view that, PP shall first forward/circulate all the relevant documents including Hon'ble NGT Order dated 15/01/2024, to all the Members of the Committee. Henceforth, the matter was **deferred**.

As desired by the Committee the Mahagenco, on 17.03.2024 circulated the relevant documents pertaining to the NGT judgement to the EAC and MoEF&CC. Further, the Ministry vide email dated 19/03/2024 circulated the requisite documents including NGT Judgment dated 15.01.2024 to the EAC. The PP vide proposal number IA/CG/CMIN/466451/2024 also applied on the Parivesh Portal and the proposal is now placed in the 9<sup>th</sup> EAC meeting held on 21/03/2024.

### **9.3: Committee after deliberations noted the following:**

During the meeting the PP made a presentation and submitted the following:

- MoC, GoI has allotted the Gare-Pelma Sector-II Coal Mine to Mahagenco on 24.03.2015.
- Mahagenco signed the Allotment Agreement on 30.03.2015 and subsequently signed the Amendment on 31.08.2015.
- Coal mining was proposed in a total lease area of 2583.48 hectares falling in various villages (14 Nos.) of Tehsil Gharghoda, District Raigarh (State of Chhattisgarh).
- The ToR was granted on 8/8/2016.
- Public hearing for the project of 23.60 MTPA capacity in an area of 2583.48 ha was conducted on 27th September 2019 at Village-Dolesara, District-Raigarh, Chhattisgarh.
- Mahagenco submitted proposal no. IA/CG/CMIN/52019/2016 seeking EC under EIA Notification dated 14.09.2006 (hereinafter referred to as 'EIA 2006') for mining of coal to MoEF&CC.
- The first time, the Project was considered & discussed in the 51st EAC meeting on 05.12.2019 and the proposal was returned to PP with few observations. Again, the

Proposal was considered in the 2nd EAC meeting held on 28-29th Sep'2020 wherein the proposal was recommended for grant of Environmental Clearance. MoEF&CC granted the Environmental Clearance on 11.07.2022.

- MoEF&CC granted FC –I for diversion of 214.869 ha. Forest land on 02-06- 2022; FC stage- II has also been granted on 27.01.2023.
- CTE applied on 19.01.2023 to CECB and it is in the final stage for final approval.
- Mine lease application submitted on 08.12.2015. Mahagenco has requested to MRD (Mineral Resource Department), Gov. of Chhattisgarh for the execution of the mine lease on 06.02.2023 and 02.08.2023. and as reported by PP it is in the advanced stage of approval.
- Environment Clearance challenged by four appellants in National Green Tribunal (NGT), Bhopal. On 15th January 2024, Hon'ble NGT quashed the Environment Clearance on concerns about Public Hearing, Carrying Capacity study, Hydrology study and ICMR report.
- The Committee noted that PP has filed a Civil Appeal before the Hon'ble Supreme Court. PP reported that they have requested to withdraw the Civil Appeal filed before the Supreme Court and the Hon'ble Supreme Court vide Order dated 15.03.2024, disposed of the case as withdrawn by keeping the other remedies of the Appellant (Mahagenco) open in accordance with the law.

During the meeting, the PP made a presentation and provided its justification on the 4 issues mentioned in the Judgment dated 15/01/2024 of Hon'ble NGT.

**i) Public Consultation:**

- MAHAGENCO submitted the draft EIA report to the State Pollution Control Board i.e. Chhattisgarh Environment Conservation Board (CECB) on 01.08.2019 for intention to conduct the Public Hearing.

- Prior notice was published in local newspapers (Dainik Bhaskar) and English newspaper (Hindustan Times) on 25.08.2019 for awareness of local stakeholders with the date, and venue of the Public hearing.
- Public hearing conducted on 27.09.2019 at Government Primary School Ground, Dolesara, Tehsil Tamnar, District Raigarh in close proximity to the project as per EIA notification, 2006, completing all necessary observations/preparations.
- Public hearing was conducted under the chairmanship of the Additional District Magistrate Mr. R. A. Kuruwanshi and R.O, CECEB- R.K. Sharma as its Member Secretary.
- PH for the said project was successfully conducted observing all necessary requisites of it in the presence of the Additional Superintendent of Police and other voluntary organisations.
- As per the Public hearing proceedings, around 1000 People assembled to whom ADM requested to render their views. The process concluded smoothly, and 58 persons expressed their views/suggestions regarding the project and even signed in the attendance register kept for the purpose. The majority of the local participants welcomed the company and supported the project.
- Equal, fair and adequate opportunity with time was given to the participant to express their views
- PH was done with all due processes envisaged under EIA notification-2006 as per the Affidavit filed by CECEB during the NGT proceedings.
- All objections/views raised in PH have been addressed in Final EIA.

**Observation of EAC:** As per EIA Notification 2006 (as amended) the concerned State Pollution Control Board is responsible for conducting a public hearing and also for seeking written responses from the concerned persons having a stake in the environmental aspects of the project or activity. Therefore, the Member Secretary, Chhattisgarh State Pollution Control Board shall provide details of the prescribed procedure followed for the Public Hearing; was this procedure was fully followed as per the rules; the number of people who participated; details of written submissions received; details of issues/ concerns raised by the attendees both orally and in writing. The Committee is also of the view that any comments received from the applicants who have filed the case before Hon'ble NGT may also be provided. The Committee is of the view that to further deliberate on this issue, the representatives of SPCB shall be invited to the EAC meeting.

Further, the Committee is of the view that PP shall engage a reputed institute to conduct a fresh socio-economic study/assessment.

The PP shall also submit details of all gram sabha meetings held as a part of FRA / FC Act clearance including copies of proceedings

**ii) ICMR Report:**

- ICMR Report was prepared for the Tamnar region and submitted to MoEF & CC. Some additional conditions already covered by MoEF & CC in the EC were granted to Mahagenco on 11.07.2022.
- It is requested to kindly share the ICMR Report and its findings with Mahagenco. Accordingly, Mahagenco will comply with the recommendations of the ICMR Report.

**Observation of EAC:** The Committee is of the view that PP shall get the study done from AIIMS Chhattisgarh or reputed Govt. specialised institute for anticipated impact of the project on the health of people living in the surrounding area; suggest remedial measures and the institute should also offer comments on the ICMR report particularly with references in this study on the predicted impact of the project on the health of people living in the surrounding area.

### iii) Hydrological study:

- The study was conducted by NABET accredited consultant Min-Mec as per the direction of EAC .
- Kelo river will not be diverted due to the prevailing topography, shape of the block and presence of other coal blocks all around. Further, a thick greenbelt is proposed for development around the kelo river. • Initially a safety barrier of 17 m to 45 m was proposed. However, while granting the environment clearance, EAC stipulated the condition to observe a barrier of 100 meter from the HFL of the river.
- A separate study on hydrology from IIT (ISM) Dhanbad has been additionally proposed to substantiate the findings.

**Observation of EAC:** *The Committee is of the view that the Hydrogeological Study was conducted by NABET Accredited consultant, but Hon'ble NGT observed some shortcomings in the same, particularly concerning high flood levels and mentioned in its judgment that “Moreover, high flood level of the river has been taken for a very small period of 1996-97 to 2002-03, though it should be of the period of last 50 or 100 years”. The Committee is of the view that PP shall get the revised study done from IIT (ISM) Dhanbad and the concerned institute shall ensure that observation of Hon'ble NGT and applicants shall be addressed in the proposed study report.*

### iv) Carrying Capacity Study:

- We understand that a study has been facilitated by CECB under collaboration with IIT Bhilai & IIT Mumbai.
- It is requested to share the report and the findings and accordingly, we shall comply with the conditions as guided by EAC/MoEFCC.

**Observation of EAC:** *The Committee is of the view that representatives of concerned SPCB shall be invited to deliberate on this issue.*

*In addition to above, the Committee also proposed the following:*

- i) There is a change in consultant who is required to re-validate the EIA/EMP report. Therefore, the Committee is of the view that fresh baseline data needs to be collected. While revalidating the EIA/EMP if any additional study is required to be done then the same needs to be completed. Consultant should ensure that EIA/EMP should be complete in all respect considering the OMs issues by MoEF&CC from time to time.*
- ii) Plot the wind rose diagram using the typical meteorological year (TMY) data for the period considered for the study.*
- iii) The monitoring units shall be deployed in the field based on the coverage area ratio and direction of the wind.*
- iv) Mathematical model shall be developed for local site rather than using the standard model available in software for both air & water quality modeling.*
- v) Support generation of renewable/purchase power generated from the renewable sources to the tune of at least 25% of their total power generating capacity.*
- vi) To align themselves to one/few of the Sustainable Development Goals (SDG) and start working on the mission of net zero by 2050.*
- vii) Plan for protection of the ecology of the surrounding area and post-mining ecological restoration plan to be prepared by reputed Institute/ University.*
- viii) Detailed time bound planting plan with native species. PP should submit the detailed plan in tabular format (year-wise for life of mine) for afforestation and green belt development in and around the mining lease. The PP should submit the number of saplings to be planted, 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 planned in such a way that it should be completed within 2 years only.*

- ix) PP should submit the quantity of surface or ground water to be used for this project. The complete water balance cycle need to be submitted. In addition to this PP should submit a detailed plan for rain water harvesting measures to be taken. The PP should submit the year wise target for reduction in consumption of the ground/surface water by developing alternative source of water through rain water harvesting measures. The capital and recurring expenditure to be incurred needs to be submitted.*
- x) While preparing the Hydrogeological Study it shall be ensured that guidelines/OMs issued by MoEF&CC are followed.*
- xi) PP should mention the number and designation of person to be engaged for implementation of environmental management plan (EMP). The capital and recurring expenditure to be incurred needs to be submitted.*
- xii) A site visits by EAC team along with representatives of SPCB, MoEFCC Regional Office and other experts will be done.*

*Based on the discussion held and document submitted the Committee **deferred** the proposal.*

### **Additional Agenda**

**Marki Mangli IV coal mine project with production capacity of 0.2 MTPA in the ML area of 256 ha of M/s Shree Veerangana Steel Private Limited located at villages Hirapur, Mangali and Bhendala, Tahsil Jhari-Jamni, District Yavatmal (Maharashtra) – For Terms of Reference - reg.**

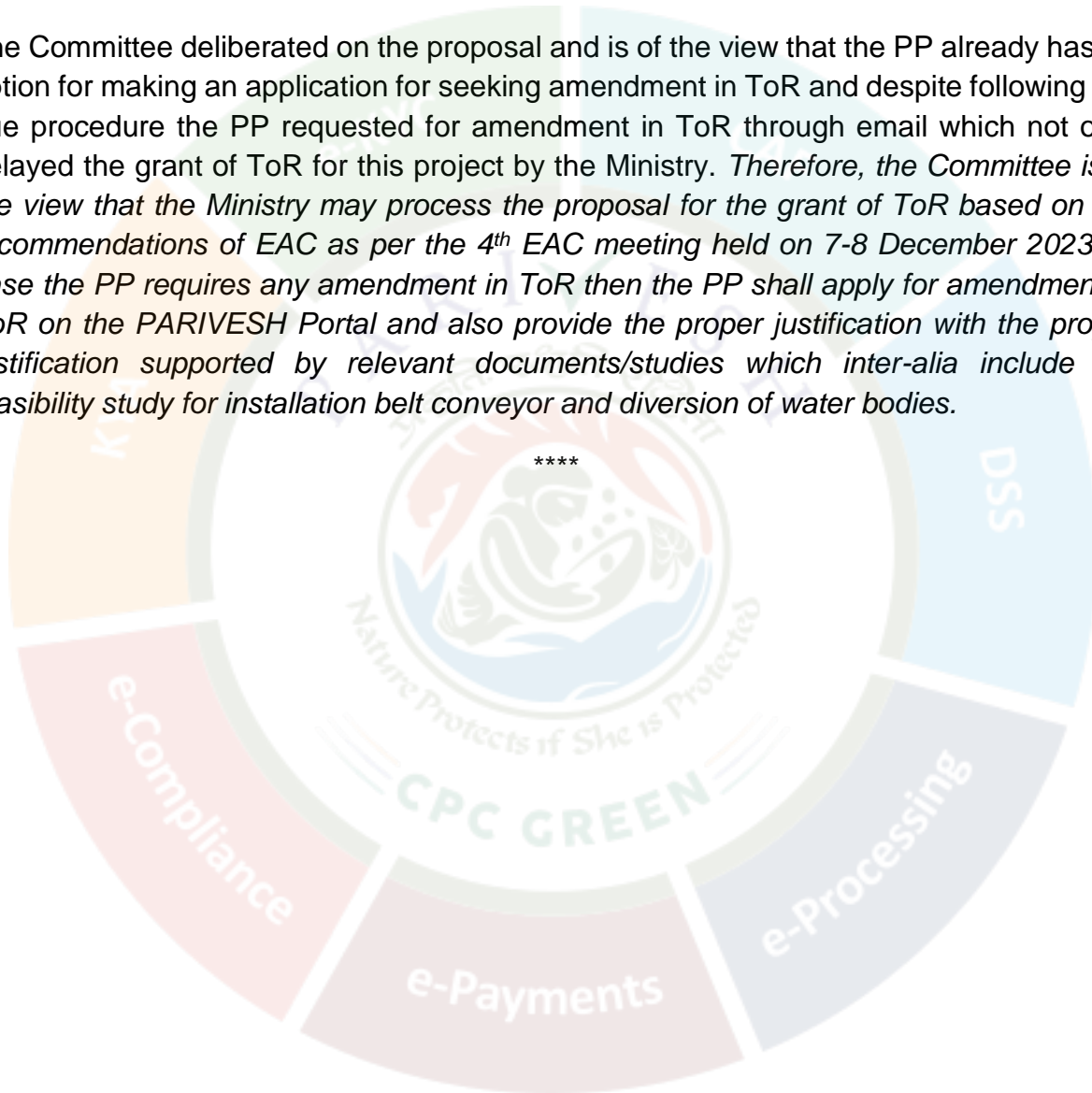
**[Online proposal No. IA/MH/CMIN/447167/2023; File No. J- 11015/425/2007-IA.II(M)]**

The proposal of Marki Mangli IV coal mine project with a production capacity of 0.2 MTPA in the ML area of 256 ha of M/s Shree Veerangana Steel Private Limited located at villages Hirapur, Mangali and Bhendala, Tahsil Jhari-Jamni, District Yavatmal (Maharashtra) for grant of Term of Reference was considered in 4<sup>th</sup> EAC meeting held

during 7-8 December 2023 wherein the Committee recommended the proposal for grant of ToR and in standard ToR also prescribed the additional ToR conditions.

Thereafter, the proposal was processed as per the recommendation of EAC but meanwhile, PP requested for amendment in certain additional ToR conditions. The matter was examined in the Ministry and the proposal is referred back to EAC. Accordingly, the proposal is now placed in the 9<sup>th</sup> EAC meeting held on 20/3/2024.

The Committee deliberated on the proposal and is of the view that the PP already has an option for making an application for seeking amendment in ToR and despite following the due procedure the PP requested for amendment in ToR through email which not only delayed the grant of ToR for this project by the Ministry. *Therefore, the Committee is of the view that the Ministry may process the proposal for the grant of ToR based on the recommendations of EAC as per the 4<sup>th</sup> EAC meeting held on 7-8 December 2023. In case the PP requires any amendment in ToR then the PP shall apply for amendment in ToR on the PARIVESH Portal and also provide the proper justification with the proper justification supported by relevant documents/studies which inter-alia include the feasibility study for installation belt conveyor and diversion of water bodies.*



## **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 PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>2</sub> and NO<sub>x</sub>. 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 PM<sub>10</sub>/PM<sub>2.5</sub>) 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 25<sup>th</sup> 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-IA.11 (M) dated 27<sup>th</sup> 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/Gol Authority. The construction of embankment to prevent any danger against inrush of surface water into the mine should be as per the approved Mining Plan and as per the permission of DGMS or any other authority as prescribed by the law.
- (xi) The project proponent shall take all precautionary measures to ensure riverine/riparian ecosystem in and around the coal mine up to a distance of 5 km. A riverine/riparian ecosystem conservation and management plan should

be prepared and implemented in consultation with the irrigation / water resource department in the state government.

**(d)** Noise and Vibration monitoring and prevention

- (i) Adequate measures shall be taken for control of noise levels as per Noise Pollution Rules, 2016 in the work environment. Workers engaged in blasting and drilling operations, operation of HEMM, etc shall be provided with personal protective equipments (PPE) like ear plugs/muffs in conformity with the prescribed norms and guidelines in this regard. Adequate awareness programme for users to be conducted. Progress in usage of such accessories to be monitored.
- (ii) Controlled blasting techniques shall be practiced in order to mitigate ground vibrations, fly rocks, noise and air blast etc., as per the guidelines prescribed by the DGMS.
- (iii) 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.
- (iv) (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 allalong 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.I1 (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 1<sup>st</sup> 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 shareholder's/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, NOx (ambient levels) or critical sectoral parameters, indicated for the projects and display the same at a convenient location for disclosure to the public and put on the website of the company.
  - (v) The project proponent shall submit six-monthly reports on the status of the compliance of the stipulated environmental conditions on the website of the ministry of Environment, Forest and Climate Change at environment clearance portal.
  - (vi) The project proponent shall follow the mitigation measures provided in this Ministry's OM No. Z-11013/5712014-IA. II (M) dated 29th October, 2014, titled 'Impact of mining activities on habitations-issues related to the mining projects wherein habitations and villages are the part of mine lease areas or habitations and villages are surrounded by the mine lease area'.
  - (vii) The project proponent shall submit the environmental statement for each financial year in Form-V to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended

subsequently and put on the website of the company.

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

## **Annexure-II**

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

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

#### **I. Statutory compliance:**

- (i) The Environmental clearance shall be subject to orders of Hon'ble Supreme Court of India, Hon'ble High Courts, NGT and any other Court of Law, fromtime 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, SO<sub>2</sub> and NO<sub>x</sub>. 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-IA.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 run off.
- viii. The water pumped out from the mine, after siltation, shall be utilized for industrial purpose. 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/Gol 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 1<sup>st</sup> 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 shareholder's / 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.

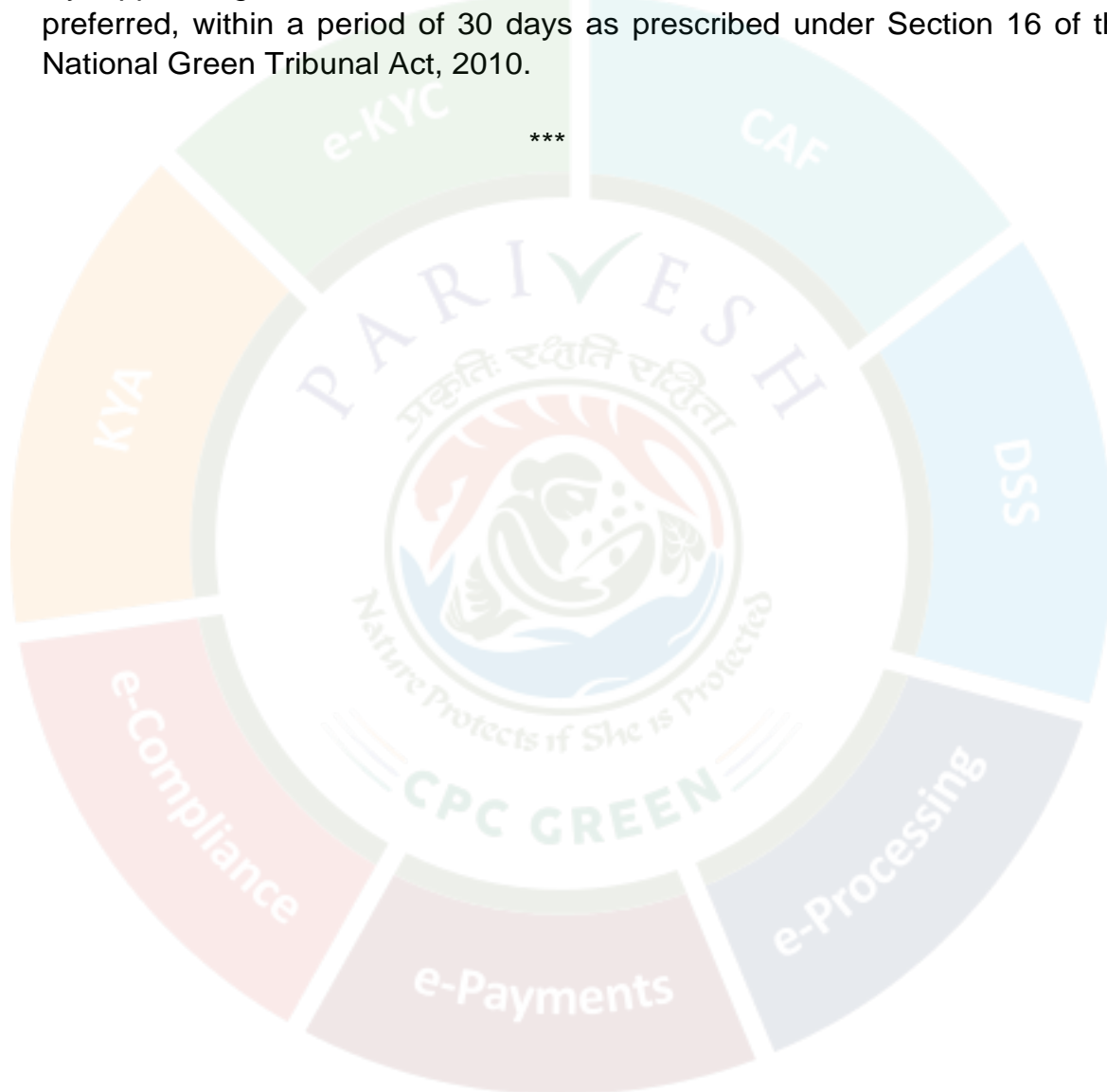
#### **X. Miscellaneous**

- 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.



## Annexure-III

### Standard EC Conditions for Coal Washery Project

#### **I. Statutory compliance:**

- (i) The project proponent shall obtain forest clearance under the provisions of Forest (Conservation) Act, 1986, in case of the diversion of forest land for non-forest purpose involved in the project.
- (ii) The project proponent shall obtain clearance from the National Board for Wildlife, if applicable.
- (iii) The project proponent shall prepare a Site-Specific Conservation Plan / Wildlife Management Plan and approved by the Chief Wildlife Warden. 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 waste/hazardous waste generated in the washery needs to be addressed in accordance to the Solid Waste Management Rules, 2016 / Hazardous & Other Waste Management Rules, 2016.
- (vii) Coal beneficiation practices shall be carried out under strict adherence to provisions of the Factories Act, 1957 and subordinate legislations made there under.

#### **II. Air quality monitoring and preservation:**

- i. Adequate ambient air quality monitoring stations shall be established in the core zone as well as in the buffer zone for monitoring of pollutants, namely particulates, SO<sub>2</sub> and NO<sub>x</sub>. 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, PM2.5, SO2 and NOx. 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-IA.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 m<sup>3</sup>/tonne of raw coal.
- xi. Regular monitoring of ground water level and quality shall be carried out in and around the mine lease area by establishing a network of existing wells and constructing new piezometers during the mining operations. The monitoring of ground water levels shall be carried out four times a year i.e. pre-monsoon, monsoon, post-monsoon and winter. The ground water quality shall be monitored once a year, and the data thus collected shall be sent regularly to MOEFCC/RO. Monitoring of water quality upstream and downstream of water bodies shall be carried out once in six months and record of monitoring data shall be maintained and submitted to the Ministry of Environment, Forest and Climate Change/Regional Office.
- xii. The project proponent shall take all precautionary measures to ensure riverine/ riparian ecosystem in and around the coal mine up to a distance of 5 km. A riverine/riparian ecosystem conservation and management plan should be prepared and implemented in consultation with the irrigation / water resource department in the state government.

#### **IV. Noise and Vibration monitoring and prevention**

- i. The noise level survey shall be carried out as per the prescribed guidelines to

assess noise exposure of the workmen at vulnerable points in the mine premises, and report in this regard shall be submitted to the Ministry/RO on six-monthly basis.

- ii. Adequate measures shall be taken for control of noise levels as per noise pollution Rules, 2016 in the work environment. Workers engaged in blasting and drilling operations, operation of HEMM, etc shall be provided with personal protective equipments (PPE) like ear plugs/muffs in conformity with the prescribed norms and guidelines in this regard. Adequate awareness programme for users to be conducted. Progress in usage of such accessories to be monitored.

#### **V. Coal beneficiation**

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

#### **VI. Green Belt**

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

#### **VII. Public hearing and Human health issues**

- i. Adequate illumination shall be ensured in all mine locations (as per DGMS standards) and monitored weekly. The report on the same shall be submitted

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

- ii. Personnel (including outsourced employees) working in core zone shall wear protective respiratory devices and shall also be provided with adequate training and information on safety and health aspects.
- iii. Implementation of the action plan on the issues raised during the public hearing shall be ensured. The project proponent shall undertake all the tasks/measures as per the action plan submitted with budgetary provisions during the public hearing. Land oustees shall be compensated as per the norms laid down in the R&R policy of the company/State Government/Central Government, as applicable.
- iv. The project proponent shall follow the mitigation measures provided in this Ministry's OM No. Z-11013/5712014-IA.11 (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. 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, NOx (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 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.
- vii. The project authorities shall inform to the Regional Office of the MOEFCC regarding commencement of mining operations.
- viii. The project authorities must strictly adhere to the stipulations made by the State Pollution Control Board and the State Government.
- ix. 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.
- x. 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.
- xi. 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.

- xii. The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.
- xiii. The Ministry reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions.
- xiv. 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.
- xv. 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.
- xvi. Any appeal against this EC shall lie with the National Green Tribunal, if preferred, within period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.

## **ANNEXURE-IV**

### **Generic ToR for coal washery**

- i. Siting of washery is critical considering to its environmental impacts. Preferences 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 conveyer belt. If it is far away, the transportation should be by rail as far as possible.

xviii. Copies of MOU/Agreement with linkages (for stand-alone washery) for the capacity for which EC is being sought should be submitted.

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

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**GENERIC TOR FOR AN OPENCAST COALMINE PROJECT for EC**

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

- (viii) A detailed Site plan of the mine showing the proposed break-up of the land for mining operations such as the quarry area, OB dumps, green belt, safety zone, buildings, infrastructure, CHP, ETP, Stockyard, township/colony (within and adjacent to the ML), undisturbed area -if any, and landscape features such as existing roads, drains/natural water bodies to be left undisturbed along with any natural drainage adjoining the lease /project areas, and modification of thereof in terms of construction of embankments/bunds, proposed diversion/re-channeling of the water courses, etc., approach roads, major haul roads, etc should be indicated.
- (ix) In case of any proposed diversion of nallah/canal/river, the proposed route of diversion/modification of drainage and their realignment, construction of embankment etc. should also be shown on the map as per the approval of Irrigation and flood control Department of the concerned state.
- (x) Similarly, if the project involves diversion of any road/railway line passing through the ML/project area, the proposed route of diversion and its realignment should be shown in the map along with the status of the approval of the competent authority.
- (xi) Break up of lease/project area as per different land uses and their stage of acquisition should be provided.

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

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<sub>x</sub>, NO<sub>x</sub> 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 28o 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 <sup>st</sup> Year)	5 <sup>th</sup> Year	10 <sup>th</sup> Year	20 <sup>th</sup> Year	24 <sup>th</sup> 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 <sup>st</sup> year					
2.	3 <sup>rd</sup> year					
3.	5 <sup>th</sup> year					
4.	10 <sup>th</sup> year					
5.	15 <sup>th</sup> year					
6.	20 <sup>th</sup> year					
7.	25 <sup>th</sup> year					
8.	30 <sup>th</sup> year					
9.	34 <sup>th</sup> year (end of mine life)					
10.	34-37 <sup>th</sup> 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.

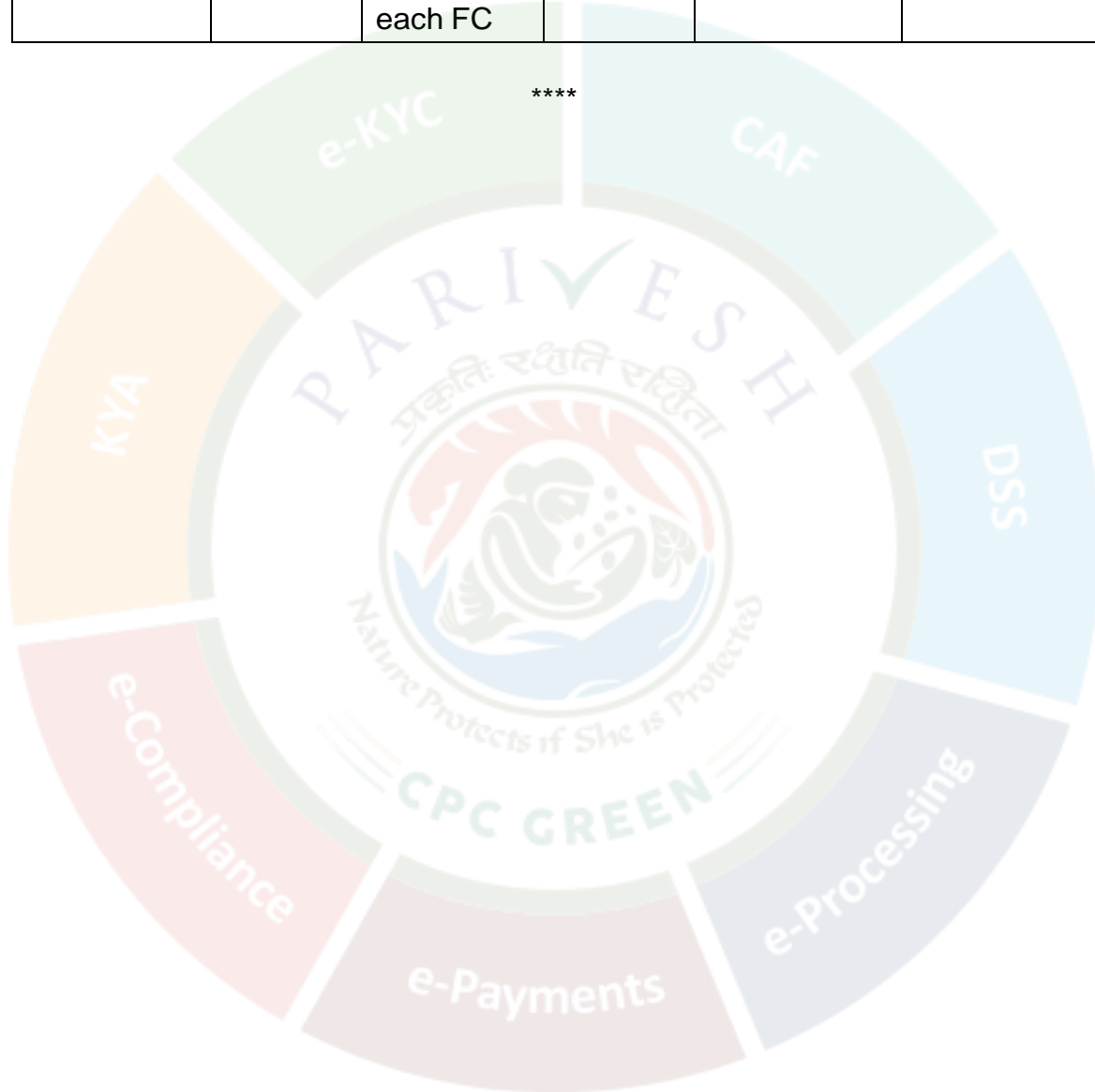
(xxxix) Corporate Environment Responsibility:

(xl)

- 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.
- (xi) 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			



**GENERIC TORs FOR AN UNDERGROUND COAL MINE PROJECT**

- (i) An EIA-EMP Report shall be prepared for MTPA rated capacity in an ML/project area of ha based on the generic structure specified in Appendix III of the EIA Notification, 2006.
- (ii) An EIA-EMP Report would be prepared for MTPA rated capacity to cover the impacts and environment management plan for the project specific activities on the environment of the region, and the environmental quality encompassing air, water, land, biotic community, etc. through collection of data and information, generation of data on impacts including prediction modeling for MTPA of coal production based on approved project/Mining Plan for MTPA.
- (iii) Baseline data collection can be for any season (three months) except monsoon.
- (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) 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.
- (vi) 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.
- (vii) 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.

- (viii) 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	

- (ix) 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.

- (x) 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.
- (xi) 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.
- (xii) 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.
- (xiii) One-season (other than monsoon) primary baseline data on environmental quality - air (PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>x</sub>, NO<sub>x</sub> and heavy metals such as Hg, Pb, Cr, As, etc), noise, water (surface and groundwater), soil - along with one-season met data coinciding with the same season for AAQ collection period should be provided.
- (xiv) Map (1: 50, 000 scale) of the study area (core and buffer zone) showing the location of various sampling stations superimposed with location of habitats, other industries/mines, polluting sources, should be provided. The number and location of the sampling stations in both core and buffer zones should be selected on the basis of size of lease/project area, the proposed impacts in the downwind (air)/downstream (surface water)/groundwater regime (based on flow). One station should be in the upwind/upstream/non-impact/non-polluting area as a control station. The monitoring should be as per CPCB guidelines and parameters for water testing for both ground water and surface water as per ISI standards and CPCB classification wherever applicable. Observed values should be provided along with the specified standards.
- (xv) 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.

- (xvi) Study on subsidence including modeling for prediction, mitigation/prevention of subsidence, continuous monitoring measures, and safety issues should be carried out.
- (xvii) 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.
- (xviii) 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.
- (xix) 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.
- (xx) 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.
- (xxi) 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.
- (xxii) 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.
- (xxiii) 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.

- (xxiv) 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.
- (xxv) 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.
- (xxvi) Cost of EMP (capital and recurring) should be included in the project cost and for progressive and final mine closure plan.
- (xxvii) 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.
- (xxviii) 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.

**(xxix) 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.

- (xxx) 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.
- (xxxi) In built mechanism of self-monitoring of compliance of environmental regulations should be indicated.
- (xxxii) Status of any litigations/ court cases filed/pending on the project should be provided.
- (xxxiii) 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.
- (xxxiv) 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:

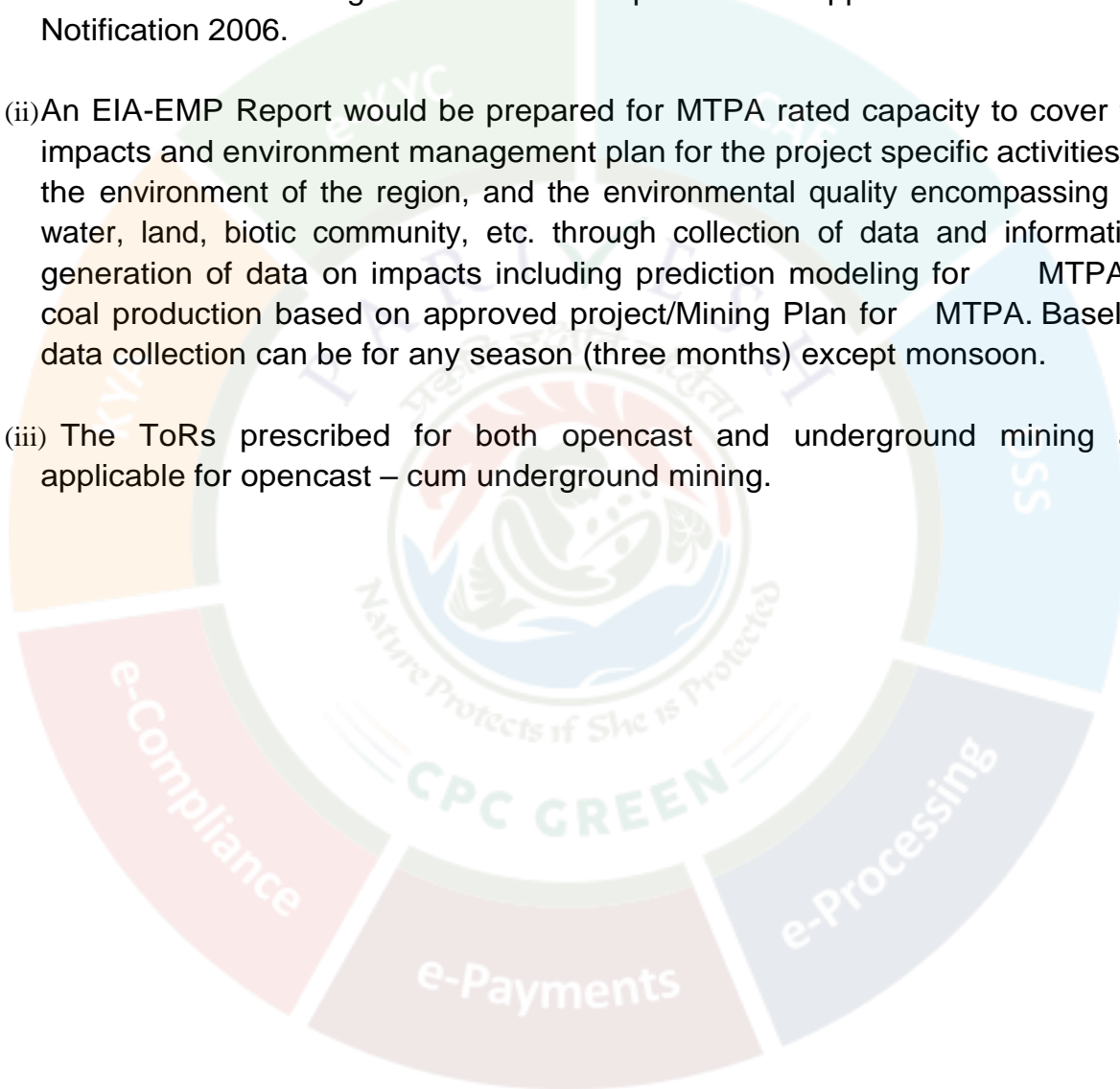
Total ML /Project Area (ha)	Total Forest Land (ha)	Date of FC	Extent of Forest Land	Balance are a for which FC is yet to be obtained	Status of appl. For diversion of forest land
		If more than one provide details of each FC			

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## ANNEXURE-VII

### **GENERIC TORs FOR AN OPENCAST-CUM UNDERGROUND COAL MINE PROJECT**

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



**ANNEXURE-VIII****LIST OF PARTICIPANTS OF EAC (COAL) IN 9<sup>th</sup> MEETING HELD ON 20-21 MARCH, 2024 THROUGH VIRTUAL MODE**

<b>S. No.</b>	<b>Name &amp; Address</b>	<b>Role</b>	<b>20.03.2024</b>	<b>21.03.2024</b>
1.	Dr. Sharad Singh Negi (I.F.S. Retd.)	Chairman	Present	Present
3.	Shri Inder Pal Singh Matharu, IFS (Retd.)	Member	Present	Present
3.	Shri Lalit Kapur	Member	Present	Present
4.	Dr. Umesh Jagannathrao Kahalekar	Member	Present	Present
5.	Dr. Santosh Kumar Hampannavar	Member	Present	Present
6.	Shri Savalge Chandrasekhar	Member	Present	Present
7.	Shri K. B. Biswas	Member	Present	Absent
8.	Prof. Shyam Shanker Singh	Member	Present	Present
9.	Dr. Vinod Agrawal	Member	Present	Present
10.	Dr Nazimuddin, Scientist - F	Representative of Central Pollution Control Board	Present	Present
11.	Shri Mahi Pal Singh, Chief Engineer	Representative of Central Electricity Authority (CEA)	Absent	Absent
13.	Shri Harmeet Sahaney	Representative of Indian Meteorological Department (IMD)	Absent	Absent
13.	Prof. R M Bhattacharjee	Representative of IIT/ISM Dhanbad	Present	Present
14.	Shri Amit Vashishtha	Member Secretary	Present	Present
<b>MOEF&amp;CC</b>				
1.	Sh. Mohit Saxena	Scientist 'D'	Present	Present

# APPROVAL OF CHAIRMAN EAC

The screenshot shows an email client interface with the following details:

- Subject:** Final MoM 9th EAC (Coal) 20-21 March 2024-Reg
- From:** sharadnegi1957@gmail.com
- To:** Amit Vashishtha
- Cc:** matharu0204@gmail.com, lkapoor2000@yahoo.com, ukahalekar@rediffmail.com, santoshkumar777@yahoo.com, savalgec@gmail.com, biswaskiriti@gmail.com, singhss.ggu, vinodudz@yahoo.com, Nazimuddin, mpsingh.cea
- Date:** April 8, 2024 5:23 PM
- Body:** Final MoM 9 th EAC coal approved as proposed

