

## **MINUTES OF 35<sup>th</sup> MEETING OF THE EXPERT APPRAISAL COMMITTEE FOR ENVIRONMENT APPRAISAL OF COAL MINING PROJECTS HELD DURING 26-27 SEPTEMBER, 2022 THROUGH VIDEO CONFERENCE.**

**Confirmation of the Minutes of 34<sup>th</sup> Meeting of the EAC (Coal) held on 23rd August, 2022:** The minutes of the 34<sup>th</sup> Meeting of the EAC held on 23rd August, 2022 as confirmed by the Chairman.

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

**Consideration of Proposals:** The 35th meeting of the Expert Appraisal Committee (EAC) for coal mining projects was held during 26-27 September, 2022 through video conferencing with support NIC team due to Covid-19 lockdown. The EAC considered proposals as per agenda adopted for the meeting. List of participant attended the meeting is annexed. The details of deliberations held & decisions taken in the meeting are as under.

### **Agenda No. 35.1**

**Expansion of Gangaramchak & Gangaramchak - Bhadulia Opencast Coal Mine from production capacity of 1.00 MTPA to 1.50 MTPA with total project area of 186.42 ha by M/s The West Bengal Power Development Corporation Limited located at village Bastabpur, Tehsil Khoyrasole, District Birbhum (West Bengal) - For Environmental Clearance (As per O.M. dated 11.04.2022) - reg.**

**[Online Proposal No. IA/WB/CMIN/400339/2022; File No. J-11015/375/2006-IA-II(M)]**

**35.1.1** The proposal is for expansion of Gangaramchak & Gangaramchak - Bhadulia Opencast Coal Mine from production capacity of 1.00 MTPA to 1.50 MTPA with total project area of 186.42 ha by M/s The West Bengal Power Development Corporation Limited located at village Bastabpur, Tehsil Khoyrasole, District Birbhum (West Bengal).

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

- (i) The project area is covered under Survey of India Topo Sheet No 73M/1 and is bounded by the geographical coordinates ranging from latitudes 23°48'20.812"N to 23°49'28.016"N and longitudes 87°12'20.292"E to 87°13'52.172"E.
- (ii) Coal linkage of the project is proposed for STPS, Santaldih, Purulia district, KTPS, Mecheda, Purba Medinipur district, BKTPP, Bakreswar, Birbhum district, BTPS, Tribeni, Hoogly district, SgTPP, Manigram, Murshidabad district will be use to meet various demand of power for development of the core segment such as Steel and Aluminum sector.

- (iii) Joint venture cartel has been formed: NA
- (iv) Project does not fall in the Critically Polluted Area (CPA), where the MoEF & CC's vide its OM dated 13th January, 2010 has imposed moratorium on grant of environment clearance.
- (v) Employment generation: Employment to 300 persons will be provided from the project.
- (vi) The project is reported to be beneficial as it will help in overcome the power demand of the country, India needs several power projects to be implemented. Till date, India's 60% power demand is fulfilled through thermal power generation. The growing demand of power for development of the other core segment such as Steel and Aluminum sector need for implementation of new power plants are inevitable. There is huge demand of coal in West Bengal for Power generation and other utility. Thus, wining of coal at the rate of 1.50 MTPA from this project is highly essential.
- (vii) Earlier, the environment clearance to the project was obtained under EIA Notification, 14th September, 2006 and its amendments vide Ministry's letter No J-11015/375/2006-IA.II (M) dated 17.05.2007 for 1.0 MTPA in mine lease area of 150 ha.
- (viii) As per Office Memorandum F No 1A3-22/10/2022-IA.1 11 (E177258) dt. 07.05.2022, the application is exempted from public hearing and EIA report has been prepared and being submitted as per standard TOR.
- (ix) Total mining lease area as per block allotment is 150 ha. Mining Plan (Including Progressive Mine Closure Plan) has been approved by the Ministry of Coal on 26.09.2019.
- (x) **The land usage pattern of the project is as follows:**

**Pre-mining land use details**

**(Area in Ha)**

S. No.	Land Use	Within ML Area(ha)	Outside ML Area (ha)	Total
1	Agricultural Land	-	--	18.42
2	Forest land			101.77
3	Waste land			64.58
4	Grazing land			-
5	Surface Water bodies			1.65
6	Settlements			
7	Other (Specify)			

**Post Mining**

S. No.	Type	Total area	Reclaimed Area	Un-reclaimed Area
1	External/ Quarry Area :	-		0
	(a) Backfilled Areas	84.93	84.93	0
	(b) Excavated Void	49.60	49.60	0
3	External Dump	12.78	12.78	0

4	Safety Zone	8.01	0	0
5	Road and Infrastructure	6.80	0	0
6	Garland Drains	2.29	0	0
7	Embankment	0.54	0	0
8	Others	21.47	3.13	18.34

- (xi) Total geological reserve reported in the mine lease area is 10.5801 MT with 9.15 MT mineable reserves. Out of total mineable reserve of 9.15 MT, 9.15 MT are available for extraction. Percent of extraction is 45 %.
- (xii) 1 seam with thickness 4.58 m are workable. Grade of coal is G8 – G12, stripping ratio 1:5 while gradient is 4 to 6 degree.
- (xiii) Method of mining operations envisages by opencast mechanized method.
- (xiv) Life of mine is 04 years.
- (xv) The project has 1 external OB dumps in an area of 12.78 ha with 30 m height and 3.86 Mm<sup>3</sup> of OB. 2 internal OB in an area of 86.73 ha with 43.08 Mm<sup>3</sup> of OB is envisaged in the project.
- (xvi) Total quarry area is 134.53 ha out of which backfilling will be done in 84.93 ha while final mine void will be created in an area of 49.60 ha with a depth of 73 m. Backfilled quarry area of 8.87 ha shall be reclaimed with plantation. Final mine void will be converted 49.60 ha.
- (xvii) Transportation of coal has been proposed by in mine pit head, from surface to siding by Road and at sidings by Road and Rail.
- (xviii) Reclamation Plan in an area of 134.53 ha, comprising of 12.78 ha of external dump, 84.93 ha of internal dump and 31.53 ha of green belt.
- (xix) 101.77 ha of forest land have been reported to be involved in the project. Approval under the Forest (Conservation) Act, 1980 for diversion of 101.77 ha of forest land for a non-forestry purpose has been obtained vide MoEF&CC letter no 8-45/2018-FC, dated 10th April 2019.
- (xx) Please mention any National Parks, Wildlife Sanctuaries and Eco-Sensitive Zones fall within 10 km boundary of the project. : NA
- (xxi) Wildlife conservation plan for schedule – I species has been submitted to: No Schedule- I species have been found.
- (xxii) The ground water level has been reported to be varying between 3.90 m BGL to 17.75m BGL during pre-monsoon and between 2.90 m BGL to 15.50 m BGL during post-monsoon. Total water requirement for the project is 80 KL.
- (xxiii) Application for obtaining the approval of the Central Ground Water Authority for Ground Water Clearance has been submitted on 07.11.2006.
- (xxiv) According to the Office Memorandum File no-IA3-22/10/2022-IA.III dated 11th April 2022 of MoEF&CC, Public hearing/Public consultation is exempted for the expansion project (up to 50% expansion) and F No IA3-22/10/2022-IA.III (E177258) dt. 07.05.2022 where no additional land acquisition or forest land diversion are involved. Thus, submission of draft

EIA/EMP report at State Pollution Control Board is not required. Hence present EIA report is does not attract the provisions of the Public Consultation.

- (xxv) Consent to Operate for the existing capacity was obtained from the State PCB on. 01.08.2021 and is valid till 31.07.2026.
- (xxvi) Hinghloo canal is passing at a distance of 0.77 km in west direction from project site. The canal will be/not be diverted in consultation with the Water Resource Department of the State Government.
- (xxvii) Regular monitoring of ambient air quality is being carried out on fortnightly basis. The documented report is submitted to Regional office of State pollution control Board and also to regional office of MoEF&CC along with half yearly EC compliance report. In general, the results of ambient air quality monitoring data were found within prescribed limits except few aberrations which can be attributed to the specific local conditions during the day of sampling.
- (xxviii) No court cases, violation cases are pending against the project of the PP.
- (xxix) The project does not involve violation of the EIA Notification, 2006 and amendment issued there under. The coal production from the mine was started from the year 2007 onwards. No excess production of coal from the sanctioned capacity has been realized since the commencement of mining operations. The coal production, realized from the project, from 1993-94 onwards, is as under:

<b>Year</b>	<b>Actual Production (MTPA)</b>
<b>19-20</b>	0.99
<b>20-21</b>	1
<b>21-22</b>	1
<b>22-23</b>	1

- (xxx) No R & R is applicable.
- (xxxi) Total cost of the project is Rs. 76.67 crores. Cost of production is Rs 76.67 crores /- , CSR cost is Rs. 15.5 Lakhs, R&R cost is not applicable. Environment Management Cost is Rs 297.72 Lakhs; Capital Rs. 88.62 Lakhs Recurring Rs. 209.10 Lakhs of all years.
- (xxxii) Consent to operate (CTO) was obtained from the State Pollution Control Board on 01.08.2021 and is valid till 31.07.2026.
- (xxxiii) Past Production details comparison with existing EC :

<b>Year</b>	<b>EC Sanctioned capacity (MTPA)</b>	<b>Actual Production (MTPA)</b>	<b>Excess production beyond the EC sanctioned capacity</b>
<b>19-20</b>	1	0.99	0
<b>20-21</b>	1	1	0
<b>21-22</b>	1	1	0
<b>22-23</b>	1	1	0

**35.1.3** The EAC observed the following during the EAC meeting:

- i. PP has applied expansion of project under MoEF&CC's OM 11<sup>th</sup> April 2022 wherein Public hearing/Public consultation is exempted for the expansion project (up to 40% expansion) under which no additional land acquisition or forest land diversion are involved. PP has applied the application within same mine lease area.
- ii. The PP has obtained Environmental Clearance for 1.00 MTPA from MoEF&CC vide letter no. J-11015/375/2006-IA-II. (M) Dated 17<sup>th</sup> May 2007 in favor of from M/s Bengal Emta Coal Mines Ltd. (BECML), which was transferred to M/s The West Bengal Power Development Corporation Limited (WBPDCCL) vide letter dated 20th December 2018.
- iii. Earlier, the project involves 101.77 ha of forest land, which was issued in favor of M/s The West Bengal Power Development Corporation Limited (WBPDCCL), as per the MoEF&CC vide letter no 8-45/2018-FC dated 29<sup>th</sup> October, 2018 (Stage I) & F. No-8-45/2018 dated 10th April, 2019 (Stage II).
- iv. EAC observed that PP, though prepared mine plan, however, it has not been approved by the competent authority.
- v. The PP was obtained the Consent to operate (CTO) from the State Pollution Control Board on 01.08.2021 and is valid till 31.07.2026.
- vi. The Schedule-I species have not found in the project area.

**35.1.4** *The EAC, after deliberations noted that instant project is a brown field opencast coal mine project. The project has been categorized as "A" (as per EIA notification 2006) due to its location fall within 5 km from interstate boundary of West-Bengal and Jharkhand. It was noted that the project has been applied under MoEF&CC's Office Memorandum dated 11<sup>th</sup> April, 2022 for the expansion of the Gangaramchak & Gangaramchak - Bhadulia Opencast Coal Mine from production capacity of 1.00 MTPA to 1.50 MTPA within total project area of 186.42 ha. The Committee noted that presently no forest land is involved; however, the project proponent has not obtained the mining plan approval from competent authority, which mandatory condition of OM dated 11<sup>th</sup> April, 2022. Further, PP could not submit the complete information on the lease documents. Few conditions of existing EC have also noted to be non-complied which includes the plantation and operational status of ETP, meeting the discharge standards. The committee emphasised to submit a detail action plan in comparative tabular format for non-complied conditions in time bound manner. PP needs to submit documents showing the tabular form to compare the EC condition, IRO action report points and the compliance status in one table.*

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

- i. PP shall submit the approved mining plan as per office memorandum vide dated 11<sup>th</sup> April, 2022 from the Competent Authority.
- ii. PP shall submit the updated status of compliance of existing EC conditions in a tabular form with proof, which are reported to be non-complied by IRO. Also to submit the time bound action plan to implement all non-compliance conditions including plan for plantation of trees.
- iii. PP shall submit performance/operational status of ETP.

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

## **Agenda No. 35.2**

**Takli Jena Bellora (North & South) Opencast cum Underground Coal Mine of overall capacity 1.5 MTPA in total area of 936 Ha (OC – 236.9 Ha; UG – 699.10 Ha) of M/s Aurobindo Realty Infrastructure Pvt Ltd (ARIPL) located in Village Bellora, Tehsil Bhadravati, District Chandrapur (Maharashtra) - For Environmental Clearance- reg.**

**[Online proposal No. IA/MH/CMIN/223819/2021; File No. J-11015/62/2021-IA-II(M)]**

**35.2.1** The proposal is for Environmental Clearance for Takli Jena Bellora (North & South) Opencast cum Underground Coal Mine of overall capacity 1.5 MTPA in total area of 936 Ha (OC – 236.9 Ha; UG – 699.10 Ha) of M/s Aurobindo Realty Infrastructure Pvt Ltd (ARIPL) located in Village Bellora, Tehsil Bhadravati, District Chandrapur (Maharashtra).

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

- (i) The project area is covered under Survey of India Topo Sheet No. F44S15, F44S16, F44T3, F44T4 and is bounded by the geographical coordinates ranging from 20° 9'16"N to 20°11'57" N and longitudes 79° 03' 41"E to 79° 06' 21"E.
- (ii) Coal linkage of the project for commercial use and thereby reducing the gap in the demand supply of coal in the country.
- (iii) There is no Joint venture cartel for this company.
- (iv) The project doesn't fall in the Critically Polluted Area (CPA), where the MoEF&CC's vide its OM dated 13<sup>th</sup> January, 2010 has imposed moratorium on grant of environment clearance.
- (v) Employment generation, Direct and Indirect employment to 1130 persons will be provided from the project.
- (vi) The project is reported to be beneficial in terms of meeting consumptive coal for commercial use and thereby reducing the gap in the demand supply of coal in the country
- (vii) MOEF&CC has accorded Terms of Reference (TOR) vide its letter No. IA-J-11015/62/2021-IA-II(M) dated 04.10.2021
- (viii) Total mining lease area as per block allotment is 936.0 ha. Ministry of Coal has accorded

approval for Mining Plan including Mine Closure Plan of Takli Jena Bellora (North) and Takli Jena Bellora (South) Coal Block vide Letter No: MHMR008/APP0060/2021 on 16.02.2022.

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

**Pre-mining land use details**

**(Area in Ha)**

S. No.	Land Use	Within MLA (ha)	Outside MLA (ha)	Total
1.	Agricultural Land	893	0	893
2.	Forest land	0	0	0
3.	Waste land	0	0	0
4.	Grazing land	0	0	0
5.	Surface Water Bodies	12.5	0	12.5
6.	Settlements	11.0	0	11.0
7.	Other (Specify)	19.5	0	19.5
	Total	936.0	0	936.0

**Post Mining**

S. No.	Land use	Land use (ha)				
		Plantation	Water Body	Public Use	Undisturbed	Total
1	External OB Dump	85.28	-	-	-	85.28
2	Top Soil Dump	4.40	-	-	-	4.40
3	Excavation	132.18	-	-	-	132.18
4	Roads	-	-	2.00	-	2.00
5	Built-up Area	32.57		5.00		37.57
6	Green Belt	6.32	-	-	-	6.32
7	Undisturbed Area	-	-	-	643.61	643.61
8	Safety Zone /Rationalization Area (Safety zone, Settling pond, Garland drain, UG entry)	23.08	-	-	-	23.08
9	Diversion / Below River / Nala /Canal	-	1.56	-	-	1.56
10	Water Body	-	-	-	-	-
11	Staff Colony	-	-	-	-	-
	<b>Total Area =</b>	<b>283.83</b>	<b>1.56</b>	<b>7.00</b>	<b>643.61</b>	<b>936</b>

- (x) Total geological reserve reported in the mine lease area is 111.819 MT with 63.56 MT mineable reserve. Out of total mineable reserve of 63.56 MT, 37.97 MT are available for extraction. Percent of extraction is 41.129 %.



- (xi) 3 seams with thickness ranging from 4.45m – 14.19 m are workable. Grade of coal is G7, G9 & G10, stripping ratio 1:6.73, while gradient is 8° to 16°.
- (xii) Method of mining operations envisages by opencast and underground mining method
- (xiii) Life of mine is 34 years.
- (xiv) The project has 2 external OB dumps in an area of 85.28 ha with 60m height and 16.43 Mm<sup>3</sup> of OB. Internal OB in an area of 132.18 ha with 70 Mm<sup>3</sup> of OB is envisaged in the project.
- (xv) Total quarry area is 132.18 ha out of which backfilling will be done in 132.18 ha while final mine void will be created in an area of 0 ha with a depth of 0 m. Backfilled quarry area of 132.18 ha shall be reclaimed with plantation. Final mine void will be converted to Plantation.
- (xvi) Transportation of coal has been proposed by dumpers in mine pit head, from surface to siding by dumpers and at sidings by road/conveyor
- (xvii) Reclamation Plan in an area of 283.83 ha, comprising of 85.28 ha of external dump, 132.18 ha of internal dump and 6.32 ha of green belt. In addition to this, an area of 60.05 ha, included in the safety zone/rationalization area, built up area, virgin area and top soil storage, has also been proposed for green belt development.
- (xviii) There are no National Parks, Wildlife Sanctuaries and Eco-Sensitive Zones fall within 10 km boundary of the project. However, A small part of Bhadravati range falls in the wildlife corridor of Tadoba- Kanhargao- Tipeshwar wildlife sanctuary comes in the 5.00 km radius of the buffer zone of the proposed coal block as per PCCF clarification vide letter no: D23(2)/Survey/C.N.97/2858/2021-22; Dated: 10<sup>th</sup> February 2022.
- (xix) Wildlife conservation plan for schedule – I species has been prepared and has been submitted to PCCF(WL), Government of Maharashtra for approval vide letter no: ARIPL/CCF/WLO/2022/1076; Dated: 19<sup>th</sup> September 2022.
- (xx) The ground water level has been reported to be varying between 5.40 m to 10.10 m during pre-monsoon and between 0.90 m to 4.90 m during post-monsoon. Total water requirement for the project is 1674.03 KLD.
- (xxi) An application of NOC for groundwater clearance (21-4/8012/MH/MIN/2022) is submitted to CGWA on 12.05.2022 and the NOC for ground water abstraction has been obtained from CGWA vide NOC no: CGWA/NOC/MIN/ORIG/2022/16172.
- (xxii) Public hearing for the project of 1.5 MTPA capacity in an area of 936 ha was conducted on 21<sup>st</sup> June 2022 at Project site of M/s Aurobindo Realty & Infrastructure Private Limited (ARIPL), Village- Bellora, Tal- Bhadravati, Dist – Chandrapur, Maharashtra under the Chairmanship of Additional District Magistrate, Chandrapur. Major Issues raised in the public hearing include environmental pollution, noise pollution, water conservation measures & Land acquisition etc.
- (xxiii) Takli, Bellora and Khandala nalla is flowing within the boundary of lease. The Bellora and Takli nallah will be diverted in consultation with the Water Resource Department of the State Government.
- (xxiv) Regular monitoring of ambient air quality will be carried out on fortnightly basis. In general, the results of ambient air quality monitoring data were found within prescribed limits except few aberrations which can be attributed to the specific local conditions during the day of sampling.
- (xxv) No court cases, violation cases are pending against the project of the PP.



Name of the court: High court, Name of the sub court: Delhi, Case No: WP(C) 5701/2021 & CM APPL 17807/2021, Verdict: As per the direction of the high court ARIPL was directed to deposit 5.9 crores and additional B.G of 9 crores that has been done and the subject land has been transferred in the name of the company

- (xxvi) The project does not involve violation of the EIA Notification, 2006 and amendment issued there under.
- (xxvii) The project involves 822 project affected families. R&R of the PAPs will be done as per RFCTLARR 2013
- (xxviii) Total cost of the project is Rs. 655.2 Crores. Cost of production is Rs 700 /- per tonne., CSR cost is Rs. 5 per tonne, R&R cost is Rs.171.68 crores. Environment Management Cost: Capital cost is Rs. 9.76 Crores & Recurring cost is Rs 1.28 Crores
- (xxix) Consent to operate (CTO) was obtained from the State Pollution Control Board: Not applicable as it is a proposed coal mining project.
- (xxx) Past Production details comparison with existing EC: Not applicable as it is a proposed coal mining project.

**35.2.3** The committee observed the following during the EAC meeting:

- i. The project proponent had obtained the TOR vide letter no. IA-J-11015/62/2021-IA-II(M) dated 4<sup>th</sup> October, 2021 and further amended ToR vide letter dated 28<sup>th</sup> March, 2022.
- ii. Ministry of Coal has accorded approval for Mining Plan including Mine Closure Plan of Takli Jena Bellora (North) and Takli Jena Bellora (South) Coal Block vide Letter No: MHMR008/APP0060/2021 on 16.02.2022. The project consists of mine lease area of 936 ha which consist of 236.9 ha of Opencast and 699.10 ha of Underground Coal Mine.
- iii. No forest land is involved in the mine area that attracts the provision of FC, Act, 1980 for diversion of forest land.
- iv. Public Hearing was conducted on 21.06.2022 by Maharashtra Pollution Control Board. In public hearing, main concerns were raised related to air pollution, water pollution, land acquisition, Project affected person and their rehabilitation by responsible NGO, Employment and remuneration, participation in development work, environment protection and social responsibility, availability of water from the Mine for agriculture purpose.
- v. Takli, Bellora and Khandala nalla is flowing within the boundary of lease. The Bellora and Takli nallah has been proposed to be diverted in consultation with the Water Resource Department of the State Government.

**35.2.4** *The EAC after deliberation noted that the instant project is greenfield project having total mine lease area of 936 ha wherein Opencast cum Underground Coal Mining shall be performed with total capacity of 1.5 MTPA. The project proponent informed that out of 1.5 MTPA of total production, 1.1 MTPA (Peak) shall be for opencast; while 0.4 MTPA (Peak )for underground coal operation. On discussing the public consultation issues, the Committee emphasized that adequate measures should be taken to minimize the post closure impact of Daga mines, which is now part of mine area. EAC suggested to dewater the Daga mine pit and its water be pumped out to meet the demands of local*

people for agriculture purposes after treating through the Effluent Treatment Plant (ETP). Further it was also advised that concerns raised after closing of mines leading to loss of employment and agriculture, should be addressed properly and separate budget provision shall be earmarked for this purpose. The EAC emphasized to demarcate the command area in consultation with local villagers and establish the pumping station accordingly through water distribution network to reach the extreme point of requirement.

PP vide letter dated 26.09.2022 has provided the information wherein Rs. 2.2 Crore has been fixed for water distribution system in 6 villages (Kiloni, Kadholi, Kondha, New Kondha, Takli and Gotala Rith) and also revised public hearing budget to tune of Rs. 3.03 crore. Apart from this, EMP budget has been revised to Rs. 22.79 crore with annual recurring cost of Rs. 4.19 Crore. PP also clarified through map that distance of mine boundaries is about 18 km from the coordinates of CPA as drawn by SPCB. The EAC suggested for monitoring of air quality through Continuous Automatic Air Quality Monitoring Station (CAAQMS) at mine site or at its vicinity.

Based on the above, EAC recommended the proposal for grant of Environmental Clearance for Takli Jena Bellora (North & South) Opencast cum Underground Coal Mine of overall capacity 1.5 MTPA in total area of 936 Ha (OC – 236.9 Ha; UG – 699.10 Ha) of M/s Aurobindo Realty Infrastructure Pvt Ltd (ARIPL) located in Village Bellora, Tehsil Bhadravati, District Chandrapur (Maharashtra) with following specific conditions;

#### **Specific condition**

- i. PP to obtain CTE/ CTO from SPCB for production capacity of 1.5 MTPA for opencast and underground as proposed by PP.
- ii. PP shall prepare a detailed plan for distribution of water within and outside Mine lease area from dewatering of Daga mine pit in consultation with gram panchayat and shall implement the water treatment plant to meet the requirement with the start of production.
- iii. As proposed by PP vide letter dated 26.09.2022, Rs. 2.2 Crore shall be invested for water distribution system in 6 villages (Kiloni, Kadholi, Kondha, New Kondha, Takli and Gotala Rith) with commissioning of mine . PP to implement the revised public hearing budget to tune of Rs. 3.03 crore on proposed activities.
- iv. PP to implement revised EMP budget of Rs. 22.79 crore as capital expenditure on pollution control measures with annual recurring cost of Rs. 4.19 Crore.
- v. In addition to manual monitoring, PP to install a continuous ambient air quality monitoring stations at suitable location preferably village side with consultation of SPCB. The real time data so generated shall be uploaded on company website. In addition, data should also be displayed digitally at entry and exit gate of mine lease area for public display.
- vi. PP shall implement a plan for transportation of coal nearly 80% i.e 1.2 MTPA through Railway and rest 20% i.e 0.3 MTPA by road.

- vii. *Presently as recommended by EAC, only Bellora nallah shall be diverted with due permission from Irrigation Department of the Maharashtra State Government and PP to take adequate safety measures to restore the catchment areas fall under these streams. However, no diversion of Takli stream shall be allowed for next 12 years. PP to take adequate measures for its environment/natural flow and also to ensure that no untreated mine water shall enter into this stream and proper garland drain shall be made all along the stream to catch mine water.*
- viii. *PP shall construct a pucca road to maintain the safety of people residing nearby along the transportation route with plantation on either side of the road.*
- ix. *PP shall install fixed fog cannon (mist spayer) and fixed sprinkler all along the haul road till CHP, Railway siding and OB Dump area and accordingly sufficient number of fog cannons (not less than 10 nos.) with 40 mts jet length shall be installed within 6 months. It should be ensured that air pollution level confirm to the standards prescribed by the MOEFCC/CPCB.*
- x. *PP shall construct a proper cemented 4 lane approach road of 1.36 km for the purpose of transportation of Coal from mine lease area to nearby National highway.*
- xi. *Project proponent to plant 150,000 nos. of native trees with broad leaves along the transportation route in three years to prevent the effect of air pollution. After completion of tree plantation, number of trees shall be duly endorsed from District Forest Officer.*
- xii. *PP shall deploy only 30-35 tonnes covered trucks/dumper to reduce fleet size till Rapid loading system and to implement surface miner and conveyor belt system from pit head to CHP as feasible.*
- xiii. *PP shall conduct third party audit of compliance of EC condition at an interval six months and its report shall be submitted to IRO, MoEF&CC.*
- xiv. *The status of mine closure activities must be included in every six months compliance report submitted to the state pollution control board and IRO.*
- xv. *PP to maintain the topped haul road properly to minimized the dust emission. PP to also develop pucca roads by seeking consent from the panchayat with widening of roads especially roads inter linking the villages within the study area of 10 km radius buffer zone.*
- xvi. *PP to install solar lights along the road used for transportation of minerals to avoid the accidents at night and also seek its maintenance. PP is asked to also identify the rural areas for installation of solar light with its maintenance within the study area of 10 km radius buffer zone within one year.*
- xvii. *PP to provide bio toilets to the villages located within the study areas within 1 year from the grant of this EC.*
- xviii. *Persons of nearby villages shall be given training on livelihood and skill development to make them employable with its proper records.*
- xix. *PP to fulfill all the commitment made in the minutes of public hearing to address the issues raised therein in a time bound manner and a progressive report to be furnished to IRO in every six monthly as compliance report.*
- xx. *The illumination and sound at night at project sites disturb the villages in respect of both human and animal population. Consequent sleeping disorders and stress may affect the health in the villages located close to mining operations. Habitations have a right for darkness and*

*minimal noise levels at night. PPs must ensure that the biological clock of the villages is not disturbed; by orienting the floodlights/ masks away from the villagers and keeping the noise levels well within the prescribed limits for day light/night hours.*

- xxi. PP shall pay to farmers of agricultural land if there is any loss due to pollution found by concerned District Commissioner as per extent rules or norms.*
- xxii. PP should establish in house (at project site) environment laboratory for measurement of environment parameter with respect to air quality and water (surface and ground. A dedicated team to oversee environment management shall be setup which should comprise of Environment Engineers, Laboratory chemist and staff for monitoring of air, water quality parameters on routine basis. Any non- compliance or infringement should be reported to the concerned authority.*
- xxiii. PP to implement the recommendation of land subsidence study carried out for underground mine and report shall be submitted to IRO in every six monthly report*
- xxiv. PP to obtain the star rating as per the guidelines of Ministry of Coal.*
- xxv. Hon'ble Supreme Court in an Writ Petition(s) Civil No. 114/2014, Common Cause vs Union of India & Ors vide its judgement dated 8th January, 2020 has directed the Union of India to impose a condition in the mining lease and a similar condition in the environmental clearance and the mining plan to the effect that the mining lease holders shall, after ceasing mining operations, undertake re-grassing the mining area and any other area which may have been disturbed due to their mining activities and restore the land to a condition which is fit for growth of fodder, flora, fauna etc. Compliance of this condition after the mining activity is over at the cost of the mining lease holders/Project Proponent". The implementation report of the above said condition shall be sent to the Regional Office of the MoEF&CC.*

### **Agenda No. 35.3**

**Manoharpur Opencast Coalmine Project (8 MTPA) of M/s Odisha Coal and Power Ltd in mine lease area of 977.875 ha located in IB-Valley, District Sundargarh (Odisha) - Amendment in Environmental Clearance- reg.**

**[Online Proposal No. IA/OR/CMIN/19231/2008; File No. J-11015/139/2008.IA. II(M)]**

**35.3.1** The proposal is for amendment in Environmental Clearance for Manoharpur Opencast Coalmine Project with production capacity of 8 MTPA of M/s Odisha Coal and Power Ltd in mine lease area of 977.875 ha located in Ib Valley, District Sundargarh (Odisha).

PP is requesting to amend the flowing specific condition no. xii of EC letter dated 21.02.2014 which is reproduced as following;

*“Coal transportation from mine to railway siding by conveyor belt and from siding to TPP by MGR through SILO loading of the wagons”.*

Earlier, vide letter dated 06.09.2019, PP had obtained EC amendment for transportation of coal by road due to non-implementation of MGR through SILO loading of the wagon. Now PP is requesting for transportation of coal by road or road cum rail mode from Manoharpur coal mine to different consumers through (i) Kanika /ACB Railway Siding.(ii) Towards Raigarh from Duduka, (iii) Sundargarh & from there onwards towards Rourkela & Jharsuguda and/or (iv) Others siding/ Consumers near Vicinity.

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

- (i) The project area is covered under Survey of India (Open series map) no. F44 R13 (Toposheet no. 64 O/13) & F44 R9 (Toposheet no. 64 O/9) and is bounded by the geographical coordinates ranging from 21° 55' 52.168" to 21° 58' 16.871" N and Longitudes 83° 44' 41.287" to 83° 47' 42.750" E.
- (ii) Coal Linkage of the project is proposed for OPGC Power Plant (2x660 MW) at Banaharpalli District Jharsuguda, Odisha. Further, the excess coal (i.e. about 9000 TPD) which will be available after meeting the captive requirement of OPGC power plants (EUP) will be supplied through the road or road cum rail mode to any consumer from the pit head or nearest railway siding.
- (iii) OCPL is a Joint Venture company of M/s Odisha Power Generation Corporation Limited (OPGC)-51% share holder, Address: Zone A, 7th Floor, Fortune Towers, Chandrasekharpur, Bhubaneswar-751023 and M/s Odisha Hydro Power Corporation Limited (OHPC)-49% shareholder, Address: Odisha State Police Housing & Welfare Corporation Building, Vanivihar Chowk, Janpath, Bhubaneswar-751022 .
- (iv) Project does not fall in the Critically Polluted Area (CPA), where the MoEF&CC's vide its OM dated 13th January, 2010 has imposed moratorium on grant of environment clearance.
- (v) Earlier, the Environment Clearance to the project was obtained under EIA Notification 2006 vide Ministry's letter No. J-11015/139.2008-IA.II (M) dated 21.02.2014 for 8 MTPA in mine lease area of 977.875 ha by previous allottee i.e. OPGC. On allocation of the coal block to OCPL the same has been transferred in favour of OCPL vide EC letter dated 30.12.2015 and amended vide EC letter dated 06.11.2019.
- (vi) Total Mine lease area as per block allotment is 653.509 ha (Inside the coal block) and outside lease Area is 324.367 ha (Outside the coal block); thus total project area is 977.875 ha. Mining plan including progressive mine closure plan has been approved by MoC.
- (vii) Life of mine is 23 years.
- (viii) The project area comprises four nos. of external dump having total area about 193.478 ha which will store about 61.73 Mm<sup>3</sup> out of the total generated over burden i.e. 432.11 Mm<sup>3</sup>. The balance 370.38 Mm<sup>3</sup> would be back filled in an area of 257.11 ha.

- (ix) Transportation of coal has been proposed by Dumpers / trucks from OC pit to the pit head stockpile / CHP / Wharf wall. From there, coal will be transported by road through Dumpers/ tippers to siding / by conveyor to silo loading onto MGR Rakes. Surplus coal will be delivered to the consumers at the pit head / nearest railway siding.
- (x) Consent to Operate (CTO) for existing 8 MTPA production was obtained from OSPCB and it is being renewed regularly. Last CTO was issued on 25.03.2022 and is valid till 31.03.2023.
- (xi) Regular monitoring of ambient air quality is being carried out on fortnightly basis. The documented report is being submitted to Regional Officer, OSPCB and also to MoEF&CC along with half yearly EC compliance report. In general, the results of ambient air quality monitoring data were found within prescribed limits.
- (xii) No court cases, violation cases are pending against the project of the PP.
- (xiii) Consent to Operate (CTO) was obtained from State Pollution Control Board, Odisha on 25.03.2022 and is valid till 31.03.2023.

**35.3.3** The Committee observed the following during the EAC meeting:

- i. The Environmental clearance was granted vide letter no. J-11015/139/2008-IA.II (M) dated 21.02.2014 and further transferred in the name M/s Odisha Coal and Power Limited for open cast coalmine project of 8 MTPA vide letter dated 30.12.2015.
- ii. The EAC noted that Ministry had issued amendment in the EC vide letter dated 06.11.2019 regarding road transportation of coal. Now PP is further extending this permission; however adequate details of road transportation was not elaborated.
- iii. PP is asking for amendment in EC for transportation of coal from coal block to Kanika/ACB Siding through road on a road length of 21.82 km and through rail from Kanika/ACB siding to defined location of thermal power plant with distance of 51.18 km to meet the requirement.

**35.3.4** *During deliberation, EAC noted that though the project proponent has commissioned the MGR network for transportation of coal to the linked Odisha Coal and Power Limited Thermal Power plant but due to non-functioning of ash evacuation system of linked Thermal Power Plant, the said mine will have surplus coal and PP, therefore, intends to transport coal by road or road cum rail mode from Manoharpur Coal mine to different consumers as he is unable to fetch complete coal to TPP. So EAC noted that this is a temporary situation. On emphasizing the early rectifying the problem, PP promised that the issue will be resolved in a defined time but no proper timeline was given. In this context, after deliberation, EAC agreed to allow 6 MTPA of coal through MGR network to the linked TPP and remaining 2 MTPA by road upto the period of 18 months only. Meanwhile PP would rectify TPP problem, which is now resulting the inadequate use of infrastructure already constructed for transportation of coal to linked TPP*

*Based on the above discussion, the EAC recommended for the amendment in the Environmental clearance for Manoharpur Opencast Coal Mining Project ( 8 MTPA) to transport 6 MTPA of coal with MGR network linked with Odisha Coal and Power Limited thermal power plant*



*and 1 MTPA shall be transported by road from coal block to Kanika/ACB Siding and 1 MTPA to other locations ( Raigarh, Jharsugoda & Rurkela) through road cum rail upto the period of 18 months only. Meanwhile PP would rectify TPP problem, which is now resulting the inadequate use of infrastructure already constructed for transportation of coal to linked TPP . The EAC recommended the proposal with the following specific conditions;*

- i. PP shall prepare and implement a solution based report within 3 months and resolve the problem related to ash evacuation system in power plant within 18 months.*
- ii. Till the period, PP shall transport 6 MTPA of coal with MGR network linked with Odisha Coal and Power Limited thermal power plant and 1 MTPA will be transported from coal block to Kanika/ACB Siding and 1 MTPA to other locations ( Raigarh, Jharsugoda & Rurkela) through road cum rail .*
- iii. Adequate safety measures along the road side in terms of plantation, water sprinkling and dust mitigation measures including maintenance of the road shall be done.*
- iv. PP shall deploy only 35-40 tonnes covered trucks/dumper to reduce fleet size with tarpaulin covered system.*

*In view of the above committee **recommended** the proposal.*

#### **Agenda No. 35.4**

**Expansion of Amelia (North) combined OC & UG coal mine with increase of production capacity from 2.8 MTPA to 3.92 MTPA in Mine Lease Area of 728.75 ha by M/s Jaiprakash Power Ventures Limited at village Majhauri, Tehsil Deosar , District Singrauli (Madhya Pradesh)- Environment Clearance under OM dated 11.04.2022 (increase of mine capacity upto 50 %) –reg.**

**[Online Proposal No. IA/MP/CMIN/287311/2022; File No. J-11015/355/2006-IA-II(M)]**

**35.4.1** The proposal is for expansion of Amelia (North) combined OC & UG coal mine with increase of production capacity from 2.8 MTPA to 3.92 MTPA in Mine Lease Area of 728.75 ha by M/s Jaiprakash Power Ventures Limited at village Majhauri , Tehsil Deosar , District Singrauli (Madhya Pradesh) under OM dated 11.04.2022.

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

- (i) The project area is covered under Survey of India Topo Sheet No 63 L/8 (R.F.1:50,000) and is bounded by the geographical coordinates ranging from Latitudes (N): 24° 07'32" to 24° 08'37" and Longitude (E): 82° 24'25" to 82° 26'45".
- (ii) Coal linkage of the project is proposed for Jaypee Nigrie Super Thermal Power Plant, Village Nigrie, District Singrauli.
- (iii) Joint venture : Not Applicable



- (iv) Project does not fall in the Critically Polluted Area (CPA), where the MoEF&CC's vide its OM dated 13<sup>th</sup> January, 2010 has imposed moratorium on grant of environment clearance. CPA Singrauli is 11.6 km E.
- (v) Employment generation- Present manpower for 2.80 MTPA production is 1602 and additional manpower requirement for the expansion of mine to 3.92 MTPA shall be 156 including outsourced. Thus, the total has been estimated as 1758 persons after expansion.
- (vi) The project is reported to be beneficial in terms of :  
**Social:** Direct and Indirect employment generation and CSR activities in nearby villages.  
**Financial:** Income generation to employee and associated persons, revenue generation to state etc.  
**Environmental:** Afforestation of backfilled and dump areas, 100% reuse of mine seepage water , use of railway for 100% evacuation of Coal.
- (vii) Earlier, the Environment Clearance to the project was obtained under EIA Notification, 2006 vide MoEF&CC's vide file no. J-11015/355/2006-IA.II(M) dated 20.07.2007 and transferred to the PP on 13.05.2015
- (viii) Terms of Reference grant- not applicable since this is an expansion under 7(ii) of EIA Notification
- (ix) Total mining lease area as per block allotment is 728.75ha. Mining Plan has been approved vide M o C letter no. 13016/3/2003-CA-I dated November 14, 2006. Mine Closure Plan has been approved vide MoC letter no. 34011-22-2010-CPAM dated 18.05.2011
- (x) The land usage pattern of the project is as follows:

**Pre-mining land use details (Area in Ha)**

Land use pattern	Within ML Area	Outside ML Area	Total
Forest land	728.75	0.00	<b>728.75</b>
Agricultural Land	0	0.00	<b>0</b>
Waste Land	0	0.00	<b>0</b>
Surface water Body	0	0.00	<b>0</b>
Grazing Land	0	0.00	<b>0</b>
Settlements	0	0.00	<b>0</b>
<b>Total</b>	<b>728.75</b>	<b>0.00</b>	<b>728.75</b>

**Post Mining Land Use details (in Ha.)**

	Description of area	Land use (Ha.)				
1.	<b>ML Area</b>					
2.	Excavation/Quarry	380.88	94.22	0.00	0.00	475.1
3.	Top soil storage	0.00	0.00	0.00	0.00	0.00

4.	Roads	5.5	0.00	0.00	0.00	5.5
5.	Greenbelts	11	0.00	0.00	0.00	11
6.	Water reservoir	10	0.00	0.00	0.00	10
7.	Internal OB Dump	162	0.00	0.00	0.00	162
8.	External OB Dump	0.00	0.00	0.00	0.00	0.00
9.	Virgin Area	0.00	0.00	61.15	0.00	61.15
10.	Built up area (Colony/Office	4.00	0.00	0.00	0.00	4.00
	<b>TOTAL</b>	<b>573.38</b>	<b>94.22</b>	<b>61.15</b>	<b>0.00</b>	<b>728.75</b>

- (xi) Total geological reserve reported in the mine lease area is 99.23 MT with 73.98 MT mineable reserve. Out of total mineable reserve of 73.98 MT, 70.28 MT are available for extraction. Percent of extraction is 71%.
- (xii) 9 seams with thickness above 1m are workable. Grade of coal varies from D to G (~G9-G14) in seam VII & VIII (to be mined), stripping ratio 7.72:1 (Cum:Tonne), while gradient is 3 to 10 degree .
- (xiii) Method of mining operations envisages by Opencast mechanized method
- (xiv) Life of mine: Reduction of 4 years in opencast only from 27 years (as per MP) to 23 years. No change proposed in underground (23 years). Total life reduced from 41 to 35 years.
- (xv) The project has 2 external OB dumps in an area of 162 ha with 100m height and 82.44 Mcum of OB Balance OB 425.381 Mm3 is proposed to be dump in internal dump.
- (xvi) Total quarry area is 475.10 ha out of which backfilling will be done in 380.88 ha while final mine void will be created in an area of 94.22 ha with a depth of 130 m. Backfilled quarry area of 380.88 ha shall be reclaimed with plantation. Final mine void will be converted into a water body.
- (xvii) Transportation of coal has been proposed by railway wagon loading through rapid loading system at CHP , and from mine pit to CHP by road through trucks/tippers.
- (xviii) Reclamation Plan in an area of 573.38 ha, comprising of 162 ha of external dump (outside pit but within ML), 380.88 ha of internal dump (backfill) and 11.00 ha of green belt (which is also the safety zone), 5.5 ha roads, 4 ha built up area and 10 ha reservoir has also been proposed for plantation.
- (xix) 728.75ha of forest land has been reported to be involved in the project. Approval under the Forest (Conservation) Act, 1980. FC was obtained vide File No. 8-08/2007-FC dated 30.11.2012 and transferred to the PP on 11.05.2015
- (xx) No National Parks, Wildlife Sanctuaries and Eco-Sensitive Zones fall within 10 km boundary of the project.
- (xxi) Wildlife conservation plan for schedule – I species has been submitted to competent authority

and approved vide letter no. F-5-2/2010/10-3/2591 issued on 01.11.2012

- (xxii) The ground water level has been reported to be varying between 5.44 to 30.80 meter (Pre-Monsoon) below ground level (m bgl) and 3.25 to 30.26 meter (Post-Monsoon) below ground level. Total water requirement for the project is 1010 KLD.
- (xxiii) NOC no. for Ground water Clearance by Central Ground Water Authority is CGWA/NOC/MIN/REN/2/2021/6323 valid from 31/12/2020 to 30/12/2022.
- (xxiv) Public hearing for the project of 2.80 MTPA capacity in an area of 728.75 ha was conducted on 20.03.2007 at Gram Panchayat Majhauhi, Tehsil Deosar, District Sidhi, Madhya Pradesh under the Chairmanship of Additional Collector, Sidhi Mr. Z.U. Sheikh and representative of M.P Pollution Control Board, Dr. R.S. Prahar. Major issues raised in the public hearing and Appropriate action to address the issues raised in the Public Hearing have already been taken/proposed.
- (xxv) Consent to Operate for the existing capacity was obtained from the Madhya Pradesh Pollution Control Board vide letter no. 114390, 04/01/2022 dated 01.01.2022 is valid till 31.03.2023
- (xxvi) No major River/nala is flowing over boundary of lease.
- (xxvii) No court cases, violation cases are pending against the project of the PP.
- (xxviii) The project does not involve violation of the EIA Notification, 2006 and amendment issued there under. The coal production from the mine was started from the year 2014 onwards. No excess production of coal from the sanctioned capacity has been realized since the commencement of mining operations.
- (xxix) The project involves no project affected families. R&R of the PAPs is Not Applicable.
- (xxx) Total cost of the project is Rs. 120 crore. Cost of production is Rs 2063 /- per tonne for FY 2022-23, Proposed CSR activities for FY-2022-23 is Rs. 20.28 Lakh. Environment Management Cost is Rs. 24 Lakh & Recurring 178 lakh per year.
- (xxxi) Past Production details comparison with existing EC
- (xxxii) Past Production of the mine was always within 2.80 MTPA, as per the EC issued by MoEF vide File no.J-11015/355/2006-IA.II(M), dated 20.07.2007.

**35.4.3** The Committee noted the following observation during the EAC meeting:

- (i) The project proponent has obtained the Environmental Clearance vide letter dated 20.07.2007 for production capacity of 2.8 MTPA. However, PP did not provide year-wise past production details. No approved mine plan has been furnished.
- (ii) PP has applied the application under OM dated 11.04.2022 for enhancement of 50% in production capacity under 7(ii) of EIA, Notification in mine lease area of 728.75 ha and no additional forest land is involved.
- (iii) The entire Mining lease area of 728.75 ha is forest land and the Forest clearance was obtained vide letter dated 30.11.2012.
- (iv) The Forest Clearance and Environmental clearance transferred from M/s Madhya Pradesh state Mining Corporation to M/s Jaiprakash Power Venture Limited vide letter dated 11.05.2015 and 13.05.2015 respectively.

**35.4.4** The EAC after deliberation noted that the instant project is brown field Opencast cum underground coal mine project and applied under OM dated 11.04.2022 for enhancement of 50% under 7(ii) of EIA, Notification. Due to incomplete proposal, EAC deferred the project on the following points

- i. PP to furnish the approved mining plan, which is mandatorily required as per MoEF&CC Office Memorandum dated 11<sup>th</sup> April, 2022.
- ii. PP to furnish Wildlife Conservation Plan as per the said OM and its status of implementation.
- iii. Year-wise of production status since grant of EC separately for OC and UG mine duly endorsed department of mines.
- iv. A time bound action plan for non-complied environmental conditions of existing EC to be provided.

*In view of above, the proposal has been deferred.*

#### **Agenda No. 35.5**

**Kuraloi-A North Coal Block Opencast Coal mine with Production Capacity of 8.0 MTPA in the project area of 965.58 Ha of M/s Vedanta Limited located at Villages Pipilimal, Dhauramunda, Kuraloi, Belpahar, Banjari, Bartap, Tehsil Lakhanpur District Jharsuguda (Odisha) - For Terms of References- reg.**

**[Online Proposal No. IA/OR/CMIN/291434/2022; File No. J-11015/34/2022-IA-II(M)]**

**35.5.1** The proposal is for Terms of References for Kuraloi-A North Coal Block IB-River with Coal Production Capacity of 8.0 MTPA in the project area of 965.58 Ha of M/s Vedanta Limited located at Villages Pipilimal, Dhauramunda, Kuraloi, Belpahar, Banjari, Bartap, Tehsil Lakhanpur District Jharsuguda (Odisha).

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

- i. The project area is covered under Survey of India Toposheet No. Core zone: F44R13; Buffer zone: F44R9, F44R10, F44R13 & F44R14 and is bounded by the geographical coordinates ranging from latitude 21°47'58" N to 21°50'21" N and longitude 83°48'14" E to 83°50'41" E.
- ii. The coal block is allotted for commercial coal sale including sale to affiliates & related parties, captive use, coal gasification, coal liquefaction and export of coal. Based on the economics, the coal will be commercially sold at pit head & used in the Vedanta Plants.
- iii. Company is incorporated as Public Limited Company under Company's Act and no Joint venture cartel is formed.

- iv. Ib Valley Critically Polluted Area (SPA/CPA) falls within study area of the project as per MoEF&CC, OM dated 13.01.2010.
- v. It is proposed to operate the Kuraloi-A North Coal Block by opencast mining method. Total 1235 persons will be employed during mining operation.
- vi. Socio-economic conditions of the nearby people will improve due to generation of direct-indirect employment. Infrastructure facilities i.e. Communication, transport etc will also be improved. The mine shall be contributing to the State & Central Govt. exchequer by way of mining revenue (Royalty, DMF, NMET etc.)
- vii. This is a Greenfield Coal Mining Project and process of obtaining the EC is under process.
- viii. This proposal is for ToR & ToR Application was submitted on 02.09.2022.
- ix. This is an Auction Block, Total Lease Area is 965.58 ha, in which 259.8 ha is Govt. Land, 500.62 ha is Pvt. Land and 205.17 ha is Forest land. Mining Plan (Including Mine Closure Plan) has been approved by Ministry of Coal, Government of India vide letter no. ORJH/APP0080/2021, dated 05.08.2022.
- x. The land usage pattern of the project is as follows:

**a. Pre-Mining Land use details**

S. No.	Land Use	Within ML Area (In Ha)	Outside ML Area (In Ha)	Total (In Ha)
1.	Agricultural Land	255.23	-	255.23
2.	Forest Land	205.17	-	205.17
3.	Waste Land	-	-	-
4.	Grazing Land	37.89	-	37.89
5.	Surface Water Bodies	15.54	-	15.54
6.	Settlements	-	-	-
7.	Other (Tenancy, Road, Community, Other Govt.)	451.76	-	451.76
<b>Total</b>		965.58	-	965.58

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

S. No.	Particular	Agric ulture	Plant ation	Water Body	Public Use	Forest Land (Return ed)	Undistur bed	Total
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1.	Total Excavation	-	-	-	-	-	-	635.50
2.	Backfilled Area*	20	329.81	-	-	100	-	449.81
3.	Excavated Void	-	168.69	17.0	-	-	-	185.69
4.	Diversion or Below River or Nala or Canal	-	-	24.58	-	-	-	24.58
5.	Settling Pond	-	1.28	-	-	-	-	1.28
6.	Road & Infrastructure	-	28.87	-	12.10	-	-	40.97
7.	Rationalization Area	-	-	-	120.32	-	-	120.32
8.	Garland Drains	-	7.50	-	-	-	-	7.50
9.	Greenbelt	-	17.62	-	-	-	-	17.62
10.	Undisturbed or Mining Right for UG	-	-	-	-	-	117.81	117.81
<b>Total</b>		<b>20</b>	<b>553.77</b>	<b>41.58</b>	<b>132.42</b>	<b>100</b>	<b>117.81</b>	<b>965.58</b>
<i><b>Source:</b> Derived from Approved Mining Plan with Mine Closure Plan</i>								

- xi. Coal mine spreads over an area of 965.58 ha. As per the initial exploration carried out, total reserves and resources are estimated to be about 1848.25 million tonnes, out of which total mineable reserves are 148.29 million tonnes and extractable reserves 145.32 million tonnes. Percent of extraction/recovery is 8.65%.
- xii. There are total 18 no. of working coal seams (OC: Seam Raniganj 2, Raniganj 1, Local 15, Local 14, Belpahar Top Top, Belpahar Top Bot, Belpahar Top Comb, Belpahar Bot, Local 13, Local 12, Local 11, Local 10, Local 9, Parkhani Top Top, Parkhani Top Bot, Parkhani Top Comb, Parkhani Bot and Local 07) with maximum thickness 8.20 m in Belpahar Bot Seam. Grade of coal is G-13, G-14, G-15, G-16 and G-17. Average stripping ratio of Coal to OB is 1:4.79 (Tonnes: CuM).

- xiii. Mining operations will be carried out by adopting opencast mining method with use of surface miner along with shovel & dumper, drilling, blasting, crushing, loading, unloading, transportation combination.
- xiv. Life of Mine is 23 years with 2 years of construction period with targeted production capacity of 8.0 Million TPA.
- xv. There will be no internal & external dump. Initially waste will be managed in two temporary external dumps, which are planned to be re-handled into the excavated pits. There will be no external dumps left at the end of the mine life.
- xvi. Total quarry area 635.50 ha will be excavated out of which 449.81 ha will be backfilled (rehabilitated by plantation/regrassing), out of 449.81 ha of backfilled area, (Agriculture: 20ha, Plantation: 329.81ha & of Forest Land to be returned: 100ha). Total excavated void area is 185.69 ha out of which 168.69 ha will be covered under plantation & 17 ha would be converted into water body.
- xvii. Coal movement within pit will be done by dumpers. Initially, for 2 years coal will be transported via road. Later on, coal is proposed to be transported through rail or directly by conveyor to plant.
- xviii. Total area is 965.58 ha out of which 635.50 ha will be excavated out of which 449.81 ha will be backfilled (rehabilitated by plantation/regrassing), out of 449.81 ha of backfilled area, (Agriculture: 20ha, Plantation: 329.81ha & of Forest Land to be returned: 100ha). Total excavated void area is 185.69 ha out of which 168.69 ha will be covered under plantation & 17 ha would be converted into water body. About 132.42 ha area will come under the public use. Total 117.81 ha area will remain undisturbed.
- xix. Revenue forest land of 205.17 ha comes within the mining lease and accordingly for approval of Forest Clearance shall be applied.
- xx. There is no National Park, wildlife sanctuaries and Eco-sensitive zones falls within 10 km boundary of the project. Around 11 Reserved Forest, 4 Protected Forest & 17 water bodies viz. 4 Nalla, 1 River, 12 Jhor within 10 km radius of the study area.
- xxi. Detailed Biological Study will be carried out and list of flora & fauna will be authenticated by Forest Dept. If there is any Schedule-I species will be found, then Conservation Plan will be prepared & will be authenticated by Forest Dept. accordingly.
- xxii. This proposal is for ToR & same will be incorporated in EIA. Total water requirement for the project is 1100 KLD.
- xxiii. Total water requirement is 1100 KLD which will be sourced from Lilari Nala and Bore wells. Prior permission before withdrawal & abstracting the surface & ground water will be taken from the competent authority.
- xxiv. Consent to Operate will be obtained from concerned authorities after grant of EC.
- xxv. Lilari Nallah cuts across the block flowing from North-West to South-East. Lilari Nallah shall be diverted along the ML periphery and will be connected to the original course of IB River in the south-west part of the coal block, beside this easterly flowing seasonal Hinjankharu Jhor which joins Lilari Nallah at the center of the block will also be reorganized. The proposed



Nallah Diversion will be implemented after taking the approval from MoEF&CC and Water Resources Department of Odisha State.

- xxvi. Baseline Monitoring is yet to be conducted.
- xxvii. No Court cases, violation cases are pending against the project of the PP.
- xxviii. The project does not involve violation of the EIA Notification, 2006 and amendment issued there under. The coal production will be started after obtaining Environment Clearance and other requisite consents from the concerned authorities.
- xxix. Total cost of the project is Rs. 2000 Crore. Cost of production is Rs. 1165/tonne. CSR cost will be calculated as per the Company's Act. R& R cost is Rs. 394 Crore. Environment Management Cost is Rs. 10 Crore (Capital cost) and Rs. 3.0 crore (Recurring Cost).
- xxx. Consent to operate will be obtained from concerned authorities after obtaining Environmental Clearance.
- xxxi. It is a Greenfield mining project and production is yet to commence.

### **35.5.3 EAC observed the following during the EAC meeting:**

- i. The project is greenfield for proposed capacity of 8.0 MTPA in the project area of 965.58 Ha of M/s Vedanta Limited located at Villages Pipilimal, Dhauramunda, Kuraloi, Belpahar, Banjari, Bartap, Tehsil Lakhanpur District Jharsuguda (Odisha).
- ii. The Lillari Nalla passing through the Mine lease area for which the project proponent seeks the diversion.
- iii. The forest land of 205.17 ha falls in the mine lease area, for which the forest clearance is due.
- iv. The project proponent seeks the diversion of road lie in the mine lease area.

**35.5.4** *EAC after deliberations noted that the instant project is of new greenfield with the mine lease area of 965.58 ha. As the project falls in the region of severally polluted area, the EAC desired to have effective EMP implementation plan. The project proponent proposed the diversion of the Lilari nalla which is passing through the project area, the EAC desired to have a report with the complete information about the streams including its length of diversion, catchment area , quantity of water flowing through nalla, impact of existing nalla on surrounding environment after diversion and pp to assess cost-benefit analysis. EAC suggested to have the complete coal evacuation plan corridor within the mine and outside the mine lease area. The EAC desired to take care of external dump and the same should not use the forest area.*

*The EAC after deliberation, recommended for grant of Terms of Reference Kuraloi-A North Coal Block Opencast Coal mine with Production Capacity of 8.0 MTPA in the project area of 965.58 Ha of M/s Vedanta Limited located at Villages Pipilimal, Dhauramunda, Kuraloi, Belpahar, Banjari, Bartap, Tehsil Lakhanpur District Jharsuguda (Odisha) under the provisions of EIA Notification, 2006 and its amendments therein alongwith public consultation with specific conditions mentioned below:*

### **Specific condition**

- i. *Public Consultation, including public hearing, shall be conducted through concerned SPCB in the concerned districts as per the provisions/procedure contained in the EIA Notification, 2006 for information of the stakeholders about the present coal mining operations inviting comments and their redressal.*
- ii. *PP shall submit the copy of application for the forest Clearance to the MoEF&CC before the submission of application on the PARIVESH portal.*
- iii. *PP shall submit the plan for protection and preservation of streams for restoration of affected catchment area, which is to be diverted and obtain the permission for the diversion of Nalla, Roads/HT lines.*
- iv. *PP shall submit a plan for land acquisition, Rehabilitation and Resettlement (R & R) and coal evacuation corridor.*
- v. *PP to submit the EIA-EMP report with integrated / merged Mining plan approved by the Ministry of Coal.*
- vi. *PP should submit the real time aerial footage and video of the Mining lease area made through drone with a special focus on the area adjacent to the rivers.*
- vii. *PP shall not plan any non-essential infrastructure of mining operation on non-coal bearing forest area.*
- viii. *PP shall explore the possibilities of utilization of OB material for different purposes (in construction of roads, manufacture of artificial sand, aggregates, use for farmers etc.) and accordingly Plan shall be included in EIA/EMP Report. PP to explore the minimum diversion of forest area and not to include the forest for infrastructure use and mine plan shall be drawn accordingly.*
- ix. *PP shall extract coal from virgin area in the block only through surface miner and by shovel dumper method from underground developed area (due to practical limitation).*
- x. *In addition to existing data already collected (if any), PP to carry out the monitoring in commensurate with action plan of State in respect of Severely Polluted Areas, if any, to assess the ecosystem services considering the presence of other coal mining activity and industries. PP shall collect fresh one season baseline data of all environmental parameters and shall compare with the data of earlier data collected for source assessment of area. Air pollution impact predication shall be conducted by considering the extremes values and worst scenario.*
- xi. *PP shall submit details of all Air Pollution control equipment (APCEs) to be implemented as part of Environment Management Plan vis-à-vis reduction in concentration of emission for each APCEs.*
- xii. *PP to explore the Inpit conveyor belt with silo loading and installed for transportation of coal till railway siding. No transportation of coal by trucks/dumpers shall be proposed in EIA/EMP.*
- xiii. *PP shall provide the details of mining technology/methodology proposed to be adopted for coal mining operations and its associated environmental benefits of using from Climate Change perspective.*

## Agenda No. 35.6

**Lignite Mine-1 with production capacity of 10.5 MTPA in Mine Lease Area of 3635.4 ha and extraction of Minerals like Silica Sand 4,00,000 TPA, Ball Clay 3,50,000 TPA and Fire Clay 4,00,000 TPA of M/s Neyveli Lignite Corporation Limited in District Cuddalore (Tamil Nadu) – For reconsideration of amendment in Environment Clearance – reg.**

**[Online Proposal No. IA/TN/CMIN/206615/2021; File No. J-11015/01/2012-IA-II (M)]**

**35.6.1** The proposal is for amendment in Environmental Clearance for Lignite Mine-1 with production capacity of 10.5 MTPA in Mine Lease Area of 3635.4 ha and extraction of Minerals like Silica Sand 4,00,000 TPA, Ball Clay 3,50,000 TPA and Fire Clay 4,00,000 TPA of M/s Neyveli Lignite Corporation Limited in District Cuddalore (Tamil Nadu).

**35.6.2** The EAC during deliberations noted the following:

Earlier, the project was deliberated on 20th EAC meeting held on 13th -14th October, 2021 for grant of amendment in Environmental Clearance wherein the proposal requires with details of recovery of sand/aggregate from stone crushers, storage, transportation, etc. which should be the part of mine plan. PP had submitted the mine plan from the Geology and Mining department, Govt. of Tamil Nadu. In view of above, EAC emphasized that the project proponent should submit the revised mine plan from Ministry of Coal, as coal block allotted by them.

**Reply by PP:** The project had submitted the approved Mining Plan (Including Progressive Mine Closure Plan) by the Ministry of Coal vide letter no. ITNTN004/APP00197/2022, dated 16.08.2022. The project proponent also mentioned about the M-sand (Crushed stone sand, Silica Sand, Ball Clay and Fire clay available in overburden as associated products) in the revised mine plan.

**35.6.3** The EAC observed the following during the EAC meeting:

- i. The project proponent had submitted the mine plan approved by Coal controller organization of Ministry of Coal vide letter dated 16.08.2022.
- ii. The project proponent mentioned that the 5 MTPA of sand will be produced after handling the 8 to 10 MTPA of Overburden.
- iii. Total 260 KLD of additional water will be required for the separation of materials. While 5205 KLD of water required only during the preparation of M-Sand.

**35.6.4** *After detail deliberation EAC noted that M-sand will extracted from the overburden through washing process only and sand segregation will be done with the help of Hydro-Cyclone technology, wherein huge quantity of water will be required in the initial stage and later 260 KLD of additional water will be consumed for M-Sand. EAC also observed that additional water will be required in the mining process and for the purpose of dust suppression, however, PP could not produce the complete*

*water balance chart for silica sand, Ball Clay and fire Clay. Accordingly, EAC advised PP to provide a comparative water balance chart mentioning the source, uses for different purposes and the amount of makeup water in different operation including water being consumed in mining process.*

*As noted by EAC that during the handling of overburden, the dust will be generated. Therefore, EAC desired to know the unit wise ( Ball clay, Fire Clay and Silica) effective dust mitigation measures including their impact due to transportation. It was advised that the trucks involved in the project should be optimized as the quantity & number of minerals involved is more; therefore, fleet should be chosen in a manner to have minimum dust emission or otherwise PP may explore the use of green fuel trucks. The project proponent should demarcate the equipped washing area for the vehicles used in transportation purpose with installation of ETP and incorporate in EMP cost. The committee noted that crusher being included in the mine but during presentation PP informed that they will not use it.*

*In view of above, PP shall submit the following details for further compliance: -*

- i. PP shall submit the complete comparative water balance chart with detailed information on the source of water, uses for different purposes including amount of water to be recycled through treatment process.*
- ii. PP shall submit the unit wise ( Ball clay, Fire Clay and Silica) dust mitigation measures including wastewater treatment facility and include it in EMP plan*
- iii. Regarding handling of sand, PP to identify and demarcate the land where material will be stored and finally sent for commercial use. Thus, PP to provide a proper sand evacuation plan with effective transportation system.*
- iv. PP to provide the detailed plan to combat the dust emission due to traffic movement including fleet size, its number. PP to explore for use of green fuel trucks as appropriate.*

*In view of above, the project was **deferred** for submission of above observation and for further technical discussion on above points.*

## **Agenda No. 35.7**

**Proposed Wet Coal Washery of 1.5 MTPA capacity in project area of 7.5 ha by M/s Vimla Infrastructure (India) Pvt Ltd located at village Tadali, Tehsil & District Chandrapur (Maharashtra) - For Reconsideration of Environmental Clearance- reg.**

**[Online Proposal No. IA/MH/CMIN/287718/2019; File No. J-11015/145/2018 -IA-II(M)]**

**35.7.1** The proposal is for Environmental Clearance for Proposed Wet Coal Washery of 1.5 MTPA capacity in project area of 7.5 ha by M/s Vimla Infrastructure (India) Pvt Ltd located at village Tadali, Tehsil & District Chandrapur (Maharashtra).

**35.7.2** The EAC during deliberations noted the following:

Earlier, the project was deliberated on 34th EAC meeting held on 23rd August, 2022 for grant of Environmental Clearance of Wet Coal Washery wherein the proposal was deferred for want of additional information. The compliance was submitted by project proponent on 08.09.2022 and was considered by EAC in its 35th meeting held on 26th and 27th September, 2022. Accordingly, EAC noted the submission of project proponent as detailed below:

<b>Sr. No.</b>	<b>Observation of EAC</b>	<b>Reply of Project Proponent</b>
1	PP shall take corrigendum of the Minutes of Public Hearing meeting and get vetted the minutes at least ADM level officer with signature of endorsement.	The Project Proponent has submitted the Minutes of Meeting of Public Hearing with the sign of J.P. Londhe (Additional Magistrate, Chandrapur). J.P. Londhe signed in place of mentioned chairman Shri Ghanshayam Bhugaonkar.
2	PP shall address all the issues raised in Public Hearing and reply to each issues with budget and timeline to comply.	The Project Proponent had submitted the time bound action plan with budget allocation.
3	PP shall submit MoU/Agreement with Thermal Power Plant for utilization of 100% coal washery rejects.	The Project Proponent had submitted the MOU/ Agreement signed with INDO RAMA, GMR Warora energy limited and Gopani Iron and Power (India) Pvt. Ltd. for utilization of 100% coal washery reject.
4	PP shall submit exact distance of project site from the boundaries of Chandrapur CPA area.	The Project Proponent had mentioned the distance 25 m to 1.3 km from the boundaries of Chandrapur CPA area.

**35.7.4** *The EAC, after deliberation observed that instant project is greenfield coal washery project and has been categorized as “A” (as per EIA Notifications) due to its location fall within 5 km from the critically polluted area. During discussion, PP agreed for additional water harvesting/artificial pond for storage of at least one-month water capacity for washery operations with use the available surface body options. EAC advised PP for use of pond water for the villagers in their agriculture and other needs. EAC emphasized that no Ground water shall be used except for drinking purpose.*

*PP during the discussion mentioned that 90% coal including washery rejects shall be transported through rail. PP also submitted MOU/ Agreement signed with INDO RAMA, GMR*

*Warora energy limited and Gopani Iron and Power (India) Pvt. Ltd. for utilization of 100% coal washery reject.*

*As the project area falls near to the critically polluted area, the project proponent has to comply the 40 % plantation in the mine lease and marginal amount of plantation should be outside the area and also to install one Continuous Ambient Air Quality Monitoring Station (CAAQMS). PP has to use the high efficiency bag filters. The Committee also deliberated the compliance of the Ministry's OM No. 22-23/ 2018-IA.III (Pt) dated 31st October, 2019 pertaining to mechanism formulated for environmental management of critically and severely polluted areas.*

**35.7.5** *The EAC, after detailed deliberation, **recommended** the proposal for grant of environmental clearance for Wet Coal Washery of 1.5 MTPA capacity in project area of 7.5 ha by M/s Vimla Infrastructure (India) Pvt Ltd located at village Tadali, Tehsil & District Chandrapur (Maharashtra), under the provision of the Environment Impact Assessment Notification, 2006 and subsequent amendments/circulars thereto subject to the compliance of the following terms & conditions / specific conditions: -*

#### **Specific condition**

- i. PP to obtain the CTE/CTO for Wet Coal Washery of 1.5 MTPA capacity from SPCB*
- ii. As proposed, PP to transport 90% coal including washery middling rejects through rail and CTO shall be issued accordingly.*
- iii. As proposed, coal washery rejects shall be used by INDO RAMA, GMR Warora energy limited and Gopani Iron and Power (India) Pvt. Ltd. as per the MoU/Agreement.*
- iv. Monitoring of compliance of EC conditions may be submitted with third party audit every year.*
- v. The water for washery purposes shall be sourced from nearby water pond as proposed by PP. No groundwater shall be extracted except for drinking water purposes.*
- vi. PP to install a continuous ambient air quality monitoring stations at suitable location preferably towards village side with consultation of SPCB. The real time data so generated shall be uploaded on company website. In addition, data should also be displayed digitally at entry and exit gate of mine lease area for public display.*
- vii. The coal washery shall be based on 'Zero Liquid Discharge Principle'. No untreated wastewater shall be discharged from the coal washery plant. Domestic effluent will be treated in STP. Treated water will be used for gardening within the plant premises.*
- viii. Thick green belt of adequate width to be provided around the washery to mitigate/check the dust pollution. A 3-tier avenue plantation should also be developed along vacant areas, storage yards, loading/transfer points, and also along internal roads/main approach roads.*
- ix. The project proponent shall cover the 40% of the mine lease area by plantation as per the standard norms and marginal amount of plantation should be outside the area*
- x. The Green Belt shall be developed all along the boundary of approach road/ railway siding and*

*permanent green sheet barricade shall be placed with fixed type mist spray to suppress dust ( not less than 3 ).*

- xi. Fixed type water sprinklers at distance of 50 meters shall be installed along road transportation and near the village/habitat area to avoid dust mitigation.*
- xii. PP shall ensure that quantity of stored coal and rejects should not exceed more than 1 month of total capacity.*
- xiii. The project proponent shall conduct periodical training for the truck drivers for imparting safety training. The safety audit shall be conducted through a third party once in every two years.*
- xiv. Commitment made during public hearing held on 15.02.2020 shall be strictly followed and complied with action taken report as part of six monthly report.*
- xv. The project proponent will provide the training programme related to the health and safety to the employee engaged in the operation and maintenance.*

## **Agenda No. 35.8**

**Ramagundam Opencast-III Expansion-II Coal Mine Project from 8.16 (Peak 8.16) MTPA to 9.52 MTPA (Peak) in mine lease area of 2070.10 ha of M/s Singareni Collieries Company Limited located near Village Jallaram Mandal Kamanpur District Peddapalli (Telangana) – For Environmental clearance under OM dated 11.04.2022 the provision of clause 7(ii) of EIA Notification, 2006-reg.**

**[Online proposal No. IA/TG/CMIN/120211/2019; File No. J-11015/43/2013-IA.II(M)]**

**35.8.1** The proposal is for Environmental Clearance under Ministry's OM dated 11.04.2022 attracting the provision of clause 7(ii) of EIA Notification, 2006 for Ramagundam Opencast-III Expansion-II Coal Mine Project from 8.16 (Peak 8.16) MTPA to 9.52 MTPA (Peak) in mine lease area of 2070.10 ha of M/s Singareni Collieries Company Limited located near Village Jallaram Mandal Kamanpur District Peddapalli (Telangana).

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

- (i) The project area is covered under Survey of India Topo Sheet No. 56N/10 and is bounded by the geographical co-ordinates ranging from North latitude 18°40'57" to 18°42'46" and East Longitude 79°29' 58" to 79°34'15".
- (ii) Coal linkage of the mine is proposed as per Basket Linkage.
- (iii) Joint venture cartel has been formed - Not Applicable.
- (iv) Project does not fall in the Critically Polluted Area (CPA), where the MoEF&CC's vide its OM dated 13<sup>th</sup> January, 2010 has imposed moratorium on grant of environment clearance.



- (v) Employment generation from the project is about 2330 persons out of which about 1780 persons permanent and 550 persons contractual.
- (vi) The project is reported to be beneficial in terms of socio-economic and improving living standards.
- (vii) Earlier, Environment clearance to the mine was obtained from MoEF&CC vide Lr. No. J-11015/43/2014-1A. II (M), Dt. 02<sup>nd</sup> March, 2021 for a rated capacity of 8.16 Mtpa (peak) in project area of 2070.10 ha.
- (viii) Total project area is 2070.10 ha. Mining Plan (Including Mine Closure Plan) has been approved by MoC vide Lr. No. 38011/12/2017-PCA dt.17th June, 2019.

The Project area is covered under following mining leases.

- a. 1162.76 ha of Lease area is covered in 3rd Renewal of South Godavari Mining Lease” for an extent of 6848 ha granted vide G.O.Ms. No. 2 by Energy (PR.I) department, dt. 12.01.2015 and valid up to 31.12.2034.
- b. 644.60 ha is covered in “South Godavari Additional Mining lease” of 1554 ha granted vide G.O.Ms No.201, Energy (PR.I) department, dated: 31.07.2008 and valid up to 16.09.2025.
- c. LoI is obtained for 262.74 ha from the State Government.

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

**Pre-mining land use details**

(Area in ha)

S. No.	Land use	Within ML Area	Outside ML Area	Total
1.	Agricultural	1642.02	0	1642.02
2.	Grazing	108.16	0	108.16
3.	Roads	4.17	0	4.17
4.	Village	88.95	0	88.95
5.	Barren	85.68	0	85.68
6.	Water bodies	141.12	0	141.12
	Total	2070.10	0	2070.10

**Post Closure Land Use Details**

(Area in ha)

Sl. No.	Type	Plantation	Water Body	Public/ Company Use	Agricultural land	Total
1.	Excavation/Quarry Area	--				--
	<i>a. Backfilled Area</i>	<i>558.41</i>				<i>558.41</i>
	<i>b. Excavated Void</i>		<i>671.00</i>			<i>671.00</i>

	Sub-Total	558.41	671.00			1229.41
2.	External Dump	474.50				474.50
3.	Safety Zone / Rationalisation Area	103.60	17.16	34.34	81.34	236.44
4.	<i>Diversion of nallah</i>		33.71			33.71
5.	Road & Infrastructure area			8.62	62.57	71.19
6.	Embankment	24.85				24.85
	Total	1161.36	721.87	42.96	143.91	2070.10

- (x) Total geological reserves reported in the mine lease area are 317.96 Mt with 235.14 Mt mineable reserves. Out of this total mineable reserves 223.94 Mt are extractable, out of which 146.094 Mt were already extracted and 77.846 Mt are available as on 01.04.2022. Percent of extraction is 70.43 %.
- (xi) 9 seams viz., 1A1, 1A3, 1, 2Top, 2Bot, 3B, 3A, 3, 4 are workable. Grade of coal ranges from G-9 to G-11 and Stripping ratio is 7.89 m<sup>3</sup> of OB per 1 tonne of coal, while gradient is varying from 1 in 5.5 to 1 in 12.
- (xii) Method of mining operations envisages is by opencast method.
- (xiii) Life of mine is 9 years from year 2022-23.
- (xiv) The Project has one external OB dump in an area of 474.50 ha with 120m height and 449.03 Mm<sup>3</sup>. One internal dump in an area of 558.41 ha with 899.03 Mm<sup>3</sup> with 120m height is envisaged in the project.
- (xv) Total quarry area is 1229.41 ha out of which backfilling will be done in 558.41 ha and 671.00 ha will be left as water body with a depth of 280 m. Backfilled quarry area of 558.41 ha will be reclaimed with plantation.
- (xvi) Transportation of coal has been proposed by belt conveyors up to pit head, from surface to railway siding by belt conveyors and from siding to end use by rail.
- (xvii) Reclamation Plan in an area of 2070.10 ha, comprising of 474.50 ha of external dump, 558.41 ha of internal dump and 128.45 ha of safety zone/rationalization/others area. In addition to this, an area of 143.91 ha of land will be made available for Agriculture.
- (xviii) No forest land is involved in the project.
- (xix) There are no National Parks, Wildlife Sanctuaries and Eco-Sensitive Zones fall within 10 km boundary of the project.
- (xx) Wildlife Conservation Plan for Schedule-I species was approved by the Principal Chief Conservator of Forest (HoFF) and Chief Wild life Warden (FAC), Telangana State. vide Ltr No. 3505/2020/WI-1 dated 08<sup>th</sup> April, 2021 for an amount of Rs.335.68 Lakhs.

- (xxi) The ground water level is reported to be varying between 1.97 m to 10.80 m during pre-monsoon and between 1.50 m to 9.96 m during post-monsoon. Total water requirement for the mine is about 5740 KLD.
- (xxii) Ground Water Clearance was issued by the State Government vide Memo No. 2182/Hgll/2018-2, dt.23.06.2022.
- (xxiii) Earlier, Public hearing was conducted on 06<sup>th</sup> August, 2014 in the premises of GDK-8 Incline (Opposite to mines Rescue station) Jallaram village, Kamanpur mandal of karimnagar distict, Telangana state.
- (xxiv) Consent to Operate for the existing capacity was obtained from the State PCB and is valid till 31<sup>th</sup> March, 2026.
- (xxv) A seasonal Jallaram Nallah is flowing along the south West to South East of the Mine which will be diverted as per the approved Mining plan.
- (xxvi) Regular monitoring of ambient air quality is being carried out on fortnightly basis. The documented report is submitted to State Pollution Control Board and also to MoEF&CC along with half yearly EC compliance report. In general, the results of ambient air quality monitoring data were found within prescribed limits except few aberrations which can be attributed to the specific local conditions during the day of sampling.
- (xxvii) No court cases, violation cases are pending against the project of the PP.
- (xxviii) The project does not involve violation of the EIA Notification, 2006 and amendment issued there under.

The coal production from the mine was started from the year 2015-16 onwards. No excess production of coal from the sanctioned capacity has been realized since the commencement of mining operations.

The coal production, realized from the project, from 2015-16 onwards, is as furnished here under:

Year	EC Capacity (MTPA)	Actual Production (MTPA)	Excess production beyond the EC sanctioned capacity (MTPA)
2015-16	6.80	5.00	Nil
2016-17	6.80	6.01	Nil
2017-18	6.80	6.80	Nil
2018-19	6.80	6.35	Nil
2019-20	6.80	6.79	Nil
2020-21	8.16	7.44	Nil
2021-22	8.16	8.15	Nil

- (xxix) No R&R involved in the present proposal.

- (xxx) The additional capital cost for expansion is about Rs. 91.64 Crores, the cost of production is Rs.3592 per tonne. CSR cost is 2% of average net profits of the company during last three years which will be allocated for CSR at company level. Environmental capital cost is Rs.21.53 Crores and Recurring cost is Rs. 13.07 Cores per year.
- (xxxi) Consent to Operate for the existing capacity was obtained from the State PCB and is valid till 31<sup>th</sup> March, 2026.
- (xxxii) Past production details comparison with EC:

Year	EC Capacity (MTPA)	Actual Production (MTPA)	Excess production beyond the EC sanctioned capacity (MTPA)
2015-16	6.80	5.00	Nil
2016-17	6.80	6.01	Nil
2017-18	6.80	6.80	Nil
2018-19	6.80	6.35	Nil
2019-20	6.80	6.79	Nil
2020-21	8.16	7.44	Nil
2021-22	8.16	8.15	Nil

### 35.8.3 The EAC observed the following during the EAC meeting:

- PP has applied the application for expansion of production under MoEF&CC's OM dated 11.04.2022.
- The base Environmental Clearance was granted vide letter dated 11.05.2015 for the production capacity of 6.3 MTPA (6.8 MTPA) for the Mine lease area of 2070.10 ha. The last Public hearing was conducted for the mine lease area of 2070.10 on 06.08.2014 and no additional land acquired.
- No Forest Land is involved in this project.
- Earlier, Ministry granted the Environmental Clearance for 20% expansion vide dated 02.03.2021 for the production capacity of 8.16 MTPA in the same Mine lease area.
- The instant proposal is for increase of production capacity of 40% i.e. from 8.16 MTPA to 9.52 MTPA within the same project area of 2070.10 ha. The Mining plan with the Mine closure plan for RG OC-III expansion Mine approved by MoC vide dated 17.06.2019.
- The project proponent has submitted the wildlife conservation plan vide dated 08.04.2021 for the Presence of Schedule-I Species Pavo cristatus, Varanus bengalensis.
- The Godavari River is present at a distance of 1.8 km in the North East direction.
- The NOC issued for Ground water withdrawal vide letter dated 25.06.2022 for the enhanced capacity and the same is valid up to 24.06.2024.

- ix. The CTO was issued vide letter dated 20.04.2022 for the production capacity of 8.6 MTPA and the same is valid for period upto 31.03.2026.
- x. The past production detail lie within the granted capacity.

**35.8.4** *The EAC, after detailed deliberation observed that instant proposal is expansion under clause 7(ii) of EIA Notification, 2006 as per Ministry's OM dated 11 April 2022 for increase in production capacity upto 40% in phases without public hearing subject to fulfilment of certain requirements. Earlier Ministry has granted expansion to PP from 6.8 MTPA to 8.16 MTPA (20%- stage-1 under OM dated 15.09.2017). Now PP has submitted for next expansion of 20% i.e. stage-2 from 8.16 MTPA to 9.52 MTPA under OM dated 11.04.2022. The Committee noted that Godavari river is at distance of 1.8 Km from the mine lease area, and therefore, due to mine location in catchment area of river, the project proponent needs to ensure that no contaminated water should be discharged into the river. The Committee observed that there is no change in area, and production capacity based on which earlier EIA-EMP was prepared and also public hearing conducted.*

*Further, based on documents and facts submitted by PP, EAC recommends the proposal for Ramagundam Opencast-III Expansion-II Coal Mine Project from 8.16 (Peak 8.16) MTPA to 9.52 MTPA (Peak) in mine lease area of 2070.10 ha by M/s Singareni Collieries Company Limited located near Village Jallaram Mandal Kamanpur, District Peddapalli (Telangana) under clause 7(ii) of EIA Notification, 2006 and subsequent amendments/circulars thereto subject to the compliance of the following terms & conditions / specific conditions for environmental safeguards:*

- i. *PP shall comply all the conditions stipulated by Ministry's EC vide its letter no. J-11015/43/2013 IA.II(M) dated 11th May, 2015 and letter no. J-11015/43/2014-IA. (M) dated 2nd March, 2021 and complete the non-compliance and an Action taken report in this regard to be submitted to IRO.*
- ii. *PP to install continuous ambient air quality monitoring stations at suitable locations preferably village side and with consultation of SPCB. The real time data so generated shall be uploaded on company website. In addition, data should also be displayed digitally at entry and exit gate of mine lease area for public display.*
- iii. *PP shall install fixed fog cannon (mist spayer) all along the haul road till CHP, Railway siding and OB Dump area and accordingly sufficient number of fog cannons with 40 mts jet length shall be installed. It should be ensured that air pollution level confirm to the standards prescribed by the MOEFCC/CPCB*
- iv. *PP should Install Wind breaker/shield arrangement along the railway siding for reducing the dust propagation in upwind direction.*
- v. *PP to develop an ECO park with separate area of 5 ha for medicinal and herbal species within two years.*
- vi. *PP to install solar lights along the road used for transportation of coal to avoid the accidents at night and also involve in maintenance. PP to identify the rural areas for installation of solar light with its maintenance within the study area of 10 km radius buffer zone within one*

*year and submit its report to IRO.*

- vii. PP to take proper care of health of villagers and a 24X 7 helpline call facility should be provided to such area and also to nearby villages for assisting any medical aid and ambulance facility.*
- viii. Top soil should be stored separately at marked area and necessary vegetation shall be maintained to avoid any entrainment of dust.*
- ix. Progressive backfilling of mine and progressive reclamation of OB dump shall be done.*
- x. Active OB Dump should not be kept barren/open and should be covered by temporary grass to avoid air born of particles.*
- xi. The Green Belt shall be developed all along the boundary of approach road/ railway siding and permanent green sheet barricade shall be placed with fixed type mist spray to suppress dust ( not less than 4 ).*
- xii. Project Proponent shall obtain blasting permission from DGMS for conducting mining operation near villages and also explore deployment of rock breakers of suitable capacity in the project to avoid blasting very near to villages. There shall be no damages caused to habitation/structures due to blasting activity.*
- xiii. PP shall carry out monthly water monitoring quality of River bodies located within 5 Km radius and conduct Bio-assay test half yearly and further monitoring Ground water level.*
- xiv. PP should conduct epidemiology study to (analysis of the distribution, patterns and determinants of health and disease conditions in defined populations).*
- xv. All approach roads to mine and all other roads which are in regular use should be black topped. The maintenance of road shall be done by PP in collaboration with state government.*
- xvi. Persons of nearby villages shall be given training on livelihood and skill development to make them employable with its proper records.*
- xvii. The illumination and sound at night at project sites disturb the villages in respect of both human and animal population. Consequent sleeping disorders and stress may affect the health in the villages located close to mining operations. Habitations have a right for darkness and minimal noise levels at night. PPs must ensure that the biological clock of the villages is not disturbed; by orienting the floodlights/ masks away from the villagers and keeping the noise levels well within the prescribed limits for day light/night hours.*
- xviii. Hon'ble Supreme Court in an Writ Petition(s) Civil No. 114/2014, Common Cause vs Union of India & Ors vide its judgement dated 8th January, 2020 has directed the Union of India to impose a condition in the mining lease and a similar condition in the environmental clearance and the mining plan to the effect that the mining lease holders shall, after ceasing mining operations, undertake re-grassing the mining area and any other area which may have been disturbed due to their mining activities and restore the land to a condition which is fit for growth of fodder, flora, fauna etc. Compliance of this condition after the mining activity is over at the cost of the mining lease holders/Project Proponent". The implementation report of the above said condition shall be sent to the Regional Office of the MoEFCC.*

## Agenda No. 35.9

**Ramagundum Opencast-I Coal Mine for Expansion- Phase II with increase in production capacity from 3.3 MTPA to 5.3 MTPA in mine lease area of 923.88 Ha by M/s The Singareni Collieries Company Limited at Village Nagepalli, Mandal Ramagiri, District Peddapalli (Telangana)- For Environmental Clearance under violation category based on Ministry's Notification dated 14th March, 2017 –reg.**

**[Online proposal No. IA/TG/CMIN/290184/2017; File No. 23-71/2018-IA (III)]**

**35.9.1** The proposal is for Environmental Clearance under violation category based on Ministry's Notification dated 14th March, 2017 for Ramagundum Opencast-I Coal Mine for Expansion- Phase II with increase in production capacity from 3.3 MTPA to 5.3 MTPA in mine lease area of 923.88 Ha by M/s The Singareni Collieries Company Limited at Village Nagepalli, Mandal Ramagiri, District Peddapalli (Telangana).

**35.9.2** The EAC during deliberations noted the following:

Earlier, the project was deliberated on 25th EAC meeting held during 18th to 20th January, 2022 for grant of Environmental Clearance for Ramagundum Opencast-I Coal Mine wherein the proposal was returned to get the desired information and compliances. The project proponent had submitted the fresh application for EC on 29.08.2022 and same proposal was considered by EAC in its 35th meeting held on 26th and 27th September, 2022. Accordingly, EAC noted the submission of project proponent as detailed below:

Sr. No.	Observation of EAC	Reply of Project Proponent
1	PP shall consolidate the mine closure activity already conducted and to be pursued for final mine closure	The project proponent had submitted the Progressive mine closure activities that will be taken up in the project.
2	PP shall submit a video recording of the site from drone in next meeting and capture the recording of works completed for mine closure including plantation done so far.	The project proponent had submitted a video recording of the project area covering OB dumps, back filling operations, air pollution control measures, water pollution control measures, plantation areas, fencing etc., was taken.
3	PP shall re-monitor the water quality of surface water i.e. ponds, tanks and streams vicinity of the project area by other consultant (third party).	The project proponent had submitted the information based on the 11 samples of Surface water quality data including the data of pH, DO, BOD, Total Coliforms and Fecal Coliforms.



<b>4</b>	Action plan for commitment made on the issues raised during public hearing in both the districts.	The project proponent had submitted the total fund provision of Rs. 75.00 lakh was proposed towards public hearing commitments. However, the fund amount has been enhanced to Rs. 79.00 Lakh (1% of capital cost of the expansion i.e. 79.00 Crores).
<b>5</b>	Details of Annual EMP cost - capital as well as recurring shall be submitted till the life of the mine.	The project proponent had submitted the an amount of Rs. 6.38 Crores was allocated as capital cost and Rs. 15.98 per tonne of coal production was allocated as revenue cost for environmental protection measures.
<b>6</b>	The capital cost of the Expansion being Rs. 79 Crores, an amount of Rs:79.0 lacs shall be earmarked towards the commitment to address the Public hearing grievances. Activity shall be specified in consultation of town panchayat/district magistrate to the requirement of villagers.	The project proponent had submitted the a detailed action plan has been drawn in the project for spending an amount of Rs. 79.00 Lakhs towards commitment to address public hearing grievances and the activities have been specified based on consultation with local civic authorities.

The details of activities to be taken up for purpose of addressing public hearing issues along with earmarked funds and timelines for their implementation are furnished in the table below:

<b>Sl. No.</b>	<b>Activity</b>	<b>Village</b>	<b>Unit Rate (Rs.)</b>	<b>Quantity</b>	<b>Cost (Rs.lakh)</b>	<b>Time lines</b>
i.	Arranging street lights	Julapalli	4,000 /unit	100 nos.	4.00	2 years
ii.	Arranging hand pumps	Julapalli	80,000/unit	02 nos.	1.60	2 years
iii.	Construction of drains, public toilets etc., in nearby villages	•Julapalli •Mulakalapalli •Pannuru •Nagepalli •Ratnapur	LS	LS	34.40	2 years
iv.	Arranging bore hole pump at Vykunta Dhamam	• Pannuru	LS	01	2.00	2 years
v.	Construction of Bus Shelter	•Mulakalapalli	LS	01	2.00	2 years
vi.	Plantation in surrounding villages by planting 1,500 nos. of plants including maintenance for three years @ Rs.1,000.00 per plant	•Julapalli •Mulakalapalli •Pannuru •Nagepalli	1000	1500	15.00	2 years

		•Ratnapur				
vii.	Skill development & Medical camps	•Julapalli •Mulakalapalli •Pannuru •Nagepalli • Ratnapur	-	-	20.00	2 years
<b>Total</b>					<b>79.00</b>	

<b>7</b>	Economic benefits(loss) accrued during the violation period shall be certified by the Finance Dept.	The project proponent had submitted the violation period and Economic benefits(loss) accrued as a net loss of Rs. 504.49 Crores on account of excess coal production.
<b>8</b>	Ground water abstraction quantity for mine shall be reworked. Damage cost for the Excess mine seepage water shall be re worked @Rs:15/: per Cum being a safe Zone category.	The project proponent had submitted the damage cost for the excess mine seepage water was estimated as <b>Rs. 20.93</b> Lakhs @ Rs.5.00 per KLD. However, the ground water abstraction quantities have been reworked for the mine and accordingly the damage cost for the excess mine seepage water has been estimated as <b>Rs. 45.92</b> lakh at an enhanced rate of @ Rs.15 per KLD as per the CGWA Gazzette.
<b>9</b>	The damages shall be re- worked for PM10 and PM2.5 separately and (Environmental prices considered can be obtained from EAC Violation Committee guidelines.)	The project proponent had submitted the damage assessment was worked for PM10 and PM2.5 separately in accordance with the guidelines of EAC Violation Committee. The same guidelines were followed in damage assessment of other violation projects of SCCL for which ECs were accorded earlier.
<b>10</b>	Cost saved in EMP expenditure for all the violation years shall be assessed and 3% of the total cost saved shall be considered/added in CRAP	The project proponent had submitted the an amount of Rs.9.04 Crores against Rs.6.38 Crores of EMP capital cost (Excess of Rs.2.66 Crores) & Rs.101.08 Crores against Rs.83.31 Crores of EMP revenue cost (Excess of Rs.17.77 Crores) was spent towards

		<p>environmental protection measures in the project.</p> <p>As excess amount has been spent on EMP capital and revenue costs, no cost is saved with regard to EMP expenditure and hence no additional funds are considered in CRAP.</p>
<b>11</b>	The total damage cost and the cost saved as mentioned shall be taken for Remediation, NRAP and CRAP budget.	The project proponent had submitted the provision of additional funds to an extent of 3 % of the total cost saved in NRAP and CRAP budget has not been considered in the project.

**35.9.3** The EAC observed the following during the EAC meeting:

- i. The last EC was issued vide letter no. J-11015/534/2007-IA.II (M) dated 31.07.2008 for 3.3 MTPA.
- ii. ToR issued vide MoEF&CC F.No. 23-71/2018-IA (III) dated. 27.09.2019 under Violation category as per S.O. 804(E) dt. 14th March 2017. The project proponent has submitted the Certified compliance report vide letter dated 05.11.2021.
- iii. The project proponent had obtained the forest clearance for 15.64 ha vide FC No.F.No.8-109/2005-FC, dated 2nd May, 2008.
- iv. The Project proponent has obtained the CTO vide letter dated 06.11.2021 for the production capacity of 3.0 MTPA (Peak production 3.3 MTPA) and is valid for a period upto 31.03.2026.
- v. Separately, upon finding excess production, MoEF&CC had issued a show cause notice on 30.06.2022 and PP has now informed to reply the SCN on 05.07.2022, citing the reason covid and pressure of coal production for power generation.

**35.9.4** *The EAC, after deliberations observed that Ramagundum OCP falls in violation category under Ministry's Notification dated 14th March, 2017 and PP was issued TOR under this OM. The Committee noted that Project Proponent have provided the revised damage assessment cost as suggested by EAC in last meeting and accordingly proposed the cost of remediation plan, Natural Resource Augmentation Plan and Community Resource Augmentation Plan, which is found to be adequate. However, Committee noted that conclusion of SCN is pending with MoEF&CC but in the present form, the EAC satisfied with submission of project proponent.*

*Based on documents and commitments submitted by PP, EAC recommended the proposal under violation category to EC for Ramagundum Opencast-I Coal Mine for Expansion- Phase II with increase in production capacity from 3.3 MTPA to 5.3 MTPA in mine lease area of 923.88 Ha by M/s The Singareni Collieries Company Limited at Village Nagepalli, Mandal Ramagiri, District Peddapalli (Telangana) under EIA Notification, 2006 and subsequent amendments/circulars*

thereto subject to decision on SCN by MoEF&CC alongwith the compliance of the following terms & conditions / specific conditions for environmental safeguards:

- (i) EAC recommended an amount of Rs. 162.00 **Lakh** towards Remediation plan and Rs 205 **Lakh** towards Natural and Community Resource Augmentation plan, which should be spent within a span of 2 years. The details of Remediation plan, Natural resource Augmentation plan and Community Resource Augmentation plan with budgetary provision are mention above

*A. Remediation plan along with the action plan with a budget of Rs. 162.00 lakh*

Sl. No .	Component	Activity	Item description	Location	Unit Rate in Rs.	Qty.	Cost	Year I	Year II
							in Rs. lakh		
1a	Air, Noise & Ecology	Dust suppression	Providing Wind Barrier/Greenbelt of 8m height for RG OCP-I CHP.	RG OCP-I CHP	30,00,000/ 100 m	400 m	120.00	60.00	60.00
1b		Avenue Plantation	Plantation of total 3,000 nos. of native plants at Rs.1000 per sapling, including maintenance for 3 years in nearby villages.	In surrounding villages: <ul style="list-style-type: none"><li>• Julapalli</li><li>• Mulakalapalli</li><li>• Pannuru</li><li>• Nagepalli</li><li>• Ratnapur</li></ul>	1,000/one plant	4,200 nos. of plants	42.00	21.00	21.00
Sub-Total (A)							162.00	81.00	81.00

*A. Natural & Community Resource Augmentation Plan along with action plan with a budget of Rs. 205 lakh*

**Natural Resource Augmentation Plan**

Sl. No.	Activity	Description	Location	Unit Rate in Rs.	Qty.	Cost	Year-I	Year-II
						in Rs. lakh		

2a	Ground Water Recharge	Providing Rain Water Harvesting Pits (2.5 m x 2.5 m x 2 m size) in surrounding villages and in SCCL lease area.	In surrounding villages: <ul style="list-style-type: none"> <li>• Julapalli</li> <li>• Mulakalapalli</li> <li>• Pannuru</li> <li>• Nagepalli</li> <li>• Ratnapur</li> </ul>	2,00,000/one unit	20 nos.	40.00	20.00	20.00
2b		Construction of two nos. of check dams across Bokkala vagu.	Across Bokkala vagu	15,00,000/one unit	2 nos.	30.00	15.00	15.00
2c	Green Energy Initiatives	Providing 30 W Pole mounted Solar Street Lights (complete set) in nearby villages @ Rs.28,000 per unit with three years maintenance.	In surrounding villages: <ul style="list-style-type: none"> <li>• Julapalli</li> <li>• Mulakalapalli</li> <li>• Pannuru</li> <li>• Nagepalli</li> <li>• Ratnapur</li> </ul>	28,000/one unit	81 nos.	22.68	11.34	11.34
<b>Sub-Total (B)</b>						<b>92.68</b>	<b>46.34</b>	<b>46.34</b>

### Community Resource Augmentation Plan

Sl. No.	Activity	Description	Location	Unit Rate	Qty.	Cost	Year - I	Year- II
						in Rs.lakh		
3	Development of infrastructure	Laying of CC Road	<ul style="list-style-type: none"> <li>• Julapalli (1.0 Km)</li> <li>• Ratnapur 1.25Km)</li> </ul>	Rs.50 lakh / km (width: 10 ft.)	2.25 Km	112.32	60.00	52.32
<b>Sub-Total (C)</b>						112.32	60.00	52.32
<b>Grand-Total(B+C)</b>						<b>205.00</b>	92.68	112.32

(ii) Remediation plan shall be completed within two years from date of issue of EC only whereas bank guarantee shall be for 3 years. The bank guarantee will be released after successful implementation of the remediation plan and Natural and Community Resource

- Augmentation Plan, and after the recommendation by regional office of the Ministry, Expert Appraisal Committee and approval of the Regulatory Authority.*
- (iii) Any connected proposal of expansion/amalgamation of this mine with other mines shall only be considered for next one till 75% of full compliance of existing EC conditions along with compliance of Remediation plan and Natural & Community Resource Augmentation plan for amount Rs. 367.00 lakhs are accomplished.*
  - (iv) PP shall implement in-pit conveyor system with silo loading facility till railway siding and No road transportation shall be allowed.*
  - (v) PP to submit the tree implementation plan along the internal /approach road side of transportation route including mine periphery area within 2 months from date of issue of EC to IRO, MoEF&CC. A detailed report with GIS images of every 3 months subsequently be submitted in every six monthly report to justify the adequate tree plantation.*
  - (vi) Approval/permission of the CGWA/SGWA shall be obtained before drawing ground water for the project activities, if applicable. State Pollution Control Board (SPCB) concerned shall not issue Consent to Operate (CTO) till the project proponent obtains such permission.*
  - (vii) The Environmental Clearance will not be operational till such time the Project Proponent complies with all the statutory requirements and judgment of Hon'ble Supreme Court dated the 2nd August 2017 in Writ Petition (Civil) No. 114 of 2014 in the matter of Common Cause versus Union of India and Ors.*
  - (viii) State Government concerned shall ensure that mining operation shall not commence till the entire compensation levied, if any, for illegal mining paid by the Project Proponent through their respective Department of Mining & Geology in strict compliance of judgment of Hon'ble Supreme Court dated the 2<sup>nd</sup> August 2017 in Writ Petition (Civil) No.114 of 2014 in the matter of Common Cause versus Union of India and Ors.*
  - (ix) PP shall engage third party independent expert agency for monitoring/auditing of compliance of EC conditions every year.*
  - (x) No village road shall be used for transportation of coal and no road transport route shall be adopted, which is passing through any sensitive location such as schools, hospitals etc. PP shall take legal undertaking from its consumers accordingly.*
  - (xi) Effective dust suppression system shall be adopted at the transportation site and in the other parts of the mining lease to arrest the fugitive dust emission.*
  - (xii) Project proponent shall take necessary other clearances/permissions under various Acts and Rules if any, from the respective authorities / department.*
  - (xiii) PP shall install CAQMS for air monitoring and online water quality monitoring system for checking the quality of mine water and display outside main gate of colliery before discharge from its settling pond.*
  - (xiv) In pursuance to the Ministry's OM dated 30.09.2020, Project Proponent shall take up the activities for community development under EMP.*
  - (xv) PP shall plant Additional 2000 numbers of native/fruit bearing plants around the colony/guesthouse in before commencement of monsoon and furnish the detail within 3*

*months to the respective IRO, MoEF&CC*

- (xvi) PP must obtain 4.5-star rating of MoC in the year 2023-24 and report shall be submitted to IRO.*
- (xvii) Periodical health check-up shall be conducted to monitor the impact of heavy metals present in core zone & buffer zone air quality and also to prepare an action plan to reduce heavy metals concentration and also report to be submitted to concerned regional office of MoEF&CC.*
- (xviii) Hon'ble Supreme Court in an Writ Petition(s) Civil No. 114/2014, Common Cause vs Union of India & Ors vide its judgement dated 8th January, 2020 has directed the Union of India to impose a condition in the mining lease and a similar condition in the environmental clearance and the mining plan to the effect that the mining lease holders shall, after ceasing mining operations, undertake re-grassing the mining area and any other area which may have been disturbed due to their mining activities and restore the land to a condition which is fit for growth of fodder, flora, fauna etc. Compliance of this condition after the mining activity is over at the cost of the mining lease holders/Project Proponent". The implementation report of the above said condition shall be sent to the Regional Office of the MoEF&CC*

**The meeting with vote of thanks**

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## **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 25<sup>th</sup> 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-20012/1/2006-1A.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/GoI Authority. The construction of embankment to prevent any danger against inrush of surface water into the mine should be as per the approved Mining Plan and as per the permission of DGMS or any other authority as prescribed by the law.
- (xi) The project proponent shall take all precautionary measures to ensure riverine/riparian ecosystem in and around the coal mine up to a distance of 5 km. A riverine/riparian ecosystem conservation and management plan should be prepared and implemented in consultation with the irrigation / water resource department in the state government.

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

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

**(e) Mining Plan**

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

**(f) Land reclamation**

- (i) Digital Survey of entire lease hold area/core zone using Satellite Remote Sensing survey shall be carried out at least once in three years for monitoring land use pattern and report in 1:50,000 scale or as notified by Ministry of Environment, Forest and Climate Change(MOEFCC) from time to time shall be submitted to MOEFCC/Regional Office (RO).
- (ii) The final mine void depth should preferably be as per the approved Mine Closure Plan, and in case it exceeds 40 m, adequate engineering interventions shall be provided for sustenance of aquatic life therein. The remaining area shall be backfilled and covered with thick and alive top soil. Post-mining land be rendered usable for agricultural/forestry purposes and shall be diverted. Further action will be treated as specified in the guidelines for Preparation of Mine Closure Plan issued by the Ministry of Coal dated 27<sup>th</sup> 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.II (M) dated 29<sup>th</sup> 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 shareholders/stake holders.
  - (iii) A separate Environmental Cell both at the project and company head quarter level, with qualified personnel shall be set up under the control of senior Executive, who will directly to the head of the organization.
  - (iv) Action plan for implementing EMP and environmental conditions along with responsibility matrix of the company shall be prepared and shall be duly approved by competent authority. The year wise funds earmarked for environmental protection measures shall be kept in separate account and not to be diverted for any other purpose. Year wise progress of implementation of action plan shall be reported to the Ministry/Regional Office along with the Six Monthly Compliance Report.
  - (v) Self-environmental audit shall be conducted annually. Every three years third party environmental audit shall be carried out.
- (j) **Miscellaneous**
- (i) The project proponent shall make public the environmental clearance granted for their project along with the environmental conditions and safeguards at their cost by prominently advertising it at least in two local newspapers of the District or State, of which one shall be in the vernacular language within seven days and in addition this shall also be displayed in the project proponent's website permanently.

- (ii) The copies of the environmental clearance shall be submitted by the project proponents to the Heads of local bodies, Panchayats and Municipal Bodies in addition to the relevant offices of the Government who in turn has to display the same for 30 days from the date of receipt.
- (iii) The project proponent shall upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and update the same on half-yearly basis.
- (iv) The project proponent shall monitor the criteria pollutants level namely; PM10, SO2, 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 OMNo.Z-11013/5712014-IA.II (M) dated 29<sup>th</sup> 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.

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## **Annexure-II**

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

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

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

- (i) The Environmental clearance shall be subject to orders of Hon'ble Supreme Court of India, Hon'ble High Courts, NGT and any other Court of Law, from time to time, and as applicable to the project
- (ii) The project proponent shall obtain forest clearance under the provisions of Forest (Conservation) Act, 1986, in case of the diversion of forest land for



non-forest purpose involved in the project.

- (iii) The project proponent shall obtain clearance from the National Board for Wildlife, if applicable.
- (iv) The project proponent shall prepare a Site-Specific Conservation Plan / Wildlife Management Plan and approved by the Chief Wildlife Warden. The recommendations of the approved Site-Specific Conservation Plan / Wildlife Management Plan shall be implemented in consultation with the State Forest Department. The implementation report shall be furnished along with the six-monthly compliance report. (in case of the presence of schedule-I species in the study area)
- (v) The project proponent shall obtain Consent to Establish / Operate under the provisions of Air (Prevention & Control of Pollution) Act, 1981 and the Water (Prevention & Control of Pollution) Act, 1974 from the concerned State Pollution Control Board/ Committee.
- (vi) The project proponent shall obtain the necessary permission from the Central Ground Water Authority.
- (vii) Solid waste/hazardous waste generated in the mines needs to 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 runoff
- viii. The water pumped out from the mine, after siltation, shall be utilized for industrial purposive. watering the mine area, roads, green belt development etc. The drains shall be regularly desilted particularly after monsoon and maintained properly.
- ix. Industrial waste water from coal handling plant and mine water shall be properly collected and treated so as to conform to the standards prescribed under the Environment (Protection) Act, 1986 and the Rules made thereunder, and as amended from time to time. Oil and grease trap shall be installed before discharge of workshop effluent. Sewage treatment plant of adequate capacity shall be installed for treatment of domestic waste water.
- x. Adequate groundwater recharge measures shall be taken up for augmentation of ground water. The project authorities shall meet water requirement of nearby village(s) in case the village wells go dry due to dewatering of mine.
- xi. The surface drainage plan including surface water conservation plan for the area of influence affected by the said mining operations shall be prepared, considering the presence of any river/rivulet/pond/lake etc., with impact of mining activities on it, and implemented by the project proponent. The surface drainage plan and/or any diversion of natural water courses shall be as per the provisions of the approved Mining Plan/ EIA-EMP submitted to this Ministry and the same should be done with due approval of the concerned State/GoI Authority. The construction of embankment to prevent any danger against inrush of surface water into the mine should be as per the approved mining plan and as per the permission of DGMS.

- xii. The project proponent shall take all precautionary measures to ensure reverian/ riparian ecosystem in and around the coal mine upto a distance of 5 km. A reverian /riparian ecosystem conservation and management plan should be prepared and implemented in consultation with the irrigation / water resource department in the state government.

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

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

#### **V. Mining Plan**

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

#### **VI. Land reclamation**

- i. Digital Survey of entire lease hold area/core zone using Satellite Remote Sensing survey shall be carried out at least once in three years for monitoring land use pattern and report in 1:50,000 scale or as notified by Ministry of Environment, Forest and Climate Change (MOEFCC) from time to time shall be submitted to MOEFCC/Regional Office (RO).

- ii. Post-mining land be rendered usable for agricultural/forestry purposes and shall be handed over to the respective State Government, as specified in the Guidelines for Preparation of Mine Closure Plan, issued by the Ministry of Coal dated 27th August, 2009 and subsequent amendments.
- iii. Regular monitoring of subsidence movement on the surface over and around the working areas and its impact on natural drainage pattern, water bodies, vegetation, structure, roads and surroundings shall be continued till movement ceases completely. In case of observation of any high rate of subsidence beyond the limit prescribed, appropriate effective mitigation measures shall be taken to avoid loss of life and materials. Cracks should be effectively plugged in with ballast and clay soil/suitable material.
- iv. Fly ash shall be used for external dump of overburden, backfilling or stowing of mine as per provisions contained in clause (i) and (ii) of subparagraph (8) of fly ash notification issued vide SO 2804 (E) dated 3<sup>rd</sup> 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 29<sup>th</sup> 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 approve by the Board of Directors. The environmental policy should prescribe for standard operating procedures to have proper checks and balances and to bring into focus any infringements/deviation/violation of the environmental / forest / wildlife norms / conditions. The company shall have defined system of

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

#### **X. Miscellaneous**

- i. The project proponent shall make public the environmental clearance granted for their project along with the environmental conditions and safeguards at their cost by prominently advertising it at least in two local newspapers of the District or State, of which one shall be in the vernacular language within seven days and in addition this shall also be displayed in the project proponent's website permanently.
- ii. The copies of the environmental clearance shall be submitted by the project proponents to the Heads of local bodies, Panchayats and Municipal Bodies in addition to the relevant offices of the Government who in turn has to display the same for 30 days from the date of receipt.
- iii. The project proponent shall upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and update the same on half-yearly basis.
- iv. The project proponent shall submit six-monthly reports on the status of the compliance of the stipulated environmental conditions on the website of the ministry of Environment, Forest and Climate Change at environment clearance portal.
- v. The project proponent shall submit the environmental statement for each financial year in Form-V to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently and put on the website of the company.
- vi. The project authorities shall inform to the Regional Office of the MOEFCC regarding commencement of mining operations.
- vii. The project authorities must strictly adhere to the stipulations made by the State

Pollution Control Board and the State Government.

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

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**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 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.

- 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 appropriately planned and designed to avoid air and water pollution from such sites.

### **III. Water quality monitoring and preservation**

- i. The effluent discharge (mine waste water, workshop effluent) shall be monitored in terms of the parameters notified under the Water Act, 1974 Coal Industry Standards vide GSR 742 (E) dated 25.9.2000 and as amended from time to time by the Central Pollution Control Board.
- ii. The monitoring data shall be uploaded on the company's website and displayed at the project site at a suitable location. The circular No. J-20012/1/2006-1A.11 (M) dated 27.05.2009 issued by Ministry of Environment, Forest and Climate Change shall also be referred in this regard for compliance.
- iii. Industrial waste water shall be properly collected and treated so as to conform to the standards prescribed under the Environment (Protection) Act, 1986 and the Rules made there under, and as amended from time to time.
- iv. The project proponent shall not alter major water channels around the site. Appropriate embankment shall be provided along the side of the river/nallah flowing near or adjacent to the washery. The embankment constructed along the river/nallah boundary shall be of suitable dimensions and critical patches shall be strengthened by stone pitching on the riverfront side stabilised with plantation so as to withstand the peak water pressure preventing any chance of inundation.
- v. Heavy metal content in raw coal and washed coal shall be analysed once in a year and records maintained thereof.
- vi. The rejects should preferably be utilized in FBC power plant or disposed off through sale for its gainful utilization. If the coal washery rejects are to be disposed off, it should be done in a safe and sustainable manner with adequate compaction and post closure arrangement to avoid water pollution due to leachate from rejects and surface run off from reject dumping sites.
- vii. An Integrated Surface Water Management Plan for the washery area up to its buffer zone considering the presence of any river/rivulet/pond/lake etc. with impact of coal washing activities on it, shall be prepared, submitted to MoEFCC and implemented.
- viii. Waste Water shall be effectively treated and recycled completely either for washery operations or maintenance of green belt around the plant.
- ix. Rainwater harvesting in the washery premises shall be implemented for conservation and augmentation of ground water resources in consultation with Central Ground Water Board.
- x. No ground water shall be used for coal washing unless otherwise permitted in writing by competent authority (CGWA) or MoEFCC. The make-up water requirement of washery should not exceed 1.5 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 ClimateChange/Regional Office.

- xii. The project proponent shall take all precautionary measures to ensure riverine/riparian ecosystem in and around the coal mine up to a distance of 5 km. A riverine/riparian ecosystem conservation and management plan should be prepared and implemented in consultation with the irrigation / water resource department in the state government

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

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

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

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

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

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

Supreme Court with regard to acquiring grazing land.

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

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

## **VIII. Corporate Environment Responsibility**

- i. The project proponent shall comply with the provisions contained in this Ministry's OM vide F.No. 22-65/2017-IA.III dated 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 shareholders /stake holders. The copy of the board resolution in this regard shall be submitted to the MoEF&CC as a part of six-monthly report.
- iii. A separate Environmental Cell both at the project and company head quarter level, with qualified personnel shall be set up under the control of senior

Executive, who will directly to the head of the organization.

- iv. Action plan for implementing EMP and environmental conditions along with responsibility matrix of the company shall be prepared and shall be duly approved by competent authority. The year wise funds earmarked for environmental protection measures shall be kept in separate account and not to be diverted for any other purpose. Year wise progress of implementation of action plan shall be reported to the Ministry/Regional Office along with the Six Monthly Compliance Report.
- v. Self-environmental audit shall be conducted annually. Every three years third party environmental audit shall be carried out.

## **IX. Miscellaneous**

- i. The project proponent shall make public the environmental clearance granted for their project along with the environmental conditions and safeguards at their cost by prominently advertising it at least in two local newspapers of the District or State, of which one shall be in the vernacular language within seven days and in addition this shall also be displayed in the project proponent's website permanently.
- ii. The copies of the environmental clearance shall be submitted by the project proponents to the Heads of local bodies, Panchayats and Municipal Bodies in addition to the relevant offices of the Government who in turn has to display the same for 30 days from the date of receipt.
- iv. The project proponent shall upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and update the same on half-yearly basis.
- v. The project proponent shall monitor the criteria pollutants level namely; PM<sub>10</sub>, SO<sub>2</sub>, NO<sub>x</sub> (ambient levels) or critical sectoral parameters, indicated for the projects and display the same at a convenient location for disclosure to the public and put on the website of the company.
- vi. The project proponent shall submit six-monthly reports on the status of the compliance of the stipulated environmental conditions on the website of the ministry of Environment, Forest and Climate Change at environment clearance portal.
- vii. The project proponent shall submit the environmental statement for each financial year in form-V to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently and put on the website of the company.
- viii. The project authorities shall inform to the Regional Office of the MOEFCC regarding commencement of mining operations.
- ix. The project authorities must strictly adhere to the stipulations made by the State Pollution Control Board and the State Government.

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

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## **ANNEXURE-IV**

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

- i. Siting of washery is critical considering to its environmental impacts. Preference should be given to the site located at pit head; in case such a site is not available, the site should be as close to the pit head as possible and coal should be transported from mine to the washer preferably through closed conveyer belt to avoid air pollution.
- ii. The washery shall not be located in eco-sensitive zones areas.
- iii. The washery should have a closed system and zero discharge. The storm drainage should be treated in settling ponds before discharging into rivers/streams/water bodies.
- iv. A thick Green belt of about 50 m width should be developed surrounding the washery.
- v. A brief description of the plant along with a layout, the specific technology used and the source of coal should be provided.
- vi. The EIA-EMP Repot should cover the impacts and management plan for the project of the capacity for which EC is sought and the impacts of specific activities, including the technology used and coal used, on the environment of the area (within 10km radius), and the environmental quality of air, water, land, biotic community, etc. through collection of data and information, generation of data on impacts for the rated capacity. Cumulative impacts for air and water should be a part of EIA in case coal mine, TPP and other washeries are located within 10km radius. The EIA should also include mitigative measures needed to minimize adverse environmental impacts.
- vii. A Study Area Map of the core zone as well as the 10km area of buffer zone showing major industries/mines and other polluting sources should be submitted. These maps shall also indicate the migratory corridors of fauna, if any and areas of endangered fauna; plants of medicinal and economic importance; any ecologically sensitive areas within the 10 km buffer zone; the shortest distance from the National Park/WL Sanctuary Tiger Reserve, etc. 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 11<sup>th</sup> August, 2014 to be followed with regard to CSR activities.
- xv. Details of Public Hearing, Notice(s) issued in newspapers, proceedings/minutes of Public Hearing, points raised by the general public and response/commitments made by the proponent along with the Action Plan and budgetary provisions be submitted in tabular form. If the Public Hearing is in the regional language, an authenticated English translation of the same should be provided. Status of any litigations/ court cases filed/pending, if any, against the project should be mentioned in EIA.
- xvi. Analysis of samples indicating the following be submitted:
  - Characteristics of coal prior to washing (this includes grade of coal, other characteristics of ash, S and heavy levels of metals such as Hg, As, Pb,Cr etc).
  - Characteristics and quantum of coal after washing.
  - Characteristics and quantum of coal rejects.
- xvii. Details of management/disposal/use of coal rejects should be provided. The rejects should be used in TPP located close to the washery as far as possible. If TPP is within a reasonable distance (10 km), transportation should be by conveyor belt. If it is far away, the transportation should be by rail as far as possible.
- xviii. Copies of MOU/Agreement with linkages (for stand-alone washery) for the

capacity for which EC is being sought should be submitted.

- xix. Corporate Environment Responsibility:
  - a) The Company must have a well laid down Environment Policy approved by the Board of Directors.
  - b) The Environment Policy must prescribe for standard operating process/procedures to bring into focus any infringements/deviation/violation of the environmental or forest norms/conditions.
  - c) The hierarchical system or Administrative Order of the company to deal with environmental issues and for ensuring compliance with the environmental clearance conditions must be furnished.
  - d) To have proper checks and balances, the company should have a well laid down system of reporting of non-compliances/violations of environmental norms to the Board of Directors of the company and/or shareholders or stakeholders at large.
- xx. A detailed action Plan for Corporate Social Responsibility for the project affected people and people living in and around the project area should be provided.
- xxi. Permission of drawl of water shall be pre-requisite for consideration of EC.
- xxii. Wastewater /effluent should conform to the effluent standards as prescribed under Environment (Protection) Act, 1986
- xxiii. Details of washed coal, middling and rejects along with the MoU with the end-users should be submitted.

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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 following table:

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

- (xii) Break-up of lease/project area as per mining plan should be provided.
- (xiii) Impact of changes in the land use due to the project if the land is predominantly agricultural land/forestland/grazing land, should be provided.
- (xiv) One-season (other than monsoon) primary baseline data on environmental quality - air (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.

- (xv) Map (1: 50, 000 scale) of the study area (core and buffer zone) showing the location of various sampling stations superimposed with location of habitats,

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

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

- (xxii) Impact of mining and water abstraction from the mine on the hydrogeology and groundwater regime within the core zone and 10 km buffer zone including long-term monitoring measures should be provided. Details of rainwater harvesting and measures for recharge of groundwater should be reflected in case there is a declining trend of groundwater availability and/or if the area falls within dark/grey zone.
- (xxiii) Impact of blasting, noise and vibrations should be given.
- (xxiv) Impacts of mining on the AAQ and predictions based on modeling using the ISCST-3 (Revised) or latest model should be provided.
- (xxv) Impacts of mineral transportation within the mining area and outside the lease/project along with flow-chart indicating the specific areas generating fugitive emissions should be provided. Impacts of transportation, handling, transfer of mineral and waste on air quality, generation of effluents from workshop etc, management plan for maintenance of HEMM and other machinery/equipment should be given. Details of various facilities such as rest areas and canteen for workers and effluents/pollution load emanating from these activities should also be provided.
- (xxvi) Effort be made to reduce/eliminate road transport of coal inside and outside mine and for mechanized loading of coal through CHP/ Silo into wagons and trucks/tippers.
- (xxvii) Details of waste OB and topsoil generated as per the approved calendar programme, and their management shown in figures as well explanatory notes tables giving progressive development and mine closure plan, green belt development, backfilling programme and conceptual post mining land use should be given. OB dump heights and terracing based on slope stability studies with a max of 28° angle as the ultimate slope should be given. Sections of final dumps (both longitudinal and cross section) with relation to the adjacent area should be shown.
- (xxviii) Efforts be made for maximizing progressive internal dumping of O.B., sequential mining, external dump on coal bearing area and later rehandling into the mine void. --to reduce land degradation.
- (xxix) Impact of change in land use due to mining operations and plan for restoration of the mined area to its original land use should be provided.
- (xxx) Progressive Green belt and ecological restoration /afforestation plan (both in text, figures and in the tabular form as per the format of MOEFCC given below) and selection of species (native) based on original survey/land-use should be given.

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

S.N.	Land use Category	Present (1 <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



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

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

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

- (xxxix) 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.
- (xxxix) 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.
- (xxxix) Risk Assessment and Disaster Preparedness and Management Plan should be provided.
- (xxxix) Integration of the Env. Management Plan with measures for minimizing use of natural resources - water, land, energy, etc. should be carried out.
- (xxxix) Cost of EMP (capital and recurring) should be included in the project cost and for progressive and final mine closure plan.
- (xxxix) Details of R&R. Detailed project specific R&R Plan with data on the existing socio- economic status of the population (including tribals, SC/ST, BPL families) found in the study area and broad plan for resettlement of the displaced population, site for the resettlement colony, alternate livelihood

concerns/employment for the displaced people, civic and housing amenities being offered, etc and costs along with the schedule of the implementation of the R&R Plan should be given.

(xxxviii) CSR Plan along with details of villages and specific budgetary provisions (capital and recurring) for specific activities over the life of the project should be given.

(xxxix) Corporate Environment Responsibility:

- a) The Company must have a well laid down Environment Policy approved by the Board of Directors.
- b) The Environment Policy must prescribe for standard operating process/procedures to bring into focus any infringements/deviation/violation of the environmental or forest norms/conditions.
- c) The hierarchical system or Administrative Order of the company to deal with environmental issues and for ensuring compliance with the environmental clearance conditions must be furnished.
- d) To have proper checks and balances, the company should have a well laid down system of reporting of non-compliances/violations of environmental norms to the Board of Directors of the company and/or shareholders or stakeholders at large.

(xl) Details on Public Hearing should cover the information relating to notices issued in the newspaper, proceedings/minutes of Public Hearing, the points raised by the general public and commitments made by the proponent and the action proposed with budgets in suitable time frame. These details should be presented in a tabular form. If the Public Hearing is in the regional language, an authenticated English Translation of the same should be provided.

(xli) In built mechanism of self-monitoring of compliance of environmental regulations should be indicated.

(xlii) Status of any litigations/ court cases filed/pending on the project should be provided.

(xliii) Submission of sample test analysis of Characteristics of coal: This should include details on grade of coal and other characteristics such as ash content, S and heavy metals including levels of Hg, As, Pb, Cr etc.

(xliv) Copy of clearances/approvals such as Forestry clearances, Mining Plan Approval, mine closer plan approval. NOC from Flood and Irrigation Dept. (if req.), etc. wherever applicable.

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

TOTAL ML/PROJECT AREA (ha)	TOTAL FORESTLAND (ha)	Date of FC	Extent of forestland	Balance area for which FC is yet to be obtained	Status of appl for. diversion of forest land
		If more than, provide details of each FC			

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## **ANNEXURE -VI**

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

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

furnished.

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

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

#### Area under Surface Rights

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

- (viii) Study on the existing flora and fauna in the study area (10km) should be carried out by an institution of relevant discipline. The list of flora and fauna duly authenticated separately for the core and study area and a statement clearly specifying whether the study area forms a part of the migratory corridor of any endangered fauna should be given. If the study area has endangered flora and fauna, or if the area is occasionally visited or used as a habitat by Schedule-I species, or if the project falls within 15 km of an ecologically sensitive area, or

used as a migratory corridor then a Comprehensive Conservation Plan along with the appropriate budgetary provision should be prepared and submitted with EIA-EMP Report; and comments/observation from the CWLW of the State Govt. should also be obtained and furnished.

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

of subsidence, continuous monitoring measures, and safety issues should be carried out.

- (xvi) Detailed water balance should be provided. The breakup of water requirement as per different activities in the mining operations, including use of water for sand stowing should be given separately. Source of water for use in mine, sanction of the Competent Authority in the State Govt. and impacts vis-à-vis the competing users should be provided.
- (xvii) Impact of choice of mining method, technology, selected use of machinery and impact on air quality, mineral transportation, coal handling & storage/stockyard, etc, Impact of blasting, noise and vibrations should be provided.
- (xviii) Impacts of mineral transportation within the mining area and outside the lease/project along with flow-chart indicating the specific areas generating fugitive emissions should be provided. Impacts of transportation, handling, transfer of mineral and waste on air quality, generation of effluents from workshop etc, management plan for maintenance of HEMM and other machinery/equipment should be given. Details of various facilities such as rest areas and canteen for workers and effluents/pollution load emanating from these activities should also be provided.
- (xix) Effort be made to reduce/eliminate road transport of coal inside and outside mine and for mechanized loading of coal through CHP/ Silo into wagons and trucks/tippers.
- (xx) Details of various facilities to be provided to the workers in terms of parking, rest areas and canteen, and effluents/pollution load resulting from these activities should also be given.
- (xxi) The number and efficiency of mobile/static water sprinkling system along the main mineral transportation road inside the mine, approach roads to the mine/stockyard/siding, and also the frequency of their use in impacting air quality should be provided.
- (xxii) Impacts of CHP, if any on air and water quality should be given. A flow chart showing water balance along with the details of zero discharge should be provided.
- (xxiii) Conceptual Final Mine Closure Plan and post mining land use and restoration of land/habitat to the pre- mining status should be provided. A Plan for the ecological restoration of the mined out area and post mining land use should be prepared with detailed cost provisions. Impact and management of wastes and issues of re-handling (wherever applicable) and backfilling and progressive mine closure and reclamation should be furnished.
- (xxiv) Greenbelt development should be undertaken particularly around the transport route and CHP. Baseline data on the health of the population in the impact zone and measures for occupational health and safety of the personnel and manpower for the mine should be submitted.

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

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

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

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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.

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**LIST OF PARTICIPANTS OF EAC (COAL) IN 35<sup>th</sup> MEETING HELD  
DURING 26-27 September, 2022 THROUGH VIDEO CONFERENCING**

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