MINUTES OF 3rd MEETING OF THE EXPERT APPRAISAL COMMITTEE FOR ENVIRONMENTAL APPRAISAL OF COAL MINING PROJECTS HELD ON 27th OCTOBER, 2020.

Tuesday, 27th October, 2020

Confirmation of the Minutes of 2nd Meeting of the EAC (Coal) held on 28-29 September 2020: No comment was made from members of the committee on the minutes of the 2nd meeting of the EAC held during 28-29 September, 2020, therefore the Minutes of the Meeting (MoM) of 2nd EAC meeting was confirmed.

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

Consideration of Proposals: The 3rd meeting of the Expert Appraisal Committee (EAC) for coal mining projects was held on 27th October, 2020 through video conferencing with support NIC team due to Covid-19 lockdown. The EAC considered proposals as per agenda adopted for the meeting. List participant attended the meeting is annexed. The details of deliberations held & decisions taken in the meeting are as under.

Agenda No. 3.1

Bhengari coal washery of 5.0 MTPA in an area of 17.48 ha of M/s Mahavir coal washery Private Limited, located in village bhengari, Tehsil Gharghora, District Raigarh (Chhattisgarh) - For Environment Clearance – reg

[IA/CG/CMIN/27185/2015; File No J-11015/161/2015-IA.II(M)]

3.1.1 The proposal is for environmental clearance for Bhengari coal washery of 5.0 MTPA in an area of 17.48 ha of M/s. Mahavir Coal Washery Private Limited, to be located in village Bhengari, Tehsil Gharghora, District Raigarh (Chhattisgarh).

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

(i) The project area is covered under Survey of India Topo Sheet No. 64 N/4 and 64N/8 and is bounded by the geographical coordinates ranging from latitude 22°08'5.7" N to 22°08'19.40" N & longitude 83°14'21.2" E to 83°14'49.4" E.

(ii) The washery is based on heavy media cyclone technology. Closed circuit wet washing will be done and only make up water will be added to compensate the water lost with clean coal and rejects.

(iii) No joint venture has been formed.

(iv) The Ministry granted Terms of Reference to the project vide its letter no. J-11015/161/2015-IA.II (M) dated 3rd February 2016. TOR validity was extended up to 3rd February, 2020 vide letter no. J-11015/161/2015-IA.II (M) dated 13th February 2019.

(v) Raw coal for beneficiation will be sourced from the SECL mines on behalf of the clients as well as own purchase through e-auction. Letters of interest from the parties have been obtained. Letter of interest has also been obtained for utilization of washery rejects.

(vi) The project is reported to be beneficial in terms of environment, employment generation and over all development in the nearby region.

(vii) The project site does not fall in the Critically Polluted Area (CPA), where MoEF&CC has imposed moratorium on grant of environment clearance vide its OM dated 13th January, 2010.

(viii) No forest land is involved. The land usage pattern of the project is as follows:

Sr. No.	Particulars	Area (in Acres)	Percentage
1	Washery Plant	9.75	22.6
2	Raw Coal Stockyard	4.40	10.2
3	Clean coal, middling & Rejects	2.00	4.6
4	Other Facilities Internal roads, WTP, Maintenance Shed, Office, Stores, Staff Quarters, etc.	7.50	17.4
5	Plantation Area	14.25	33.0
6	Vacant land	5.28	12.2
Total		43.18	100.0

The total land required for the proposed coal washery plant is 43.18 acres excluding about 10 acres for railway siding. The entire project land is private and is in the name of sister companies – M/s Mahavir Global Coal Ltd, M/s Mahavir Energy & Coal Beneficiation Ltd. and MCWPL. The present land use of the site is mostly barren land.

(ix) The project does not involve any R&R issue.

(x) The Kurket River passes through the study area at a distance of 3.6 km with reference to the project site in ESE direction. The main drainage basin is Mahanadi Basin.

(xi) The raw coal will be sourced on behalf of the clients from the South Eastern Coalfields Limited coal mines, located within 29 km, by road as adequate rakes are not available. MCWPL may also buy coal through e-auction for beneficiation. The existing road network [Chhal – Robertson / Bilaspur / Ambikapur and Baroud – Ghalghoda – Chhal – Robertson / Bilaspur] is adequate. Coal transportation by road is through this network. Inward coal transportation (100%) from SECL mines to the washery will be by road through covered trucks as adequate rakes are not available.

(xii) Own railway siding will be constructed near the project site. Maximum transportation of washed coal, middling & rejects will be by rail (60%), once own rail siding is established. Nearby clients not connected to rail network will receive coal & rejects by road. Movement of coal by road will be kept minimum and through covered trucks. Till such time rail link is established, transportation will be by existing road network through covered trucks.

(xiii) There is no notified National Park, Wildlife Sanctuary and Eco-Sensitive Zone within 10 km around the proposed project site.

(xiv) The baseline data monitoring studies have been carried out for three months covering pre-monsoon season (March – May, 2015). Fresh baseline data was generated for the period March – May, 2018 in compliance with the requirement of 3 years data validity norms.

(xv) The ambient air quality was observed in the range of 20.3 – 29.1 µg/m3 for PM2.5, 40.2 – 74.1 µg/m3 for PM10, SO2 from 14.2 – 26.5 µg/m3, NO2 from 16.5 – 29.2 µg/m3 and 280 - 430 for CO µg/m3. The results are within the prescribed NAAQ standards.

(xvi) The ground water level has been reported to be varying between 3.5 m. to 10.7 m during pre-monsoon. Estimated stage of ground water development is 8%. The area falls under safe category of development. Total water requirement for the project is 800 KLD. NOC from the Central Ground Water Authority has been obtained vide letter no. CGWA/NOC/IND/ORIG/2017/2412 dated 31.01.2017. Renewal of NOC is awaited from CGWA.

(xvii) Wildlife Conservation plan for schedule I species has been prepared and submitted to PCCF(WL), Raipur for approval.

(xviii) The project will provide employment to about 100 persons during construction, 70 persons for operation & maintenance, and indirect employment to about 250.

(xix) Public hearing for the project was conducted on 8th December, 2019 at Government Higher Secondary School premises / ground, village – Navapara (Tenda), Gharghora Tehsil, Raigarh District, Chhattisgarh at 11.00 am under the Chairmanship of Additional District Collector, Raigarh. Major issues raised in the public hearing include employment generation, pollution, ground water, plantation, CSR activities.

(xx) The project cost is Rs 56.18 crores excluding the cost of railway siding. Rs. 0.75 crores has been allocated for Rain water harvesting structures. A sum of Rs 1.55 crores has been earmarked for environment management. It is proposed to spend Rs.15 Lakhs annually on CSR activities.

(xxi) No court cases, violation cases are pending against the project.

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

3.1.3. The EAC during deliberations noted the following

The Ministry granted Terms of Reference to the project vide its letter no. J-11015/161/2015-IA.II (M) dated 3rd February 2016. TOR validity was extended up to 3rd February, 2020 vide letter no. J-11015/161/2015-IA. II (M) dated 13th February 2019

Public hearing for the project was conducted on 8th December, 2019 at Government Higher Secondary School premises / ground, village – Navapara (Tenda), Gharghora Tehsil, Raigarh District, Chhattisgarh at 11.00 am under the Chairmanship of Additional District Collector, Raigarh. Major issues raised in the public hearing include employment generation, pollution, ground water, plantation, CSR activities, Pollution from proposed operations will affect agricultural productivity and region, Use of ground water will further lower water levels in surrounding villages and the people of this region will face water crisis. Villagers, surrounding villages, schools are there. Dust emissions from vehicles movement affects public, cultivation, and trees.

It is noted that matter relating to land acquisition from tribal people is pending vide letter of National Commission for Scheduled Tribes dated 15.01.2018. Case has been filed in Green Tribunal against irregularities of Mahavir Company as one of issue raised in PH

M/s TRN Energy Ltd. [600 MW], M/s Phil Coal Washery & M/s Mahavir Energy Coal Beneficiation Ltd. [12 MW] are operating within 1.5 km from MCWPL proposed coal washery. The region is under pressure due to daily movement of 500 coal trucks to TRN, 200 to Phil & 100 to MECBL

The baseline data monitoring studies have been carried out for three months covering pre-monsoon season (March – May, 2015). Fresh baseline data was generated for the period March–May, 2018 in compliance with the requirement of 3 years data validity norms. A separate addendum report on fresh baseline data was prepared & submitted to MoEF&CC, its Regional office including the Chhattisgarh Environment Conservation Board. Ambient Air Quality Monitoring (AAQM) was carried out at eight locations with a frequency of two days per week for three months during pre-monsoon season 2018.

AERMOD model has been used to assess the incremental concentration of dust due to the proposed 5.0 MTPA capacity coal washery. The sources of emission from the proposed washery will be stock piles, crushing, screening, unloading / loading, transfer points, belt conveyors and vehicles movement. The emissions are mainly Particulate Matter (PM).

To assess the physical and chemical properties of water in the region, water samples from eight ground water and two surface water locations were collected and analyzed from various water sources around the project site

The Ecological studies were conducted in and around the project area within the study area to assess know the biological resources. It can be concluded that 6 animals species belongs to Sch-I and a total of 8 Schedule I species are found in the buffer zone as per Wildlife Protection Act, 1972. However, reportedly the elephants have been seen in the vicinity (secondary sources) although there is no notified elephant corridor in the study area.

The raw coal will be transported to the washery from Chhal mines and Jampali and Baraud mines by road. About 0.45 MTPA rejects will be generated from the proposed coal washery plant

The quantity of water required for the proposed plant including domestic use is 800 m3/day. The water requirement is proposed from groundwater through bore wells.

The committee also noted that Hon'ble NGT order dated 27th February, 2020 wherein Hon'ble Tribunal is considering remedial action against pollution caused by the thermal power plants, the coal washeries in Tamnar and Gharghoda blocks of Raigarh District in Chhattisgarh.

3.2.3 *The EAC after deliberations and observed certain deficiencies in the submission of PP and deferred the proposal on the following points:*

i. *Response from project proponent on the Hon'ble NGT order dated 27th February, 2020 and in reference to extra mitigation measures adopted for the proposed activity.*
ii. *Confirmation of Wildlife Santuary/National Park within 10 km of project site.*
iii. *Plan for 100 % Rejects utilisation shall be submitted to be utilised in FBC boilers and accordingly MoU with power plants shall be submitted.*

iv. *PP shall explore use of surface water from kurket river which is at a distance of 3.6 km instead of using groundwater for proposed washery during operations/construction activity.*

v. *The percentage of system loss in washery operation seems to be on higher side and shall be further optimized/reduced.*

vi. *Clarity on the ownership of Land for the project and whether there is no court case as raised in Public Hearing.*

vii. *Feasibility of proposed transportation route for raw coal and washed coal through road considering the presence of other industries. Plan for further reduction in fleet size of trucks for transportation of raw coal and product.*

viii. *Status of implementation of proposed railway siding shall be submitted.*

ix. *Tree transplantation in the area of washery shall be explored instead of cutting the trees and accordingly number of trees for transplantation and plan of action shall be submitted. Development of greenbelt along the periphery of plan premises shall be submitted with fixed timeline.*

x. *Plan/layout of washery shall be proposed as such that storage yard of raw coal and washed coal shall be not in pre-dominant wind direction and near any villages. Accordingly, layout may be revised.*

xi. *Ambient Air quality modelling for So2 and Nox shall also be carried out and impact of these shall be provided.*

xii. *Letter from PCCF stating the project area does not come under elephant corridor*

xiii. *Fund allocated for Wildlife conservation plan shall be submitted*

xiv. *Clarification may be provided about applicability of Chhattisgarh Minerals (Mining, Transportation & Storage) Rules, 2009 not allowing coal storage within 25 km radius from any coal mine wherein site is 13 km from SECL coal mine area*

Agenda No. 3.2

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

[IA/MH/CMIN/135434/2019; F.No. J-11015/381/2015-IA-II (M)]

3.2.1 The proposal for grant of Environment Clearance for Amalgamated Yekona I & II OC (Phase-I) with increase in production capacity from 1.0 MTPA to 2.75 MTPA (normative) and 3.44 MTPA (peak) of M/s Western Coalfields Limited and increase in land area from 680.06 ha to 1679.39 ha located in Tehsil Warora, District Chandrapur (Maharashtra).

3.2.2 The EAC during deliberations noted the following:

The proposal was earlier considered by the sectoral EAC in its 53rd meeting held on 20th February, 2020, 55th meeting held on 29th May, 2020, and 1st EAC meeting held on 17-18 August, 2020 wherein the Committee deffered the proposal for want of additional information. Now, the PP has submitted the replies/compliance to observations of EAC, which is tabulated below: -

3.2.3 EAC noted following details with respect to compliance of the observations.

Sr. No.	Observations of EAC	Compliance / Submission of Project Proponent
1	PP shall study the impact Assessment on the proposed road route on receptors for environment parameters of as per Ambient Air Quality standards.	Impact Assessment on the proposed road route on receptors for environment parameters has been carried out • Accordingly air quality prediction modelling in two scenarios (with control and without control measures) for the parameters PM10, PM2.5 has been carried out on the receptors along the road route. The without control measures scenario provides worst case situation in context of air pollution when no control measures are adopted. • The second scenario with control measures is considered by adopting the control measures such as 3 m wide Green Belt along coal transport route and 10-30 m wide green belt along mine boundary, covering entire road route with fixed sprinklers and utilizing the mobile fogging machine to supress the suspended dust generated due to vehicular movement. The air quality prediction modelling for the SO2 and NOx has also been carried out in the road route without considering any control measures in worst case scenario. The road route proposed is following the same alignment in respect of pipe conveyor system. The road route has been proposed along the mine boundary and keeping at least 500 meter of distance from the nearby villages. It can be observed from the plan showing coal transport route, two villages namely Wanoja and Naydev are the nearest villages from the proposed coal transportation. • The maximum impact of proposed road route will be observed on these two villages. Accordingly, the impact Assessment study on the both receptors has been made where the baseline data has been generated from Jan'20 to April'20 for environment parameters as per Ambient Air Quality standards. • The prediction study has considered the cumulative impact of all the mining activities as the peak production capacity of 3.44 MTPA and coal transportation route (8 kms of road transport

		from coal stock yard to thermal power plant). The study has been carried out considering without control measures and with control measures. The In order to assess the likely impact of proposed expansion considering the road route for coal transportation on ambient air, numerical modeling has been carried out by using AERMOD version 16216r Air Quality Model. The nearest receptors along the coal transport route are Wanoja Village and Naydev Village. • The Air quality modelling has been done on incremental production of 3.44 MTPA (Peak Capacity of the project) likely to be achieved in middle years of the mine. The one season baseline data generated from Jan'20 to April'20 has been used for calculation of cumulative pollution load impact on the nearby receptors reduces after considering the control measures such as 3m Green Belt along coal transportation route, Fog Canon, Fixed Sprinklers along the road route 10-30 m wide green belt along mine boundary, covering entire road route with fixed sprinklers and utilizing the mobile fogging machine to supress the suspended dust generated due to vehicular movement
2	PP shall provide the deliberations with Power Plants, PWD or MIDC for widening of road or similar initiatives of pipe conveyor with Mahagenco to reduce the impact on road and nearby habitations.	As informed by GMR (through e-mail), GMR Warora Energy limited (GWEL) has appointed Tata Consulting Engineers Limited (TCE) as engineering consultant to carry out the feasibility study for transportation of coal from the WCL mines to power plant. TCE has submitted a preliminary survey report regarding long term transportation of coal from Yekona Mine of WCL to GWEL plant boundary TCE has recommended pipe conveyor technology for transportation of coal from WCL mine to power plant. • Regarding land acquisition at WCL end to be utilized for the purpose of installation of Pipe conveyor system, Section 9 of Gazette notification under CBA (A&D) Act is done and Payment of compensation & taking possession of the land is in process. It has also been informed (through e-mail) that, the job will be executed in phased manner and in 1st phase – the access road work from mine

		boundary to GWEL plant will commence shortly. • From the above details furnished, it may be seen that, the consultant of GWEL has recommended Pipe conveyor system for conveying of coal from WCL mine to GWEL power plant and the job will be executed in phased manner, the land acquisition is being done by both parties i.e. by WCL and by GWEL. • Therefore the long term coal sale agreement with GMR is under active consideration but the final agreement can be reached after grant of EC. Once the EC is granted further action for installation of Pipe conveyor system may be expedited
3	Water Balance diagram with zero liquid discharge considering no untreated mine water discharged in river	At Amalgamated Yekona-I and II OC Mine, the mine seepage water accumulated in the mine pit is being pumped out for safe mining purpose (total quantity being pumped out at present is 4320 m3/day). • The mine water quality is being monitored on fortnightly basis and if any adverse analysis result is observed suitable remedial measures will be adopted. • The mine seepage water is being used at mine for various industrial purposes like dust suppression, fire-fighting, and washing of HEMM. The surplus water after sedimentation/ treatment is utilized by surrounding villagers for household and irrigation purpose
	Permission of extraction of ground water from Central Ground Water Authority.	• The NOC from CGWA, for ground water abstraction from Amalgamated Yekona-I and II OC Mine has been obtained vide NOC letter no CGWA/NOC/MIN/ORIG/2019/6689 dated 06.12.2019, which is valid from 19.11.2019 to 18.11.2021.
	Study the impact of embankment along river and propose mitigation measures bearing in mind that no villages shall be flooded due to embankment.	The location of villages vis-à-vis danger due to flooding after construction of embankment, has been studied and conclusions have been drawn Last recorded HFL of Wardha river in the year 1994 is 198.0 m. • There are two villages namely Marda and Yekona. • Marda village is located within the mine leasehold area and having RL varying from 200.62 m – 201.62 m so there is clear difference of 2.62 to 3.62 m above HFL and as such there is no danger due to flooding. There is no history of flooding in the Marda village. Village Marda is

		proposed to be rehabilitated. A capital provision of Rs. 41.1908 crores has been made in approved Project Report for resettlement of Marda Village. Till such time, as Marda village is located on higher ground with respect to HFL and as such there is no danger due to flooding. Yekona village is located outside the mine leasehold area and having RL varying from 200.3 m – 202.5 m so there is clear difference of 2.3 to 4.5 m above HFL and as such there is no danger due to flooding. There is no history of flooding in the Yekona village. As Yekona village is located on higher ground with respect to HFL and as such there is no danger due to flooding
	Recommendation of Slope Stability Study of OB dump and Year wise dumping of external and internal OB, along with backfilling and reclamation shall be presented.	Scientific Study for Method of Working, Ultimate Pit Slope, Dump Slope & Monitoring of Slope Stability in Amalgamated Yekona I & II Mine of Majri Area was prepared by Prof. Jayanta Bhattacharya and his team of Department of Mining Engineering and School of Environmental Science and Engineering, Indian Institute of Technology, Kharagpur and submitted in September'2019. The same recommendation will be following by the company.

The Public Consultation for the Amalgamated Yekona I & II OC mine (production capacity of 3.44 MTPA (Peak) within area of 1701.32 ha) was conducted by Maharashtra Pollution Control Board at the project site in Warora Tehsil, Chandrapur on 14th June, 2019. The Public Consultation was presided by ADM, Chandrapur and attended by more than 200 people from nearby villages Following major issues were 1. Rehabilitation of Marda Village 2. Provision of direct and indirect employment and skill development for unemployed local youth. 3. Land Compensation 4. Wild vegetation on the land acquired by WCL 5. Pollution due to OB dump, mining and coal transportation. 6. Construction of Road for Coal transportation 7. Plantation activities 8. Utilization of CSR fund for Project affected villages 9. Water pollution and depletion of water table 10. Drinking Water supply arrangement to CharurKhati village

The forest land bearing survey nos 26/2, 27, & 28/2 measuring 2.76 ha in Nagala Rith Mouza are adjacent to the proposed lease boundary of the project and re-appropriation of the boundary is done excluding these forest land. However, the forest land bearing survey no. 2/1 and 2/2 in the Nagala Rith mouza measuring 0.62 ha falls in the middle of proposed external OB dump of Amalgamated Yekona-I & II OC mine. Due to which acquisition of this forest land has become inevitable to have sufficient external OB dump capacity and sustainability of the mining operations.

As the Stage–I forestry clearance for the 0.62 ha of forest land is yet to be secured and with all efforts, the formal Stage – I FC may take time. A revised Mining Plan by excluding the Forest

land 0.62 Ha and adjacent non-forest land 21.31Ha (for maintaining mine geometry) has been approved as Phase – I.

RO MoEF&CC made Field visit of Yekona I & II OC mine for ascertaining status of compliance of EC conditions, Nagpur on 26.06.2019. Thereafter, the Regional Office of MoEF&CC issued the Certified Compliance Report, Nagpur vide letter no. EC-1016/RON/2019-NGP/5622 dated 19.08.2019. There were zero non-compliance condition observed against total 36 EC conditions by RO, MoEF&CC. Six nos of conditions were found to be partially complied, against which action taken report (ATR) is provided in Section 7.6 of this EIA-EMP report

The irrigation canal passes through the proposed quarry area, and proposed to divert along the mine boundary. Existing length of irrigation canal proposed to be diverted is approx 6 kms within the ML Area. Diverted length of the canal will be approx 3.5 kms

Diversion of part of PWD road from Wanoja to Marda, Warora to Madhari and Marda to Yekona
This road is proposed to be diverted along the northern boundary in such a way that it have minimum effect on local transportation. The shortest possible and feasible alignment for diversion has been proposed as per the approved Mining Plan

Water pipe line of Maharashtra Government for water supply from Yekona village to Wanoja village passes through proposed Yekona I Quarry area, hence it is proposed to be diverted. The existing length of water pipeline is 5.6 kms. The diverted length will be 8.7 kms along the diverted road.

The nallah passes over the proposed external OB dump of the Yekona-I quarry. The nallah passes over the proposed external OB dump of the Yekona-I quarry. The design parameters will be as per the approval of concerned departments of State Government. The direction from the approval authority will be followed during final diversion of all surface features

There is no ecologically sensitive areas such as Biosphere Reserves / National Parks / WL Sanctuaries / Elephant Reserves, forests (Reserved/Protected), plants of medicinal and economic importance are found in the 15 km area of the buffer zone. No endangered plant species in the Core zone of Mining project was recorded. No endemic plant species have been recorded in the Core and Buffer zones of the project areas.

The Wardha River flows through the South-Western boundary of the Project. The mine boundary is stretched upto the River. A safety distance of 100 meters have been kept from the quarry. A minimum distance of 100 meters have been kept from the quarry. The external OB dump proposed is 170 m away from the Wardha River. Distance of 60 meters will be maintained from the Daiwal nallah flowing along the north west boundary of the project.

Air Quality monitoring at six numbers of sampling locations were selected for monitoring ambient air quality in and around project site. To assess the water quality, Six locations are identified and samples (6 Nos.) were collected and analyzed for physico-chemical and heavy metal parameters background Ambient Noise level of the Project site and its surrounding Environment, 6 locations (Two in core zone and four in buffer zone) were identified for baseline study.

Two Schedule-I species Great India Bustard and Indian pied hornbill were recorded within the buffer zone. Comprehensive Conservation Plan for the schedule-I species has been submitted. A capital provision of Rs 97.09 lakhs has been made against environment protection

The radius of mine influence area has been estimated for Amalgamated Yekona-I & II OC Mine based on the above mentioned aquifer and mine parameters and works out to around 530 m at final mine depth of 160 m for Yekona-I OC mine and 375 m at a final depth of 150 m for Yekona-II OC Mine

The major impact of deep and large mines is on natural groundwater table. Lowering of water table may result in reduced groundwater availability. Extraction of different minerals is known to lead to water pollution due to heavy metal, acid discharges and increased suspended solids

3.2.3 *The EAC, after deliberations found responses given by PP are satisfactory and since the approved Mine Plan is for normative capacity, EAC* ***recommends*** *the proposal for grant of Environment Clearance to Amalgamated Yekona I & II OC (Phase-I) with increase in production capacity from 1.0 MTPA to 2.75 MTPA (Normative) of M/s Western Coalfields Limited and increase in land area from 680.06 ha to 1679.39 ha located in Tehsil Warora, District Chandrapur (Maharashtra), under the provisions of Environment Impact Assessment Notification, 2006 and subsequent amendments/circulars thereto subject to the compliance of the following terms & conditions / specific conditions*

(i) The Environmental Clearances issued vide letter nos vide letter J-11015/175/ 2006-IA.II(M) Dated-17 October, 2006 and letter J-11015/182/2006-IA.II(M) Dated 17th October, 2006 dated shall be applicable along with this conditions.

(ii) The project proponent shall obtain Consent to Establish/Operate from the State Pollution Control Boards for the proposed capacity of 2.75MTPA prior to commencement.

(iii) Third party monitoring (by NEERI/CIMFR/IIT/NITs) for air quality shall be carried out at identified locations, both ambient and the process area, to arrive at impact of the proposed expansion at regular interval of 3 years.

(iv) Top soil should be stored separately at marked area and necessary vegetation shall be maintained to avoid any entrainment of dust.

(v) PP shall construct embankment leaving 100 mtrs away from HFL of Wardha river and the same shall be taken prior approval from DGMS

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

(vii) All the villages coming under the zone of influence as in hydrology study shall be provided with suitable water supply alongwith sanitation facility

(viii) Commitment made during public consultation process shall be adhere to. As proposed, Rs. 45.35 Crore is earmarked for CER activities shall be considered as part of Environment Management Plan, which shall be accomplished within period of 5 years.

(ix) Water quality and Bioassay test of Wardha River shall be monitored quarterly and submitted to State Pollution Control Board. No water shall be discharged in river.

(x) Quarterly monitoring of quality of water from bore hole used for drinking purpose shall be conducted and report thereof shall be submitted to SPCB

(xi) Progressive backfilling of mine and progressive reclamation of OB dump shall be done

(xii) To control the production of dust at source, the crusher and in-pit belt conveyors shall be provided with mist type sprinklers

(xiii) Mitigating measures shall be undertaken to control dust and other fugitive emissions all along the roads by providing sufficient fixed type water sprinklers. Adequate corrective measures shall be undertaken to control dust emissions, which would include mechanized sweeping, water sprinkling/mist spraying on haul roads and loading sites, long range misting/fogging arrangement, wind barrier wall and vertical greenery system, green belt, dust suppression arrangement at loading and unloading points, etc.

(xiv) Continuous monitoring of occupational safety and other health hazards, and the corrective actions need to be ensured.

(xv) The total industrial water demand (peak) in operation phase shall be met by utilizing treated mine discharge water. If require, necessary arrangement shall be made to reuse treated water from STP & ETP to nearby TPP or coal washery /or future coal washery by entering suitable agreement. No wastewater (treated or untreated) shall be discharged into the river or any other water body

(xvi) PP shall take permission of State Public Works Department before the proposed diversion of Road. Road between Naidev village to Warora shall be constructed by project proponent in co-ordination with PWD atleast 7 mts width and tree plantation shall be done along with road (both sides).

(xvii) STP for proposed colony shall be constructed within one year of implementation of colony

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

(xix) 5 Fog canon shall be installed to reduce the impact of air pollution for nearby yokona village

(xx) Water storage ponds shall be constructed of appropriate depth in nearby village (Pandurni Vilalge, Wanoja Village, Naydev Village and Mohbala Village) in collaboration with Gram Panchayats.

(xxi) Peripheral tree plantation of local species in nearby village (Pandurni Vilalge, Wanoja Village, Naydev Village and Mohbala Village) in collaboration with Gram Panchayats.

(xxii) Fund allocated in Approved Wildlife conservation plan for schedule I species shall be deposited within six months of issue of EC letter.

(xxiii) Green belt along the mine boundary should be developed on priority basis preferably within first 3 years

(xxiv) The recommendation of Scientific Study for Method of Working, Ultimate Pit Slope, Dump Slope & Monitoring of Slope Stability conducted by Indian Institute of Technology, Kharagpur shall be complied

(xxv) 3- teir tree plantation with wired fenching shall be by project proponent for clearly demarcating forest land adjacent forest land.

(xxvi) Persons of nearby villages shall be given training on livelihood and skill development to make them employable.

(xxvii) Mining shall be carried out only by surface miners for the project (as proposed) and silo loading till railway siding through in-pit conveyor should be installed to avoid road transportation in 3 years.

(xxviii) Efforts shall be made for utilizing alternate sources of surface water, abandoned mines or else whatsoever and thus minimizing the dependability on a single source.

(xxix) Active OB Dump should not be kept barren/open and should be covered by temporary grass to avoid air born of particles

(xxx) 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.

(xxxi) 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.

(xxxii) The Project Proponent shall 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. State Government shall ensure that the entire compensation levied, if any, for illegal mining paid by the Project Proponent through their respective Department in strict compliance of 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.

(xxxiii) Project Proponent shall obtain the necessary prior permission from the Central Ground Water Authority (CGWA) in case of intersecting the Ground water table.

(xxxiv) Proponent shall appoint an Occupational Health Specialist for Regular and Periodical medical examination of the workers engaged in the Project and maintain records accordingly; also, Occupational health check-ups for workers having some ailments like BP, diabetes, habitual smoking, etc. shall be undertaken once in six months and necessary remedial/preventive measures taken accordingly. The Recommendations of National Institute for ensuring good occupational environment for mine workers shall be implemented; The prevention measure for burns, malaria and provision of anti-snake venom including all other paramedical safeguards may be ensured before initiating the mining activities.

(xxxv) Project Proponent shall follow the mitigation measures provided in Office Memorandum No. Z-11013/57/2014-IA.II (M), dated 29th October, 2014, titled "Impact of mining activities on Habitations-Issues related to the mining Projects wherein Habitations and villages are the part of mine lease areas or Habitations and villages are surrounded by the mine lease area".

(xxxvi) 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.

(xxxvii) The project proponent shall take all precautionary measures during mining operation for conservation and protection of endangered fauna, if any, spotted in the study area. Action plan for conservation of flora and fauna shall be implemented in consultation with the State Forest and Wildlife Department. A copy of action plan shall be submitted to the Ministry of Environment, Forest and Climate Change and its Regional Office.

(xxxviii) 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.

Specific condition with respect area being in CPAs

(i) CTE/CTO for the project shall be obtained from the SPCB as required under the Air (Prevention and Control of Pollution) Act, 1981 and the Water (Prevention and Control of Pollution) Act, 1974, and the SPCB shall follow the mechanism/protocol issued by the Ministry vide letter no. Q-16017/38/2018-CPA dated 24th October, 2019 while issuing the CTE/CTO for the project, for improvement of environmental quality in the area.

(ii) The green belt of at least 5-10 m width shall be developed in more than 40% of the total project area, mainly along the periphery of mine boundary, in downward wind direction, and along road sides etc. Selection of plant species shall be as per the CPCB guidelines in consultation with the State Forest Department.

(iii) In addition, the project proponent shall develop greenbelt outside the plant premises such as avenue plantation, plantation in vacant areas, social forestry etc.

(iv) Monitoring of compliance of EC conditions may be submitted with third party audit every year.

(v) Fund allocation for Corporate Environment Responsibility (CER) which is atleast 2 times as per OM of 1st May, 2018 may now be considered as 2 time of fund allocated on commitment made during public consultation process for incorporating in EIA-EMP for deliberation of EAC and item-wise details along with time bound action plan shall be prepared and submitted to the Ministry's Regional Office..

(vi) Effective fugitive emission control measures should be imposed in the process, transportation, packing etc.

(vii) Transportation of materials by rail/ conveyor belt, wherever feasible.

(viii) A detailed water harvesting plan may be submitted by the project proponent

(ix) In case, domestic waste water generation is more than 10 KLD, the industry may install STP.

(x) Monitoring of compliance of EC conditions may be submitted with third party audit every year

Agenda No.3.3

Brahampuri Coal Mine Project of 0.36 MTPA (UG) in mine lease area of 360 ha of M/s Birla Corporation Limited located in Tehsil Parasia, District Chhindwara (Madhya Pradesh) – Term of Reference- reg .

[IA/MP/CMIN/178023/2020; File No IA-J-11015/20/2020-IA-II(M)]

3.3.1 The Proposal is for Terms of Reference (ToR) for Brahampuri Coal Mine Project of 0.36 MTPA (UG) in mine lease area of 360 of M/s Birla Corporation Limited located in, Village- Bichhua Pathar, Chhinda, Kukurmunda, Sethia & Sirgoda and Forest Block: 61-Thaori, Tehsil- Parasia, District- Chhindwara (Madhya Pradesh).

3.3.2 The details of the project, as ascertained from the proposal documents and as revealed from the discussions held during the meeting, are given as under

(i) Location: Latitude and Longitude of the project: Latitude: 22^0 12' 26" N & 22^0 13' 46" N and Longitude: 78^0 51' 18" E & 78^0 52' 41" E

(ii) Brahampuri Coal Mine has been allotted to M/s Birla Corporation Limited through vesting order no. NA-104/2/2019-NA dated Feb. 10, 2020 under clause (b) of sub-rule (2) of rule 7 & sub-rule (1) of rule 13 of the Coal Mines (Special Provisions) Rules 2014, issued by Ministry of Coal Govt. of India.

(iii) Mine plan has been approved vide letter No. 13016/63/2008/CA-I, dated 23.04.2010 from Ministry of Coal, Govt. of India.

(iv) Whether the project is in the Critically Polluted Area (CPA): No

(v) If a Joint venture, the names & addresses of the JV partners including their share: No

(vi) A total Geological reserve of Brahampuri is 55 MT and Extractable Reserve is 12.343 MT.

(vii) Brahampuri underground coal mine of lease area 360 Ha having 150.098 Ha of Forest land (Reserve Forest 32.475 Ha; Protected Forest 29.181 Ha & Revenue Forest land 88.442 Ha). Necessary Forest Clearance, as per applicable rules will be obtained.

(viii) End Use of coal: Cement Plant Birla Cement Works, Chanderia, Cement Plant Chanderia Cement Works, Chanderia, Cement Plant New Chittor Cement Works, Chanderia, Cement Plant Satna Cement Works, Satna, Captive Power Plant, Chanderia, Chittorgarh and Captive Power Plant, Satna

(ix) As per EIA notification dated 14th September 2006, as amended on date, the project falls under Activity 1 (a) and category 'A' project.

(x) The life of the mine is 38 years and operations shall be done in three stages.

(xi) Total 450 KLD of water requirement shall be made through underground mine seepage & bore well throughout the year.

(xii) It is an underground coal mine project and direct employment of about 600 persons shall be envisaged. Several indirect employment opportunities shall also be generated.

(xiii) Total power requirement is estimated to be between 3000 KVA to 4000 KVA excluding the load of township. For emergency power arrangement a DG set of 2 x 500 KVA shall be used for which about 60-70 LPH of HSD shall be consumed.

(xiv) The mine infrastructure comprises of shafts (2 No's), coal handling plant, coal transport facility, Mine offices, Canteen, Rest shelters, weighbridge etc which shall be made on ground at about 12.594 Ha [Forest Land 3.691 Ha, Non-Forest Land 8.903 Ha].

(xv) The peak rated capacity of Brahampuri Coal Mine is 0.36 MTPA by underground mining with Semi-mechanized bord & pillar method with LHD and belt conveyor conveying system with Coal Handling Plant (CHP) of 1200 tons per day.

(xvi) Details of Land usage

Landuse Details:

Sr. No.	Land use	Within ML Area (Ha)	Outside ML (Buffer Zone 10 km from ML) Area (Ha)	Total
1	Agricultural land	184.635	24,047.53	24,072.797
2	Forest land	150.098	12,010.332	12,160.43
3	Wasteland/Open Scrub	25.267	443.605	628.24
4	Grazing land	0	0	0
5	Surface water bodies	0	1,478.07	1,478.07
6	Settlements	0	1,377.44	1,377.44
7	Others (specify)	0	0	0
	Total	360.0	39,356.98	39,716.98

Pre-mining: Present Land Use Details

Forest	
Reserve Forest	32.475 Ha
Protected Forest	29.181 Ha
Revenue Forest	88.442 Ha
(A) Total Forest Land 150.098 Ha	
Non Forest	
Private Land	184.635 Ha
Government Land	25.267 Ha
(B) Total Non-Forest Land 209.902 Ha	
Total Land (A +B) = 360 Ha	

The proposed surface area for infrastructure development is around 12.594 Ha [Forest Land 3.691 Ha, Non-Forest Land 8.903 Ha (Govt Land: 0.502 Ha, Private Land: 8.401 Ha).

(xvii) Post- Mining: The project is for underground mining and only 12.594 Ha surface areas shall be acquired for infrastructure development. The post mining land use details shall be estimated after DPR preparation and during EIA-EMP study.

(xviii) Ambient Air Quality Monitoring has been started from 1st October 2020 for Post monsoon Season

(xix) Status of Forest Clearance: Forest Diversion Proposal for 150.098 Ha has been submitted on 21st October, 2020, the proposal no. is FP/MP/MIN/51637/2020.

(xx) Extent of forest land in the project (including safety zone and all types of forest land) (in ha): In project, the total forest area in 150.098 Ha and only 3.691 Ha of forest area shall be diverted (used for infrastructure activities above ground). The forest diversion shall be applied accordingly

(xxi) Is there any National Park, eco-sensitive Zones, within 10 km radius? If so, give the details: None. No National Park, eco-sensitive Zones, were present within 10 km radius of ML area.

(xxii) The capital cost for the Brahampuri Coal Mine project is Rs. 191 Crores, Cost of Production: Rs. 2848 / T; Environmental Management cost: 3.82 Cr (Capital and Recurring Cost)

(xxiii) Details of transportation of coal is proposed from In pit by Conveyor Belt & Shaft to CHP; Surface to siding: By Trucks and Siding at loading: By Railways (End Use Plants)

(xxiv) Total Afforestation plan shall be implemented covering of mining. This will include About 1 Ha at the end of mine life at above ground with Density of tree plantation (in no of plants) of 1000 / Ha

(xxv) No court cases pending for the project

3.3.3 The EAC during deliberations noted the following:-

The Proposal is for Terms of Reference (ToR) for Brahampuri Coal Mine Project of 0.36 MTPA (UG) in an ML area of 360 of M/s Birla Corporation Limited located in, Village-Bichhua Pathar, Chhinda, Kukurmunda, Sethia & Sirgoda and Forest Block: 61-Thaori, Tehsil-Parasia, District-Chhindwara (Madhya Pradesh).

Brahampuri Coal Mine has been allotted to M/s Birla Corporation Limited through vesting order no. NA-104/2/2019-NA dated Feb. 10, 2020 under clause (b) of sub-rule (2) of rule 7 & sub-rule (1) of rule 13 of the Coal Mines (Special Provisions) Rules 2014, issued by Ministry of Coal Govt. of India.

Mine plan has been approved vide letter No. 13016/63/2008/CA-I, dated 23.04.2010 from Ministry of Coal, Govt. of India.

Project involves 150.098 ha of forest land which requires Forest clearance. Forest Diversion Proposal for 150.098 Ha has been submitted on 21st October, 2020, the proposal no. is FP/MP/MIN/51637/2020

The solid waste produced during drivage of shaft sinking will be used for preparation of bank head at surface and debris so produced from inter seam drifts will be utilized for underground track levelling of the uneven floors and strengthening of surface bank head. Coal loss due to board and pillar method of mining will be minimised by use superior mining procedure

Intersection of ground water is envisaged. As the mining process does not involve any chemical treatment, the seepage water shall be pumped-out to the surface and recycled & reused for domestic & dust suppression purpose. It is proposed that about 450 KLD of water requirement shall be made through bore well & seepage water throughout the year.

Thaori reserve forest is within lease area under Parasia forest range

The Brahampuri Coal Mine project is underground project and no rehabilitation & resettlement is involved

3.3.4 *The EAC after deliberation* ***recommends*** *the proposal for grant of Terms of Reference to Brahampuri Coal Mine Project of 0.36 MTPA (UG) in an ML area of 360 ha of M/s Birla*

Corporation Limited located in, Tehsil Parasia, District Chhindwara (Madhya Pradesh),with specific conditions as below and as defined in the Standard ToR issued by this Ministry dated 8th September, 2020, under the provisions of the Environment Impact Assessment Notification, 2006 and subsequent amendments/circulars thereto.

(i) Public Consultation, including public hearing, shall be conducted through concerned SPCB as per the provisions/procedure contained in the EIA Notification, 2006 for information of the stakeholders about the present coal mining operations inviting comments and their redressal.

(ii) Time bound Action Plan for railway siding from mining pit to dispatch point.

(iii) Cumulative Impact Assessment Study of the area shall be carried out by project proponent with respect to existing mines.

(iv) Stage-I clearance for the entire forestland involved the project shall be obtained.

(v) The proposed infrastructure for mining activity shall be considered with minimum forest area with necessary justification.

(vi) The ground water shall be used only for domestic purpose only till initial 2 years of mine development.

(vii) Clarification from District Forest Officer that mine does not fall under corridors of any National Park and Wildlife Sanctuary.

(viii) PP shall prepare Mine Plan including Mine Closure Plan for Peak production capacity as per latest guidelines of Ministry of Coal.

(ix) Proper drainage system shall be prepared to avoid seepage of mining water to water bodies and seepage to ground water.

(x) Wind rose pattern in the area should be reviewed and accordingly location of AAMSQ shall be planned by the collection of air quality data. Monitoring location for collecting baseline data should cover overall the 10 km buffer zone i.e. dispersed in 10 km buffer area

(xi) Project proponent to prepare Environmental Cost Benefit Analysis for the project in EIA/EMP Report.

(xii) Permission for ground water withdrawal shall be obtained from Central Ground Water Authority (CGWA), if applicable.

(xiii) Impact of proposed project/activity on hydrological regime of the area shall be assessed and report be submitted. Hydrological studies as per GEC 2015 guidelines to be prepared and submitted

(xiv) Heavy metals including other parameters in surface water quality shall be analyzed and provided in EIA Report.

(xv) The parameters Arsenic, Lead and Silica shall also be analyzed in ambient air quality

(xvi) PP shall propose progressive greenbelt year wise and fund allotted for the same.

(xvii) PP shall study the impact of underground mining on Pench River in terms of quality and quantity of water availability

(xviii) Ground water usage for domestic purpose shall be limited for only 3 years. After 3 years PP should only use mine seepage water after treatment.

Agenda No.3.4

Expansion of New Majri UG to OC from 1.20 MTPA to 3.0 MTPA (Normative)/ 3.75 MTPA (Peak) & land area from 479.16 to 706.28 ha located in Shivji Nagar Majri, teh Bhadravati, District Chandrapur (Maharashtra)- For Environment Clearance – reg

3.4.1 The proposal is for Environment Clearance for Expansion of New Majri UG to OC from 1.20 to 3.0 MTPA (Normative) / 3.75 MTPA (Peak) and with increased in area from 479.16 ha to 706.28 ha located in Shivaji Nagar Majri, Tehsil Bhadravati, District Chandrapur (Maharashtra).

3.4.2 The EAC during deliberations noted the following:

The proposal was earlier considered by the sectoral EAC in its 1st EAC meeting held on 17-18 August, 2020 wherein the Committee deferred the proposal for want of additional information. Now, the PP has submitted the replies/compliance to observations of EAC, which is tabulated below: -

EAC noted following details with respect to compliance of the observations.

Sr. No.	Observations of EAC	Compliance / Submission of Project Proponent
	PP shall prepare and submit Mine Closure Plan as per latest guidelines of Ministry of Coal.	As per the latest guidelines of Ministry of Coal, issued on 29th May 2020, mine closure plan & final mine closure plan shall be integral part of mining plan. • Para 1.2 of the guidelines dated 29th May 2020 stipulates the following: - Quote "The mining plan approved prior to issue of this guideline will qualify for submission of such report/information at least 180 days prior to expiry of 5 year from the date of notification of the Mineral Concession Amendment Rules 2020." The Project Report (including mining plan) including mine closure plan of "Expansion of New Majri UG to OC", expansion of production capacity from 1.20 MTPA to 3.00 MTPA (Normative) and 3.75 MTPA (Peak) & Expansion in Land Area from 479.16 Ha to 706.28 Ha for has been approved by WCL Board vide resolution WCL/BD/SECTT/BM-311/w2019/539 dated 07.06.2019. • The Mining Plan has been approved prior to the issue of the guidelines dated 29.05.2020.
	Study the impact of diversion of nallah on hydrogeology and community.	The study has been carried and concluded as under: Impact of Nallah diversion on Hydrogeology: • Diversion of nallah involves change in Water shed area form 33.104 sq. km to 33.07 sq.km. i.e. reduction of watershed

		area by only 0.1% (approx.). So, there is negligible change in watershed area. Thus impact on overall ground water resource potential is negligible. Moreover, the affected area (0.034 sq. km) due to diversion of nallah comes under excavation area of the mine. As per the ground water flow direction analysis in the surrounding area of the project under consideration, it has been observed that the nallah is of gaining nature (groundwater contributes water to the nallah). As, it is a gaining nallah, due to the diversion, there is hardly any impact on the hydrogeological regime of the area. Impact of diversion of nallah on Community There are two nearby villages, one is Palasgaon located in the up-dip side of the mine and other is Patala located in the down dip direction. 1. Palasgaon Village: Palasgaon which was in up-stream of the confluence zone now falls in the down-stream of same. Therefore, Palasgaon village has access to more quantity of surface water than earlier. 2. Patala Village: In reference drainage plan of buffer zone and water shed maps presented in EIA/EMP report at section 3.5, it may be seen that Patala village is located outside the watershed of the said nallah. Therefore, there is no probability of getting affected due to diversion of nallah.
	Quality of mine water shall be analyzed for heavy metals.	Mine water is analyzed for heavy metals. The report of analysis of mine water as carried out (given in the EIA/EMP page - 162) recorded a value of "BDL" in respect of Arsenic, 0.009 (PLV – 0.1) in respect of Lead, "BDL" in respect of Nickel, "BDL" in respect of Cadmium, "BDL" in respect of Total Chromium.
	Water Balance scheme shall be presented without any discharge in nallah or river and water usage agreement should be provided power plants and villages with quantity	Water balance diagram (flowchart for utilization of pumped out mine water) has been presented during the appraisal. At present the seepage water from the mine face of the opencast mine gets accumulated in the underground mine galleries. Most of the suspended particles gets settled in the underground mine sump and the supernatant water is being pumped out for safe mining purpose (total

		quantity being pumped out is 4293 KLD). After being used for different purposes at mine (domestic, industrial, greenbelt development etc.) the balance water is being passed through sedimentation tank constructed at surface before for use of local villagers mainly for irrigation purpose The sedimentation tank has been constructed at New Majri UG to OC with dimension of 50 mtr x 18 mtr x 1.20 mtr (with 2 nos. baffle walls). For the expansion proposal an additional sedimentation tank has been proposed. Provision of Rs 25.00 Lakhs has been made in the approved Project Report for the construction of additional sedimentation tank. Also, the mine water quality is being monitored on fortnightly basis and if any adverse analysis result is observed the suitable remedial measures will be adopted. As directed by Ministry of Coal, the mine water discharge is treated & supplied to the local population on mining cost. Accordingly, WCL as a whole is distributing mine discharge water after treatment to local populace. Till date 2.0 Million cubic meter per annum is being supplied for domestic purpose benefitting 218365 people around its mining areas. In addition, WCL has also entered into agreement (MoU) to supply surplus water to Mahagenco (10.76 Million Cubic meter per annum) & Vidarbha Irrigation Development Corporation (28.16 Million cubic meter per annum). A copy of the front page of the same is presented Further 39.88 million cubic meter per annum water is fed into local channels for irrigation of 1084 Ha for the benefit of the surrounding community. Regarding agreement, it is submitted that, WCL as a CPSE, enters into agreement with Govt/Corporate body. For supply of water for domestic as well as irrigation, it is done as per felt need of the local surrounding habitants. In respect to the subject project, in case of any requirement of the nearby Power Plant and availability of surplus water at the project site, similar type of agreement may also be entered into.

	Impact of constructed embankment on village Patala shall be studied for flooding and necessary mitigation measure should be proposed	There is clear distance of 1.35 km from the shown bank of Wardha river upto the toe of constructed embankment The last recorded HFL of Wardha river is in 1994 with HFL of 192.65 m. Till date, the HFL is continuing with the same. It is recorded from topographical plan that the village has RL varying from 195 m to 197 m as such it well above the HFL (2.35 m to 4.35 above HFL). Thus it can be concluded that village is placed on elevated ground w.r.t. the HFL and is safe from flooding as flood even if it comes at all, will not be able to rise up to Patala village. As such there is no danger to Patala Village due to flooding During the proposed expansion also, the HFL is not going rise so as to affect Patala Village adversely. Hence there is no danger to Patala Village due to construction of embankment at New – Majri UG to OC.
	Heavy metals shall be analyzed for surface water	The report of analysis of surface water as carried out (given in the EIA/EMP page – 163-164) recorded a value of "BDL" in respect of Arsenic, "BDL" in respect of Lead, "BDL" in respect of Cadmium.
	PP shall submit Action Taken Plan on non/partial compliance observed by Ministry's Regional Office during its inspection for certified compliance report.	Certified Compliance Report was issued by the Regional Office of MoEF&CC, Nagpur vide letter no. EC-607/RON/2017-NGP/5788 dated 01.10.2019. Action taken report / Compliance report against the Non- complied and partially complied conditions has been submitted to RO, MoEF & CC vide letter 212 dated 21.11.2019. The same has already been uploaded on PARIVESH portal in FORM II
	Mine Plan including Mine Closure Plan (including yearly calendar plan) should be as per proposed Peak capacity of 3.75 MTPA.	The Project Report (including Mining Plan with mine closure plan) for Expansion of New Majri UG to OC for the production capacity of 3.0 MTPA (normative) and 3.75 MTPA (peak) has been approved by WCL Board in its 311th meeting as communicated vide resolution no. WCL/BD/SECTT./BM-311/2019/539 dated 07.06.2019. The relevant extract is reproduced below:- Quote:

		"a. The PR of Expansion of New Majri UG to OC mine, including Mining Plan (March 2019) for capacity of 3.00 MTY with total capital investment of Rs. 496.3829 crores (including WDV of Rs. 94.1087 crores) in partial hiring option at desired selling price of Rs. 2213.49 per te at 85% capacity to yield IRR of 12%. d. Obtaining Environmental Clearance for expansion of New Majri UG to OC mine for 3.75 MTPA." Justification for considering 3.75 MTPA as peak capacity and thereafter seeking EC of 3.75 MTPA is because of following reasons: • The parameters of opencast mine field and technical conditions of its development make target of 3.00 MTPA feasible with normal indices namely length, width & depth of the excavated block, thickness of composite seam, seam gradient, method of mining, location and deployment of equipment, rate of deepening etc. • However, favorable geo-mining and other conditions such as availability of greater strike length, flatter gradient, less number of rainy days in monsoon etc., the mine can achieve a peak production up to a maximum of 25% only beyond the normative capacity of 3.00 MTPA and the same works out to 3.75 MTPA. Hence, the peak production of 3.75 MTPA has been recommended in the approved Project Report for obtaining Environmental clearance.

(i) Earlier, the environment clearance to the project was obtained under EIA Notification, 2006 vide Ministry's letter No J-11015/25/2008-IA.II (M) dated 13.02.2017 for 1.20 MTPA in land area of 479.16 ha. Amendment in EC conditions was granted by MoEF&CC vide ref no. J-11015/25/2008-IA.II (M) dated 30.09.2017.

(ii) The Terms of Reference was granted by Ministry on 23rd October, 2019.

(iii) Project Report for production capacity of 3.00 MTPA (Normative) and 3.75 MTPA (Peak) within ML area of 706.28 ha was prepared and approved by WCL Board in its 311st meeting held on 25.05.2019 vide letter WCL/BD/SECTT/BM-311/2019/539 dated 07.06.2019

(iv) No forest is involved in the project

(v) The regular ambient air quality monitoring data (being continuously generated in compliance of EC) recorded for the last 2 years in and around the project from January 2017 to April 2019 with 521 samples and CAAQMS data of Feb'19 to May'19 have been considered to the assess the existing scenario with respect to proposed expansion during the Public Hearing

(vi) Thus, there is a continuity of data for more than 2 years which represent the scenario before the proposed expansion. Accordingly, it was submitted after grant of ToR (23.10.19) to MPCB for conducting of Public Hearing following due procedures laid down in the EIA Notification, 2006.

(vii) The latest baseline ambient air quality monitoring data at the baseline frequency carried out at 6 locations and CAAQMS data from Oct'19 to Dec'19 has been considered in preparation of Final EIA-EMP. The impact prediction modelling on air quality was conducted by AERMOD for increase in production capacity from 1.20 MTPA to 3.75 MTPA of coal production based on the approved Project Report/Mining Plan. The air quality impact prediction study has been caried out for the post-monsoon season, for which the baseline data has been generated from Oct'19 to Dec'19.

(viii) The advertisement for Public Hearing was published in the newspapers on 9th and 10th November, 2019 by Maharashtra Pollution Control Board in Lokmat and Hitavada respectively. The Public Hearing was successfully conducted on 12.12.2019 at community hall, WCL Kuchna Complex, Tehsil Bhadravati, Chandrapur District. The Public Hearing was presided by Additional District Magistrate (ADM), Chandrapur and it was attended by more than 500 persons. PH Points: condition of village road,employment to villages effected after PP acquired their land, improper rehabilitations, effect of blasting in majri colony, water level in village wells has gone down, damage to the field due to back water of nala,

(ix) There is no 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 are found in the 15 km area of the buffer zone. A detailed study on the biological environment comprising of core & buffer zone has been carried out through QCI-NABET accredited flora & fauna expert during the postmonsoon season, 2019

(x) The diversion of road has been proposed in the approved Project Report over the embankment in the dip side. The proposed diverted length over the embankment will approximately 3.0 kms. Capital provision of Rs 404.22 Lakhs has been made in the approved Project Report for diversion of the road. The approval for diversion from concerned State authority will be sought after completion of land acquisition. No diversion will be carried out without due permission of competent authority.

(xi) The radius of mine influence area has been estimated for the mine based on the aquifer and mine parameters and works out to about 650 m at final mine depth of 250 m

(xii) It is proposed to dump 6.48 Mm3 BC soil in Temporary Top Soil Dump of 25 ha in the dip side on coal bearing area. This Temporary Top Soil Dump will be rehandled and carpeted on top of the hard OB dumps in the void of New Majri Sec-IA & IIA Extension OC mine. The 25.0 ha land of temporary top soil dump will be reclaimed and planted. The acquisition of land is limited to coal bearing area only. No land is being acquired for accommodation of external OB dumps

(xiii) A STP has been proposed at the mine site. A sedimentation tank has been constructed at New Majri UG to OC with dimension of 50 mtr x 18 mtr x 1.20 mtr (with 2 nos. baffle walls) for mine discharge water. Recycling of water to be done upto the maximum extent possible within the mine.

(xiv) A road connecting Patala village with Majri railway station and other roads from Naglon and Kuchna pass over the proposed quarry area in the dip side. The existing length of Majri-Patala road within the project boundary is 2.26 kms. The diversion of road has been proposed in the approved Project Report over the embankment in the dip side. The proposed diverted length over the embankment will approximately 3.0 kms

(xv) The certified compliance report for existing Environmental Clearance of New Majri UG to OC has been obtained from Regional Office, MoEF&CC, Nagpur. Field visit for ascertaining status of compliance of EC conditions was made from RO, MoEF&CC, Nagpur on 29.07.2019. Thereafter, the Certified Compliance Report was issued by the Regional Office of MoEF&CC, Nagpur vide letter no. EC-607/RON/2017-NGP/5788 dated 01.10.2019. The certified compliance report is attached as Annexure-VII. Two conditions were observed non-compliance condition against total 77 conditions by RO, MoEF&CC. Seven nos of conditions were found to be partially complied, against which action taken report (ATR) has been submitted

3.4.3 *The EAC, after deliberations found responses given by PP are satisfactory and since the approved Mine Plan is for normative capacity, EAC* ***recommends*** *the proposal for grant of Environment Clearance to Expansion of New Majri UG to OC from 1.20 MTPA to 3.0 MTPA (Normative) in land area from 479.16 to 706.28 ha located in Shivji Nagar Majri, teh Bhadravati, District Chandrapur (Maharashtra), under the provisions of Environment Impact Assessment Notification, 2006 and subsequent amendments/circulars thereto subject to the compliance of the following terms & conditions / specific conditions*

(i) The project proponent shall obtain Consent to Establish/Operate from the State Pollution Control Boards for the proposed capacity of 3 MTPA prior to commencement.

(ii) Third party monitoring (by NEERI/CIMFR/IIT/NITs) for air quality shall be carried out at identified locations, both ambient and the process area, to arrive at impact of the proposed expansion at regular interval of 3 years.

(iii) Top soil should be stored separately at marked area and necessary vegetation shall be maintained to avoid any entrainment of dust.

(iv) PP shall construct embankment leaving 100 mtrs away from HFL of Wardha river and the same shall be taken prior approval from DGMS

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

(vi) All the villages coming under the zone of influence as in hydrology study shall be provided

with suitable water supply alongwith sanitation facility

(vii) Commitment made during public consultation process shall be adhere to. As proposed, Rs. 299.46 Lakhsis earmarked shall be considered as part of Environment Management Plan, which shall be accomplished within period of 5 years.

(viii) Water quality and Bioassay test of Wardha River shall be monitored quarterly and submitted to State Pollution Control Board. No water shall be discharged in river. Any deviation from limits as stipulated in norms by CPCB for quality shall be informed and necessary action shall be taken

(ix) Quarterly monitoring of quality of water from bore hole used for drinking purpose shall be conducted and report thereof shall be submitted to SPCB. Any deviation from limits as stipulated in norms by CPCB for quality shall be informed and necessary action shall be taken

(x) Progressive backfilling of mine and progressive reclamation of OB dump shall be done

(xi) To control the production of dust at source, the crusher and in-pit belt conveyors shall be provided with mist type sprinklers. Permanent water sprinkler shall be installed instead to water sprinkling by water tankers on the haul road.

(xii) Mitigating measures shall be undertaken to control dust and other fugitive emissions all along the roads by providing sufficient fixed type water sprinklers. Adequate corrective measures shall be undertaken to control dust emissions, which would include mechanized sweeping, water sprinkling/mist spraying on haul roads and loading sites, long range misting/fogging arrangement, wind barrier wall and vertical greenery system, green belt, dust suppression arrangement at loading and unloading points, etc.

(xiii) Continuous monitoring of occupational safety and other health hazards, and the corrective actions need to be ensured.

(xiv) The total industrial water demand (peak) in operation phase shall be met by utilizing treated mine discharge water. If require, necessary arrangement shall be made to reuse treated water from STP & ETP to nearby TPP or coal washery /or future coal washery by entering suitable agreement. No wastewater (treated or untreated) shall be discharged into the river or any other water body

(xv) Blasting effect on patala village should minimised by using latest technology and quarterly health survey shall be conducted by project proponent

(xvi) PP shall take permission of State Public Works Department before the proposed diversion of Road. Road shall be considered as per PWD requirement and plantation of trees and street light shall be provided by project proponent

(xvii) STP for proposed colony shall be constructed within one year of implementation of colony

(xviii) Toe wall of atleast 15 mts height should be constructed along the OB dump.

(xix) 5 Fog canon shall be installed to reduce the impact of air pollution for nearby villages

(xx) Water storage ponds shall be constructed of appropriate depth in nearby villages in collaboration with Gram Panchayats.

(xxi) Peripheral tree plantation of local species in nearby village in collaboration with Gram Panchayats. 3-tier plantation with atleast 50000 trees along the patala village and nearby villages wherein no R & R is proposed shall be done within 3 years

(xxii) 3-tier Green belt along the mine boundary should be developed on priority basis preferably within first 3 years.

(xxiii) Persons of nearby villages shall be given training on livelihood and skill development to make them employable.

(xxiv) Drinking water supply shall be given to all villages coming under the zone of influence by

extraction of ground water

(xxv) Active OB Dump should not be kept barren/open and should be covered by temporary grass to avoid air born of particles

(xxvi) 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.

(xxvii) 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.

(xxviii) The Project Proponent shall 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. State Government shall ensure that the entire compensation levied, if any, for illegal mining paid by the Project Proponent through their respective Department in strict compliance of 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.

(xxix) Project Proponent shall obtain the necessary prior permission from the Central Ground Water Authority (CGWA) in case of intersecting the Ground water table.

(xxx) Proponent shall appoint an Occupational Health Specialist for Regular and Periodical medical examination of the workers engaged in the Project and maintain records accordingly; also, Occupational health check-ups for workers having some ailments like BP, diabetes, habitual smoking, etc. shall be undertaken once in six months and necessary remedial/preventive measures taken accordingly. The Recommendations of National Institute for ensuring good occupational environment for mine workers shall be implemented; The prevention measure for burns, malaria and provision of anti-snake venom including all other paramedical safeguards may be ensured before initiating the mining activities.

(xxxi) Project Proponent shall follow the mitigation measures provided in Office Memorandum No. Z-11013/57/2014-IA.II (M), dated 29th October, 2014, titled "Impact of mining activities on Habitations-Issues related to the mining Projects wherein Habitations and villages are the part of mine lease areas or Habitations and villages are surrounded by the mine lease area".

(xxxii) 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.

(xxxiii) The project proponent shall take all precautionary measures during mining operation for conservation and protection of endangered fauna, if any, spotted in the study area. Action plan for conservation of flora and fauna shall be implemented in consultation with the State Forest and Wildlife Department. A copy of action plan shall be submitted to the Ministry of Environment, Forest and Climate Change and its Regional Office.

(xxxiv) 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.

(xxxv) PP shall submit mine closure report/activity of Telwasa OC (2.00 MTPA) and Dhorwasa OC (2.00 MTPA) and status to Ministry regional office within six months.

Specific condition with respect area being in CPAs

(xi) CTE/CTO for the project shall be obtained from the SPCB as required under the Air (Prevention and Control of Pollution) Act, 1981 and the Water (Prevention and Control of Pollution) Act, 1974, and the SPCB shall follow the mechanism/protocol issued by the Ministry vide letter no. Q-16017/38/2018-CPA dated 24th October, 2019 while issuing the CTE/CTO for the project, for improvement of environmental quality in the area.

(xii) The green belt of at least 5-10 m width shall be developed in more than 40% of the total project area, mainly along the periphery of mine boundary, in downward wind direction, and along road sides etc. Selection of plant species shall be as per the CPCB guidelines in consultation with the State Forest Department.

(xiii) In addition, the project proponent shall develop greenbelt outside the plant premises such as avenue plantation, plantation in vacant areas, social forestry etc.

(xiv) Monitoring of compliance of EC conditions may be submitted with third party audit every year.

(xv) Fund allocation for Corporate Environment Responsibility (CER) which is atleast 2 times as per OM of 1st May, 2018 may now be considered as 2 time of fund allocated on commitment made during public consultation process for incorporating in EIA-EMP for deliberation of EAC and item-wise details along with time bound action plan shall be prepared and submitted to the Ministry's Regional Office..

(xvi) Effective fugitive emission control measures should be imposed in the process, transportation, packing etc.

(xvii) Transportation of materials by rail/ conveyor belt to be implemented with the implementation of stipulation given in EC.

(xviii) A detailed water harvesting plan may be submitted by the project proponent

(xix) In case, domestic waste water generation is more than 10 KLD, the industry may install STP.

(xx) Monitoring of compliance of EC conditions may be submitted with third party audit every year

Agenda No.3.5

Dhankasa UG Coal Mining Project with Production capacity of 1.0 MTPA (Normative) & 1.20 MTPA (Peak) in ML Area of 582.651 ha of M/s Western Coalfields Limited located in Amarwara, District Chhindwara (Madhya Pardesh) - For Amendment in Environment Clearance- reg

3.5.1 The proposal is for amendment in Environment Clearance granted by Ministry to Dhankasa Underground Coal Mining Project with production capacity of 1.00 MTPA (normative) / 1.20 MTPA (Peak) in ML area of 582.651 ha located in tehsil Amarwara, Dist. Chhindwara, Madhya Pradesh.

3.5.2 The EAC during deliberations noted the following:

MoEF vide its letter dated 19th December, 2019 granted Environment Clearance to Dhankasa Underground Coal Mining Project with production capacity of 1 MTPA (normative) / 1.20 MTPA (Peak) in ML area of 582.651 ha located in tehsil Amarwara, Dist. Chhindwara (Madhya Pradesh) with specific and standard/general EC conditions.

Now, Project proponent has submitted that standard EC conditions mentioned in the EC letter may be amended for following conditions:-

"Statutory Condition (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)."

"Statutory Condition (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.*"*

" Water quality monitoring and preservation (i)

The effluent discharge (mine waste water, workshop effluent) shall be monitored in terms of the parameters notified under the Water Act, 1974 Coal Industry Standards vide GSR 742 (E) dated 25th September, 2000 and as amended from time to time by the Central Pollution Control Board."

"Water quality monitoring and preservation (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."

"Water quality monitoring and preservation (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."

"Water quality monitoring and preservation (ix)

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."

"Land reclamation (ii)

The final mine void depth should preferable be as per the approved Mine Closure Plan, and incase it exceeds 40 m, adequate engineering interventions shall be provided for sustenance of aquatic life therein. The remaining area shall be backfilled and covered with thick and alive top soil. Post-mining land be rendered usable for agricultural / forestry purposes and shall be diverted. Further action will be treated as specified in the guidelines for preparation of mine closure plan issued by the ministry of Coal dated 27th August, 2009 and subsequent amendments."

"Land reclamation (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- v is the post mining land use pattern shall be submitted to the MOEFCC/RO."

"Land reclamation (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."

"Land reclamation (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."

" Green Belt (ii)

Greenbelt consisting of 3-tier plantation of width not less than 7.5 m shall be developed all along the mine lease area as soon as possible. The green belt comprising a mix of native species (endemic species should be given priority) shall be developed all along the major approach/ coal transportation roads."

3.5.3 *The EAC after deliberations observed that proposal for amendment in conditions of standard EC conditions which are stipulated as per Ministry OM dated 9th August, 2018 is not required to submitted since these are standard condition. EAC desired that PP shall follow the standard EC conditions of opencast or underground mine as applicable, stipulated in the said OM. Since these project is of underground mine then PP shall follow the standard EC conditions of underground mine. Further, there shall be no changes in specific conditions. The proposal was accordingly* ***returned*** *to project proponent.*

Agenda No.3.6

Mahamaya Opencast Project (1.5 MTPA) in an ML area 1065.218 ha of M/s South Eastern Coalfields Limited (Bhatgaon Area) Bishrampur District Surajpur (Chhattisgarh) - For Terms of Reference – reg.

[IA/CG/CMIN/167953/2020; File No IA-J-11015/17/2020-IA-II(M)]

3.6.1 The proposal is for Terms of Reference to Mahamaya Opencast Project of 1.50 MTPA capacity in mine lease area of 1065.218 ha of M/s South Eastern Coalfields Limited located in village Jarhi, Tehsil Pratappur, District Surajpur (Chhattisgarh).

3.6.2. The 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. 64M/3 and is bounded by the geographical coordinates ranging from 23^0 22' 45.67" N to 23^0 23' 03.74" N and longitudes 83^0 02' 25.03" E to 83^0 02' 53.62" E.

(ii) Coal linkage of the project is proposed for primarily power plant.

(iii) No Joint venture cartel has been formed.

(iv) Project does not fall in the Critically Polluted Area (CPA), where the MoEF&CC's vide its

OM dated 13th January, 2010 has imposed moratorium on grant of environment clearance.

(v) Employment generation, 577 employments to 577 persons will be provided from the project.

(vi) The project is reported to be beneficial in terms of improving the socio – economic status of the adjoining areas. This will result in benefits for Contribution to Exchequers, Meet energy requirement and Post mining enhancement of Green cover.

(vii) New Mahamaya opencast coal project, capacity – 1.50 MTY, Area – 1065.218 ha (950.218 ha within ML area and 115.00 ha outside ML area)

(viii) Total mining lease area as per block allotment is Sendupara Block – 22 sq. km and Bhatgaon dip side – 19.59 sq. km (Total – 1065.218 ha). Mining Plan (Including Progressive Mine Closure Plan) has been approved by the SECL Board on 24.05.2018.

(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 Land	692.592	-	692.592
2	Forest Land	200.226	-	200.226
3	Wasteland	-	-	0.000
4	Grazing Land	2.16	-	2.160
5	Surface Water Bodies (nallah)	8.00	-	8.000
6	Settlements	0.00	55.00	55.000
7	Others (road, kotwar, gothan, school, panchayat etc.)	47.24	60.00	107.240
	Total Project Area =	950.218	115.00*	1065.218
*For R&R and Magazine.				

Post Mining

S. No.	Land use	Land use (ha)				
		Plantation	Water Body	Public Use	Undisturbed	Total
1	External OB Dump	0	0	0	0	0
2	Top Soil Dump*	0	0	0	0	0
3	Excavation	788.4	65.00	0	0	853.40
4	Roads	0	0	9	0	9
5	Built-up Area	0	0	90	43.428	133.428
6	Green Belt / Safety Zone / Undisturbed Area	43.39	0	0	0	43.390
7	Diversion of River / Nallah / Canal	0	26.00	0	0	26
	Total Area =	831.79	91.00	99.00	43.428	1065.218

* Top soil shall be temporarily stored in earmarked area of approximately 8 ha in quarry area and will be spread over the backfilled areas in due course of time.

(x) A Total geological reserve reported in the mine lease area is 53.06 MT with 44.07 MT mineable reserve. Out of total mineable reserve of 44.07 MT, 44.07 MT (approximately) are available for extraction. Percent of extraction from in-situ seam is 82 -85%, for developed pillars is 60%, and depillared areas is 20%.

(xi) Dhejagir seam with thickness ranging from 0.25 m – 11.22 m, L 1 seam with thickness ranging from 0.06 m – 1.81 m, Masan top seam with thickness ranging from 0.03 m – 3.55 m, L 2 seam with thickness ranging from 0.03 m – 2.20 m, and Upper patpahari seam with thickness ranging from 0.02 m – 4.44 m, are workable.

(xii) Grade of coal is G4 (Average weighted grade – Non coking), stripping ratio 1:12.69 while gradient is $1^{o}$to 4^{o}.

(xiii) Method of mining operations envisages by Open cast mining with Shovel – Dumper Combination method

(xiv) Life of mine is 33 years.

(xv) The project has no External OB Dump. Initially 73.98 $Mm^3$of OBin an area of 86.81 ha with 90 m height will be dumped within mine area which will be re-handled& backfilled in mined out area and 03 nos internal OB in an area of 788.40 ha with 559.49 Mm^3 of OB (including 73.98 Mm^3 OB of rehandled dump) is envisaged in the project.

(xvi) Total quarry area is 853.40 ha out of which backfilling will be done in 788.40 ha while final mine void will be created in an area of 65.00 ha with a depth of approx. 70 m. Backfilled quarry area of 788.40 ha shall be reclaimed with plantation. Final mine void will be converted into a water body.

(xvii) Transportation of coal has been proposed by Trucks / Tippers in mine pit head, from surface to siding by Trucks / Tippersand at sidings by Rail.

(xviii) Reclamation Plan in an area of 788.400 ha,. In addition to this, an area of 43.390 ha, has been included in the safety zone / undisturbed area / rationalization area, has also been proposed for green belt development.

(xix) 200.226 ha of forest land have been reported to be involved in the project. Approval under the Forest (Conservation) Act, 1980 for diversion of 200.226 ha of forest land for non-forestry purposes has been applied vide Reg. No FP / CG/ MIN / 39554 dated 16.03.2020.

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

(xxi) The ground water level has been reported to be varying between 1.75 m to 8.90 m. otal water requirement for the project is 408 KLD.

(xxii) Application for obtaining the approval of the Central Ground Water Authority for Mahamaya OCP will be submitted after issue of T.O.R.

(xxiii) Public hearing for the project will be conducted after T.O.R.

(xxiv) Masannallah is flowing about 4 km (E-W) within the property which is to be diverted along the northern mine boundary of lease. The nallah will be diverted in consultation with the Water Resource Department of the State Government.

(xxv) Regular monitoring of ambient air quality of Mahamaya OCP will be done and will be regularly submitted to concerned authorities.

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

(xxvii) Mahamaya OCP is a new project and does not involve violation of the EIA Notification, 2006 and amendment issued there under.

(xxviii)The project involves 1115 project affected families. R&R of the PAPs will be done as per approved R&R policy of CIL.

(xxix) Total cost of the project is Rs. 41026.00 lakhs. Cost of production is Rs. 1894.77./- per tonne (at 100 % production level) and Rs. 1980.53 /- per tone (at 85% production level), CSR cost is 2% of the average net profits of the Company made during the three immediately preceding financial years, R&R cost is Rs. 93.96 crores. Environment Management Cost is Rs. 147.07 crores.

3.6.3 The EAC during deliberations noted the following:

The proposal is for Terms of Reference to Mahamaya Opencast Project of 1.50 MTPA capacity in mine lease area of 1065.218 ha of M/s South Eastern Coalfields Limited located in village Jarhi, Tehsil Pratappur, District Surajpur (Chhattisgarh).

The project involves 200.226 ha of forest land for diversion for non-forestry activity.

Earlier Environment Clearance was granted by Ministry on 18th February, 2020 to Mahamaya UG coalmine Expansion project from 0.34 to 0.48 MTPA and ML from 460.467 to 762.470 of M/s South Eastern Coalfields Limited located in village Jarhi, Tehsil Pratappur, District Surguja (Chhattisgarh)

This proposal is for converting underground mine to opencast since extraction of coal by underground method is technically not feasible. This is an existing discontinued underground mine and proposed to work as new Opencast mining project.

The mining of the OCP will require diversion of the SH-14 and the Masan nala. The access to the quarry -1 has been proposed at a distance of 50 metres from the SH-14.

3.6.4 *The EAC after deliberations observed that the project is for converting underground to opencast mining method. It was desired that PP shall explore first all possible technology available in the world before proposing opencast mine since opencast mine has more environmental impact than underground mine in view of 200.226 ha of forest land to be diverted. Stripping ratio (mineral in tones to OB in cum) is about 1: 12.69 which seems to very high. Techno-economic and environmental feasibility may be undertaken for such proposal. Also, since the mine was under operation, Status of mine closure activity and compliance of earlier EC conditions shall be presented. Further EAC suggested the PP should rework on the proposal and*

may like to propose to increase the rate of production and thereby decreasing the life of the mine being a coking coal.

The proposal is, therefore, ***returned*** *for carrying out the study on above lines with other stipulation.*

Agenda No.3.7

Moonidih Coking Coal Washery of 2.5 MTPA in an ML area of 18 ha of M/s Bharat Coking Coal Limited located in Village Gopinathdih District Dhanbad (Jharkhand) - For Terms of Reference – reg.

[IA/JH/CMIN/166323/2020; File No J-11015/77/201-IA-II(M)]

3.7.1 The proposal is for Terms of Reference to Moonidih Coking Coal Washery (2.5 MTPA) in an ML area of 18 ha of M/s Bharat Coking Coal Limited located in Village Gopinathdih District Dhanbad (Jharkhand).

3.7.2. The 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 Latitude and Longitude of Project: Latitudes 23^0 44' 13.21" & 23^0 44' 27.54" N and Longitudes of 86^0' 21' 9.21" & 86^0 21' 20.94" E
(ii) If a Joint Venture, the names & addresses of the JV partners including their share: Not Applicable
(iii) Details of Coal Linkage: Moonidih UG Mine project from seam XV (Top & Bottom).
(iv) Whether the Project is in Critically polluted Area(CPA): No
(v) Cost of the Project: Capital Cost of the Project is Rs. 468.91 Crores
(vi) Employment Generated/to be generated: Total Employment generation will be 251. The project will create employment opportunities both for skilled, semi- skilled and unskilled labour both during construction and operational phases of the project in the area.
(vii) Benefits of the Project:

- The Washery will produce environmental friendly metallurgical grade coal to be used in steel plants thus resulting in huge savings to the national exchequer in conjunction with minimizing pollution levels.
- It will reduce volume of coal transportation which will reduce pollution.
- There will be spontaneous economic stimulus in the area with the expansion of project. Traders and private enterprises will grow in the area with this economic growth

(viii) Whether new or expansion project: New, The proposal is for New Coking Coal Washery: 2.5 MTPA
(ix) If expansion, please indicate the number and date of the Certified Compliance report of Regional Office of the MoEF: It will be submitted during consideration of EC
(x) No. and Date of the EC and the revised EC letter issued by the MoEF (if this is a case for reconsideration. If so, what specific reconsideration(s) being sought by the proponent): Not Applicable
(xi) Type of Mine : (Open cast/Underground/mixed): NA (Coking Coal Washery 2.5 MTY)

(xii) Capacity of the mine applied for: Coking Coal Washery: 2.5 MTY

(xiii) Date of Board's approval: 361st Board held on 06.03.2020 for Setting up of 2.5 MTPA Moonidih Coking Coal Washery for washing coal at 14±0.5% Ash level on BOM Concept

(xiv) Date of Ground water clearance: No groundwater will be used for operations of washery, only mine water will be used.

(xv) The source mine water will be mine water discharged from Moonidih Colliery situated near the washery site. The average mine water discharge per month is 1.0 Million Gallon available at Pit Top and will be used in the proposed washery. The quantity of water required for the proposed washery is about 0.30 MGD (1360 KLD).

(xvi) Any river/Nallha flowing near or adjacent to the proposed mine. If yes, please give details: Damodar River flowing at 2.5 KM from washery site.

(xvii) Life of Mine / Washery (yrs.): Life of the Washery is 18 years.

(xviii) Whether ambient air quality seasonal data has been documented. If so, from which season to which season and whether the results are within the prescribed limits: Regular monitoring of ambient air quality is being carried out on fortnightly basis. The reports are documented. The results of the ambient air quality monitoring were found within applicable coal mine standards.

(xix) Whether the certificate of compliance of earlier EC from MoEF Regional Office has been obtained, if the proposal is for expansion: NA

(xx) Details of Land usage: The proposed land use for 18 hectares of new washery will be as given in the table below. The entire land is owned by BCCL and it is barren land adjacent to the existing Moonidih washery.

Sl. No.	Description	Area in Ha
1	Plant Facilities	4.28
2	Administrative building/workshop	0.09
3	Storage(raw material)	0.38
4	Storage (finished product)	0.35
5	Storage (hazardous waste)	0.03
6	Storage(Refuse/rejects)	1.01
7	Effluent Treatment Plant	0.59
8	Approach Roads (s)	0.78
9	Railway Siding	2.00
10	Green Belt	7.64
11	Truck Parking facility	0.30
12	Miscellaneous	0.55
	Total	18.0

(xxi) Details of Forest issues: No forest area involved (in ha) for mining

(xxii) No National Park, eco-sensitive Zones are within 10 km radius. No wild life sanctuary is within 10 KM of radius of the project.

(xxiii) Cost of the project: Total Capital Cost: 468.91 Crores; Cost of Production: Operating cost per tonne of raw coal (Rs.) 429.15 ; Sale Price: a) Cost per tonne of clean coal (Rs.) after credit of 2nd product (Middling @ Rs 3137/t for 14%) 7131.38; Selling price of clean coal at 14% ash (Rs./t) 9416.31

(xxiv) CSR Cost: As per the provisions of The Companies Act, 2013(2% of the average net profits of the company during the last three financial years) or Rs 2/Ton whichever is higher. Environmental Management Cost: Rs 272 lakhs

(xxv) No R & R is involved in the project and there is no PAFs

(xxvi) Details of transportation of coal: Desired quantum of ROM coal will be transported through pipe conveyor systems from the Moonidih Underground mine to the screen-cum-crusher house at washery end. The washed coal will be stocked in Silos (2x4000t capacity) within the washery premises and will be loaded into railway wagons through a Loading Hopper of the Fast Loading System (FLS) mechanism for quick loading and delivery to BCCL's consumers through the railway siding. Storage of 2nd Product (middlings) in a 4000t Silo (inside washery premises) and thereafter its reclamation & conveying by belt conveyor to Loading Hopper of Fast Loading System of Clean/Metallurgical Coal & loading into Railway wagons by Fast Loading System (FLS) for onward dispatch to BCCL's Customer(s) has been envisaged.

(xxvii) Legal Issues: Proposal is not under any investigation: NIL; No court cases are pending. No violation cases pending.

3.7.3 The EAC during deliberations noted the following

(i) The proposal is for Terms of Reference to Moonidih Coking Coal Washery (2.5 MTPA) in an ML area of 18 ha of M/s Bharat Coking Coal Limited located in Village Gopinathdih District Dhanbad (Jharkhand).

(ii) Earlier Environment Clearance was granted to Cluster XI peak capacity of 6.604 MTPA in leasehold of 3447.14 Ha of M/s Bharat Coking Coal Limited by Ministry vide its letter dated-- on 26th August, 2013. Amendment in EC was granted on 26.07.2019 for proposed restructuring/reassessment of some of the constituent mines

(iii) A coal washery of 1.6 MTPA capacity is already operational in the leasehold of Moonidih UG. As per approved Mining plan submitted during EC, it is mentioned that a new coal washery of 2.5 MTPA will be added to bridge the gap of future coal washing requirement.

(iv) Accordingly, to meet the requirement of coking coal by steel plants, M/s Bharat Coking Coal Ltd. (BCCL) desired to set up a 2.5 MTY washery to wash coal from Moonidih UG Project

(v) The source of water is mine water at Pit Top 1.0 km away from the washery site. The average mine water discharge per month is 1.0 Million Gallon available at Pit Top and will be used in the proposed washery. The quantity of water required for the proposed washery is about 0.30 MGD

(vi) Transportation of -50 mm coal from mine by Pipe Conveyor to screen-cum-crusher house at washery end

(vii) Project don not fall in eco-sensitive zones areas

3.7.4 *The EAC after deliberations observed that proposal of ToR is within the mine lease area of existing Cluster XI coal mine and PP already having 1.6 MTPA of coal washery, this proposal*

shall be considered as expansion proposal particularly for coal washery. Further EAC ***recommends*** *the proposal for grant of Terms of Reference to Cluster XI peak capacity of 6.604 MTPA in leasehold of 3447.14 Ha (only for Coal Washery of capacity 2.5 MTPA in 18 ha) of M/s Bharat Coking Coal Limited, for preparation of EIA/EMP reports along with public consultation, subject to compliance of all terms and conditions as specified/notified in the standard ToR applicable, along with the additional conditions as under:-*

(i) Public Consultation, including public hearing, shall be conducted through concerned SPCB as per the provisions/procedure contained in the EIA Notification, 2006 for information of the stakeholders about the present coal mining operations inviting comments and their redressal

(ii) Certified compliance report of existing EC issued w.r.t. coal washery/coal mines in the block duly inspected by RO, MoEF&CC.

(iii) Permission for ground water withdrawal shall be obtained from Central Ground Water Authority (CGWA), if applicable.

(iv) Total fresh water requirement shall not exceed 1350 m3/day proposed to be met from nallah. No surface or ground water shall be used in coal washery operation.

(v) Study shall be carried for sustenance of water supply to cater to projected demand of the proposed washery throughout planned life of the washery.

(vi) Impact of proposed project/activity on hydrological regime of the area shall be assessed and report be submitted.

(vii) The washing technology so chosen should conform to 'Zero Liquid Discharge'.

(viii) Continuous monitoring of occupational safety and other health hazards, and the corrective actions need to be ensured.

(ix) For proper baseline air quality assessment, adequate monitoring stations in the downwind areas based on wind rose pattern of the area, shall be set up for collection of air quality data and air quality modeling.

(x) Disposal of washery rejects shall be in accordance with the extant policy and guidelines, and environment friendly.

(xi) 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.

(xii) Traffic Impact Assessment study shall be carried out road transportation (if any).

Agenda No.3.8

Gidhmuri and Paturai open cast coal mining project of 5.6 MTPA capacity in mine lease area 1751.92 ha of M/s. Chattisgarh State Power Generation Company Limited located in Gidhmuri, Paturia, Madanpur and Uchlenga , District Korba, Chattisgarh - For Amendment in Terms of Reference – reg.

[IA/CG/CMIN/174561/2020; File No J-11015/86/2017-IA-II(M)]

3.8.1 The proposal is for amendment in Terms of Reference for Gidhmuri and Paturia open cast coal mining project of 5.6 MTPA capacity in mine lease area 1751.92 ha of M/s. Chhattisgarh State Power Generation Company Limited located in Gidhmuri, Paturiadand, Madanpur and Uchlenga, District Korba, Chattisgarh.

3.8.2 The EAC during the deliberations noted the following:

The proposal was granted Terms of Reference (ToR) by Ministry vide its letter F.No.J-11015/86/2017-IA-II (M) dated 05.12.2018

Ministry of Coal Government of India has allotted Gidhmuri & Paturia coal blocks to CSPGCL located in Hasdeo-Arand coalfield area on 13th October 2015 (order no: 103/28/2015/NA) to meet the requirement of 5.6 MTPA coal for proposed coal based power plant at Bhaiyathan.

The Mining Plan (April, 2007) of Gidhmuri & Paturia coal blocks (Hasdeo Arand Coalfield), (5.6 MTPA) has been approved by Ministry of Coal, Govt. of India vide its letter No. 47011/1(22)/2002-CPAM/CA-1 dated 06th September 2007.

1495.332 ha of forest land has been reported to be involved in the project. Application for obtaining Forest Clearance has been submitted & accepted by state Nodal officer and it is under process at DFO level, with Proposal No.: FP/CG/MIN/19916 /2016.

The present proposal is for "Change in total forest area involved in the project which has increased from 1466.839 ha to 1495.332 ha" without change in total mine lease area (1751.92 ha) and coordinates. It has been proposed to change End Use Plant (EUP) from Bhaiyathan to Premnagar (ICPL) which is within 20 km of the Coal Block.

The land usage pattern of the project is as follows:

Pre-mining land use details (Area in Ha)

S.N.	LANDUSE	Within ML Area(ha)		Outside	TOTAL	
		As per ToR	As per amendment		As per ToR	As per amendment
1.	Agricultural land	278.897	250.112		278.897	250.112
2.	Forest land	1466.839	1495.332		1466.839	1495.332
7.	Others (specify)- Govt. revenue land	6.184	6.476		6.184	6.476
	TOTAL	1751.92	1751.92		1751.92	1751.92

*clarity on categories mentioned above shall come after detailed survey**.**

Out of 4 villages involves in Gidhmuri Paturia coal block, two villages namely Gidhmuri and Paturia Dand are Mahsati villages where land records were not available. A detailed survey to finalize the land records has been undertaken by the District Authorities including Revenue and Forest Officials and a Land Schedule been provided to CSPGCL on 14.12.2019. Basis of which the above land details as proposed for amendment in Terms of Reference have been worked out.

It has been submitted that the amendment has been proposed due to change in forest land from 1466.893 ha to 1495.332 ha where in the lease area is 1751.92 ha, there is no change and coordinate are remain same of the alloted coal block.

The coal block is spread over four villages namely Gidhmuri, Paturiadan, Uchlenga & Madanpur. Out of which the two villages namely Gidhmuri & Paturiadand is at present unsettled village

(masahati village) i.e. not a Revenue village due to which earlier the forest area was identified 1466.839 ha & was submitted to Ministry at the time of Environment Clearance application. However, after persuasion of CSPGCL the Revenue Authority finally found the forest area to be 1495.332 ha after joint inspection of CSPGCL by SDO & SDM Podi-Uproda letter no. 1430/AVA/2019 dated 12th December, 2019.

After obtaining the information by SDM, Katghora, DGPS survey was conducted & the DGPS report has already been submitted to DFO, Katghora for its verification & signing purpose which was for Forest Division. However, the correspondence made with department is enclosed. After getting the verified DGPS report form DFO, Katghora CSPGCL will initiate change in area for forest diversion proposal.

2.8.3 *The EAC after deliberations* ***recommended*** *the amendment in Terms of Reference for change in forest land from 1466.839 ha to 1495.332 ha and to change End Use Plant (EUP) from Bhaiyathan to Premnagar (ICPL) which is within 20 km of the Coal Block to Gidhmuri and Paturai open cast coal mining project of 5.6 MTPA capacity in mine lease area 1751.92 ha of M/s. Chattisgarh State Power Generation Company Limited located in Gidhmuri, Paturia, Madanpur and Uchlenga , District Korba (Chattisgarh) subject to following additional conditions:-*

i. *PP shall submit the proposal for forest clearance to the Ministry of 1495.332 ha of forest land*
ii. *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*
iii. *PP shall provide an integrated mine production and mine reclamation plan of which the systematic and post mining land form management / land scape management of mining area, internal, and external dump area will be integral. Both internal and external dumps shall be regraded and reshaped to reduce its height as close to the original surface level as possible for better land use post mining activities.*
iv. *PP shall not dump any Over burden material in Forest Area*
v. *PP shall propose progressive greenbelt year wise and fund allotted for the same*

Agenda No.3.9

Kathara Opencast Coal Mine project of 1.9 MTPA with mine lease area of 773.23 ha ha of M/s Central Coalfields Limited located in District Bokaro (Jharkhand) – Terms of Reference – reg.

3.9.1 The proposal is for fresh Terms of Reference (ToR) of Kathara Opencast Coal Mine project 1.90 MTPA with mine lease area of 773.23Ha of M/s Central Coalfields Limited located in District Bokaro (Jharkhand).

3.9.2 The details of the project, as per the documents submitted by the project proponent, and also as informed during the meeting, are reported to be as under:-

(i) The project Kathara OCP with capacity 1.9 MTPA was given EC vide J-11015/482/2008-IA-II(M) on 08.01.2014, as per EIA Notification 2006 with a life of 3 Years.

(ii) An updated Form-I for amendment of EC was submitted online on 01.02.2019.

(iii) EAC appraised the project on 25.06.2019 and 29.05.2020 and suggested that the Ministry may take necessary action as per the extant norms/guidelines in this regard. Subsequently, MoEF&CC directed to submit fresh application for Environmental Clearance as per EIA Notification,2006 vide letter no. J-11015/482/2008-IA.II(M) dated 14.10.2020. CCL has submitted Form-I Application of the mine as per EIA Notification, 2006 on 17.10.2020 on Parivesh portal.

(iv) Therefore, present proposal is for obtaining fresh ToR in respect of Kathara OCP (1.9 MTPA Capacity and project area of 773.23Ha).

(v) Latitude and longitude of the project site are Latitude: $23^0$44'46.85" N to $23^0$46'25"N and Longitude: $85^0$50'46.30"E to $85^0$54'14.52"E.

(vi) Joint Venture: No Joint Venture

(vii) Coal Linkage: Basket linkage, at present coal is being transported through Kathara Washery and then through railway siding.

(viii) Benefits of the project: Improvements in Physical Infrastructure; improvements in Social infrastructure; increase in employment potential; contribution to the Exchequer; meet energy and steel sector requirement; productive utilization of existing manpower of project.

(ix) Land Use of Project: The land usage of the project will be as follows:

Sl. No	Land Use	Area (in Ha)		
		Forest	Non-Forest	Total
1	Quarry	0	258.46	258.46
2	External OB Dump	0	109.53	109.53
3	Reclaimed OB dump and Embankment	0	41.38	41.38
4	Infrastructure	0	64.54	64.54
5	Colony& Settlement	0	122.87	122.87
6	Safety Zone/Green belt	0	45.00	45.00
7	Vacant land	0	131.45	131.45
	Total	0	773.23	773.23

(x) Total geological reserve is185.14MTe in Kathara Block. The balance mineable reserve is 22.16 MT; extractable reserve is 22.16MT. The percent of extraction would be100%.

(xi) The coal grade is W-III.The stripping ratio is 3.45Cum/tonne. The average Gradient is12-25deg. There will be 04 seams with thickness ranging from 1.00-34.00 m.

(xii) Water Requirement: Total estimated water requirement is 1465m^3/day (Domestic:845m^3/day; Industrial:620m^3/day). The level of groundwater ranges Pre Monsoon: 2.13-4.10 mtrs; Post Monsoon: 1.48-3.30mts.

(xiii) Method of Mining: The Method of mining would be opencast method of mining with shovel-dumper combination.

(xiv) Quarry Area: The total Quarry area is 258.46 Ha. The final mine void would be in 97.56Ha with depth of an average upto150 m below GL. Backfilled quarry area of 160.90Ha shall be reclaimed with plantation.

(xv) Management of Overburden: At present, the active external dump of area 109.53 Ha. has already attained the top designed R.L. of +340 m. Hence, no further external dumping will be carried out. Total estimated OB to be removed in the present proposal is 76.4 Mcum, and is proposed to be backfilled into the mine void. The total area of internal dump at final stage would be 160.90 Ha. with top R.L. of +310m.

(xvi) Baseline Data: The one season baseline data in respect of Meteorology, air, water, noise, soil, flora & Fauna and Socio Economics is being generated for the post monsoon season of 2020 (Oct' to Dec' 2020) as per the MoEF&CC guidelines for baseline data generation of open cast coal mining projects

(xvii) The life of mine is 12 years.

(xviii) Transportation: Coal transportation in pit by Rear dumpers, coal will then be transported to washery through tipping trucks which is 3 km from the mine.

(xix) R & R: Rehabilitation of 250 families is proposed in the project. R&R will be taken up as per the R&R policy of CIL and RFCTLARR Act, 2013.

(xx) Capital Cost: The capital cost is Rs. 266.63 Cr. CSR Cost as per CSR policy & Companies Act,2013. The Environmental Management Cost Rs.99.42Crore.

(xxi) Water body: No water body present within the project area. In Buffer zone, Damodar River, flowing towards east is located south of the project at a safe distance of around 500 m from the mine working.

(xxii) Wildlife issues: There are no national Parks, wildlife sanctuary, biosphere reserves found in the 10km buffer zone.

(xxiii) Forestry issues: No Forest land present with in the project area.

(xxiv) Court Case Pending: There are no court cases/violation pending with the project proponent.

3.9.3 The EAC during deliberations noted the following:

The proposal is for fresh Terms of Reference (ToR) of Kathara Opencast Coal Mine project 1.90 MTPA with mine lease area of 773.23Ha of M/s Central Coalfields Limited located in District Bokaro (Jharkhand).

Earlier, Environment Clearance to Kathara Opencast Coal Mining project of capacity 1.90 MTPA with mine lease area of 792.81 Ha of M/s Central Coalfields Limited located in District Bokaro (Jharkhand) dated 8th January, 2014.

The proposal was considered by EAC in its 55th meeting held on 29th May, 2020 wherein EAC noted the following:-

The EAC after deliberation reiterated its earlier observation that as the mine life earlier was estimated to be of 3 years, environmental clearance dated 8th January, 2014 was valid till 8th January, 2017 only. Extension for EC was not applied within the timeline. Production being done as submitted by PP beyond the validity of EC may be considered as case of violation. Further, Committee observed that as the coal mine is of high-grade Coking coal (occurrence of which is limited in India) and the idle manpower of the company deployed for this operation may be indirect loss of employment in the region. Ministry may take a policy decision as it was informed by the PP that there are some other similar cases wherein Ministry's direction is required as the window of six month based on Ministry's Notification dated 14th March, 2017 has expired and therefore it requires further directions. An expeditious decision may be useful to coal sector. EAC suggested that Ministry may consider such projects to be appraised by EAC Violation sector also for taking appropriate action, including recovery of the environmental damage cost, if any, as per extant rules to pave the way for appraisal and grant of EC/TOR as the case may be.

The matter was deliberated in the Ministry and it was decided this proposal should be considered by sectoral EAC as fresh proposal and issue of proposal shall be discussed.

It has been submitted that the project has not exceeded the EC capacity of 0.96 / 1.9 MTPA till 2016-17 since grant of EC or coal production of 1993-94 (0.9 MTPA) afterwards. Further the mine was operated within the same project area of 792.81 Ha. The coal production since grant of EC is given below:

Coal Production at Kathara OCP

SN	Financial Year	Coal Production (in MTPA)
1	2013-14	0.465
2	2014-15	0.658
3	2015-16	0.923
4	2016-17	0.937
5	2017-18	0.493
6	2018-19	0.733
7	2019-20	0.132

3.9.4 *The EAC after deliberation **recommends** the proposal for grant of Terms of Reference to Kathara Opencast Coal Mine project of 1.9 MTPA with mine lease area of 773.23 ha ha of M/s Central Coalfields Limited located in District Bokaro (Jharkhand), with specific conditions as below and as defined in the Standard ToR issued by this Ministry dated 8th September, 2020, under the provisions of the Environment Impact Assessment Notification, 2006 and subsequent amendments/circulars thereto.*

(i) Public Consultation, including public hearing, shall be conducted through concerned SPCB as per the provisions/procedure contained in the EIA Notification, 2006 for information of the stakeholders about the present coal mining operations inviting comments and their redressal.

(ii) Cumulative Impact Assessment Study of the area shall be carried over by project proponent

(iii) Clarification from District Forest Officer that mine does not fall under corridors of any National Park and Wildlife Sanctuary.

(iv) PP shall prepare Mine Plan including Mine Closure Plan for Peak production capacity as per latest guidelines of Ministry of Coal.

(v) PP shall construct embankment leaving 100 mtrs away from HFL of river or based on the scientific study by reputed institutes and the same shall be taken prior approval from DGMS. Study shall be carried out for safety of villagers due to embankment construction.

(vi) Proper drainage system shall be prepared to avoid seepage of mining water to water bodies and seepage to ground water.

(vii) No OB dumping shall be undertaken in the forest land, near the river and villages.

(viii) Wind rose pattern in the area should be reviewed and accordingly location of AAMSQ shall be planned by the collection of air quality data. Monitoring location for collecting baseline data should cover overall the 10 km buffer zone i.e. dispersed in 10 km buffer area

(ix) Inpit conveyor belt with silo loading should be proposed and installed for transportation of coal till railway siding.

(x) 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

(xi) Project proponent to prepare Environmental Cost Benefit Analysis for the project in EIA/EMP Report.

(xii) Permission for ground water withdrawal shall be obtained from Central Ground Water Authority (CGWA), if applicable.

(xiii) Impact of proposed project/activity on hydrological regime of the area shall be assessed and report be submitted. Hydrological studies as per GEC 2015 guidelines to be prepared and submitted

(xiv) Heavy metals including other parameters in surface water quality (also of Ghagri river) shall be analyzed and provided in EIA Report.

(xv) The parameters Arsenic, Lead and Silica shall also be analyzed in ambient air quality

(xvi) PP shall provide an integrated mine production and mine reclamation plan of which the systematic and post mining land form management / land scape management of mining area, internal, and external dump area will be integral. Both internal and external dumps shall be regraded and reshaped to reduce its height as close to the original surface level as possible for better land use post mining activities.

(xvii) The State Government/SPCB to take action against the project proponent under the provisions of section 19 of the Environment (Protection) Act, 1986, and further no consent to operate for expansion project to be issued till the project is granted EC for the expansion.

(xviii) The project proponent shall be required to submit a bank guarantee equivalent to the amount of remediation plan and natural and community resource augmentation plan with the SPCB prior to the grant of EC. The quantum shall be recommended by the EAC and finalized by the regulatory authority. The bank guarantee shall be released after successful implementation of the EMP, followed by recommendations of the EAC and approval of the regulatory authority.

(xix) Assessment of ecological damage with respect to air, water, land and other environmental attributes. The collection and analysis of data shall be done by an environmental laboratory duly notified under the Environment (Protection) Act, 1986, or an environmental laboratory accredited by NABL, or a laboratory of a Council of Scientific and Industrial Research (CSIR) institution working in the field of environment.

(xx) Preparation of EMP comprising remediation plan and natural and community resource augmentation plan corresponding to the ecological damage assessed and economic benefits derived due to violation.

(xxi) The remediation plan and the natural and community resource augmentation plan to be prepared as an independent chapter (13) in the EIA report by the accredited consultants.

(xxii) Details of Plantation already done/proposed to take up as per statutory requirement along with photographs and Budgetary provisions (year wise) to be provided.

(xxiii) In case of violation of undertaking by way of affidavit to comply with all the statutory requirements and judgment of Hon'ble Supreme Court dated, the ToR/Environmental Clearance shall be liable to be terminated forthwith.

(xxiv) Budget of remediation plan and natural and community resource augmentation plan corresponding to the ecological damage shall be completed within three years and to prepare accordingly.

(xxv) The Action Plan on the compliance of the recommendations of the CAG as per Ministry's Circular No. J-11013/71/2016-IA.I (M), dated 25.10.2017 needs to be submitted at the time of appraisal of the project and included in the EIA/EMP Report.

(xxvi) Detailed R&R plan is to be submitted in the EIA report.

(xxvii) Details of toe wall and garland drain to be constructed along the OB dump.

(xxviii) Reclamation to be done using geo-texturing technique of the dumps close to habitation and a cause of visual intrusion.

(xxix) Details of Water spraying (static water sprinklers) at coal stock yard and along the permanent haul road.

(xxx) Details of black topping of permanent haul roads.

(xxxi) Minimum 100 m distance to be maintained from dumps to habitation and three tier green belt to be developed.

Additional Items with the approval of Chairman

3.9 Amelia Opencast-cum-Underground Coal Mine Project (8.4 MTPA) in mine lease area of 1619.10 ha and an area of 240.70 ha outside the lease in village Pidarwah, Tehsil Singrauli, District Sidhi, Madhya Pradesh from M/s Madhya Pradesh State Mining Development Corporation Limited to M/s Tehri Hydel Development Corporation India Limited (THDC India Limited)- Transfer of Environment Clearance – reg

3.9.1 The proposal is regarding transfer of Environment Clearance of Amelia Opencast-cum-Underground Coal Mine Project (8.4 MTPA) from M/s Madhya Pradesh State Mining Development Corporation Limited to M/s Tehri Hydel Development Corporation India Limited (THDC India Limited). As per the procedure, the cases involving transfer of EC does not require appraisal in EAC. However, as per the direction, the matter has been proposed for discussion for EAC.

3.9.2 EAC noted the following details:

Earlier, the proposal was considered by EAC in its 2nd meeting held on 28-29 September, 2020 wherein it was desired that project proponent may submit the detailed report based on points raised by the Ministry.

Based on observation of EAC, PP has now submitted the response point wise

S. N.	Observations	Submission of Project Proponent
1	Environmental implications due to reduction/modification in the area due to revised Mine Plan and Mining methodology	As per earlier approved EC, forest land was 1283.57 ha. Later during FC-I, forest land is revised to 843.76 ha (after deducting 411.50 ha high density forest land This means 34.26% reduction in forest land. Due to reduction in area, the opencast capacity of the Amelia Mine has reduced to 5.6 MTY in the Approved Revised Mining Plan from 4.15 cum/te to 3.67 cum/te. Therefore, the peak load of OB generation has also reduced from 29.16 cum/yr to 21.50 cum/yr, thus reducing the environmental pollution. Also, in the Earlier Mining Plan, the coal transportation to the railway siding was through trucks while in the Approved Revised Mining Plan, the coal transportation from the face of the mine to the proposed Railway Siding at Deoragram is through belt convey. This will significantly reduce the environmental pollution.
2	Earlier the project was considered for Opencast and underground mining both but	In the earlier Mining Plan, the overall PRC is 8.4 MTPA (7MTPA for oc and 1.4 MTPA for UG). But, as per Approved OC PRC of 7MTPA.In the Mining Plan, it was proposed that opencast mining shall be done in the upper most seams in Seam VIII and Seam VII and all seams below Seam VII are proposed to be mined by the underground method. But the degree of exploration in the lower seams is very low (Borehole density of 2

	now only opencast mining is proposed to be conducted which may increase the pollutants in the ambient air.	BH/sq km) and so further exploration is required in the lower seam to enhance confidence in estimated resource and other geological parameters of these coal seams. So, in the Revised Mining Plan, is proposed that after completion of exploration, underground mining potentiality will be assessed and accordingly a Revised Mining plan shall be submitted incorporation the Underground Mining. Insofar as environmental pollution is concerned, reduction in the peal load of OB generation will lessen the environmental pollution rather than increase it.

Particulars	As per earlier approved EC and earlier Mining Plan	As per Approved Revised Mining Plan	Remarks
Forest Area	1283.57 ha	843.76 ha	34.26% reduction in forest land And grater reduction in the tree cutting (as high density forest of 411.50 ha is left).
PRC	8.4 MTPA (7 MTPA OC+ 1.4 MTPA UG)	5.6 MTPA (OC)	33% reduction
Average stripping ratio	4.15 cum/te	3.67cum/te	11.57% reduction
Peak load of OB generation	29.16 cum/yr	21.50 cum/yr,	26.26% reduction
Lead of Coal transportation by Dumpers	9.5 km	1.5 km	84.21% reduction
Life of Mine	32 years-OC 60 Years-UG	28years-OC	14.28 % reduction
PAP/PAF	925 PAP	500PAF	-
Coal evacuation	OC: Truck-Dumper(28 T)	Conveyor System (12-	Eco-Friendly

			of coal upto Devragram Railway Station	UG: 55 No.s-20T tippers for 9.5 km distance	13 Kms)	

3	Due to reduced area, the land use pattern of the project has been changed so area of quarry, and mine void, rate of Overburden (OB) generation, stripping ratio, Top soil generation and proper storage/stacking location of Top soil, location of OB storage (height and mode of reclamation), procedure for containment of pollutants from OB Dump.	Yes, the land use pattern will change due to reduction in area of operation. The details are given in following				

Particulars	Earlier Mining Plan	Approved Revised Mining Plan	Remarks
Quarry Area	1116 ha	899.68 ha	19.38% reduction
Mine Void	263 ha	189.65 ha	27.88% reduction
Rate of OB generation	29.16 cum/yr (peak)	21.50 cum/yr reduction	26.26% reduction
Stripping Ratio	4.15 cum/te	3.67 cum/te	11.56% reduction
Top soil generation and proper storage/stacking location of Top soil	0.2232 cum/yr. Temporary storage is on the rise side In two dumps of cumulative area 15.37 ha	1.05 cum/yr (average) Temporary storage will be on the dip side in a single dump of area 16.86 ha	Eco-friendly
Location of OB storage (height and mode of Reclamation)	Out of total OB volume of 792.09 Mcum, 95.78 Mcum of OB stored in two external dumps in 212 ha of land with 194.70 ha outside the mining lease and rest is backfilled in area of 853 ha. Max height-90m from the surface level and	All OB volume of 511.55 Mcum dumped inside mining lease of which 35.04 Mcum of OB disposed in external dump of area 105.85 ha and rest is backfilled in area of 710.03 ha. Max height 80m Eco-friendly	Eco-friendly

				reclamation through plantation.	from the surface level and reclamation is through plantation.	
			Procedures for containment of pollutants form OB dump	Water sprinklers	Water sprinkler with mobile dust suppression cannon.	Eco-friendly
4	Water Demand and year of intersection of water table will change the overall ground water availability in nearby areas and hydrogeology of the area	As per earlier approved EC (2008), Water Table in the study area ranges from 5-15 m and will be intersected during first year of Mining Operation, Peak Water demand is 1908.1 m3/d of water which will be met from mine sump/pit water (267.1 m3/d) and from groundwater (1641 m3/d). Annual Utilization of 12.263Mm3 is very less then Annual resource of 70.34 Mm3. Now, due to reduced area and reduced PRC, water demand shall also be decreased.				
5	Due to reduced area and incase the mine void has been increased than hydrogeology study is required to assess the impact for intersecting lower aquifers	Mine void is decreased form 263 ha in earlier Mining Plan (PRC 8.4 MTPA) to 189.65 ha in Approved Revised Mining Plan(PRC 5.6 MTPA) by MoC on 13.03.2020. Moreover, in earlier Mining Plan, Minimum depth of working is 19m and Maximum depth of working 180m. However, in Approved Revised Mining Plan, Minimum depth of working is 20m and Maximum depth of working 170m				
6	In the current revised Mine Plan, it is proposed for external dumping in coal bearing so incase if that coal under external dump is proposed to be extracted later in	Initially External Dump was planned outside the Leasehold area But now External dump is planned inside the leasehold area. External dump is located close to the incrop of VII seam and merged with internal dump (Refer to drawings of Approved Mining Plan). Coal of lower seams present in the dumping region is deep seated and extractable only by underground method after OC operations are sufficiently advanced. So, there will be no impact as no re-handling of OB dump will be required				

<table>
<tr><td></td><td>near future then there must be impact due to this.</td><td></td></tr>
<tr><td>7</td><td>Area of plantation as proposed earlier and current proposal due to change in area.</td><td>In earlier proposal, the total area to be brought under plantation was 1120.70 Ha. In the Approved Revised Mining Plan, the total area to be brought under plantation is 693.91 ha. As,411.50 ha of high density forest is already deducted from mine leasehold area, no plant shall be cut from 411.50 ha of high density forest land.

Compensatory Afforestation of 1137.40 ha is planned as per earlier approved EC. After grant of Stage-I Forest Clearance by MoEF&CC on 12.12.2018, Compensatory Afforestation has been planned at 1692.00 ha THDCIL has deposited Rs. 164.74 Crores against Compensatory Afforestation, Soil Water Conservation & NPV and Supervision charges to ad-hoc CAMPA account on 28.03.2019</td></tr>
<tr><td>8</td><td>With the revised Mine Plan, PP has also revised Mine Closure Plan so whole reclamation of mine after completion of mining activity has been changed now</td><td>Yes, the Mine Closure Plan has been revised accordingly and the revised reclamation plan has been provided in the Mining Plan and got approved by Ministry of Coal on 13.03.2020.Physical / Technical Reclamation,Biological and Ecological Reclamation, Hydro Reclamation is planned as per Approved Revised Mining Plan. Total closure cost has been estimated as Rs. 229.24 Crores</td></tr>
<tr><td>9</td><td>The environmental impact modelling carried out during that period and proposed Environment Management Plan recommended by EAC has changed with proposed changes by project proponent</td><td>The environment impact due to proposed changes will be much lower since the project area, forest area, tree cutting, capacity of mine, Peak OB load and number of Heavy Earth Moving Equipment has reduced significantly and Coal transportation from the face of the mine to the railway siding is through Belt Conveyor rather than truck EMP is basically to minimize the negative impact of various parameters under same head, for which this EMP,2006 is enough and hence remains the same for present transfer of EC under consideration
<table>
<tr><th>Parameter considered in Environmental Impact Assessment, 2006</th><th>As per Approved Revised Mining Plan,2020</th></tr>
<tr><td>Air Environment</td><td>Lesser impact in comparison to 2006</td></tr>
<tr><td>Water Environment</td><td>Lesser impact in comparison to 2006</td></tr>
<tr><td>Land Environment</td><td>Lesser impact in comparison to 2006</td></tr>
<tr><td>Noise and Vibration</td><td>Lesser impact in comparison to</td></tr>
</table>
</td></tr>
</table>

<table>
<tr><td></td><td></td><td>
<table>
<tr><td>Environment</td><td>2006</td></tr>
<tr><td>Ecological impacts</td><td>Lesser impact in comparison to 2006</td></tr>
<tr><td>Socio-economic impact</td><td>Lesser impact in comparison to 2006</td></tr>
<tr><td>Topography and drainage</td><td>Lesser impact in comparison to 2006</td></tr>
</table>
</td></tr>
<tr><td>10</td><td>Environmental impact calculated with respect to Air, Water, Solid Waste for opencast cum underground viz-a-viz mining only through Opencast.</td><td>As per conditions stipulated in the mining plan approval by Moc, UG mining is proposed for lower seams after detailed exploration. Hence, this will again be a case of combined OC and UG mining. In case of PRC of 5.6 MTPA(OC) in Approved Revised Mining Plan even that is lesser than 7 MTPA (OC) of earlier Mining Plan
<table>
<tr><td>Particulars</td><td>Earlier Mining Plan</td><td>Approved Revised Mining Plan</td><td>Remark</td></tr>
<tr><td>Air</td><td>Dragline was being used to extract OB PRC was higher</td><td>• Less HEMM
• Less Overburden
• Less OB generation rate
• Less Stripping ratio</td><td>Less Environmental impact.</td></tr>
<tr><td>Water</td><td>More Water Resources required as area and PRC was higher</td><td>• Less Lease Area
• Less Quarry Area
• Less impact on Ground Water</td><td>Less Environmental impact.</td></tr>
<tr><td>Solid waste</td><td>More Overburden generation External Dumping outside leasehold area</td><td>• Larger amount of Top soil is being stored /stacked and reused
• External Dumping inside leasehold area
• Concurrent Reclamation</td><td>Less Environmental impact.</td></tr>
</table>
</td></tr>
</table>

3.9.3 *Based on above submission of project proponent, EAC after deliberations noted that the production capacity i.e 8.4 MTPA (7MTPA for OC and 1.4 MTPA for UG) to 5.6 MTPA only Opencast and mine lease has been reduced. Further, PP claims that there will be less impact on environment parameters however it does not have any data for impact assessment. It is observed that the project lies in Critically Polluted Areas (CPAs) as per CEPI Score determined by CPCB i.e. Singrauli and during the time of grant of EC, it was not under CPA. Also there are various coal mine and power plants already operating in the area and these have expanded over period of time, contributed and affected the area of Singrauli. As result of which, area was declared as polluted area and has been under moratorium time to time.*

The committee also noted that the Hon'ble NGT order in the matter of OA 1038/2018 (CEPI matter) wherein action plan for polluted industrial areas identified as CPAs/SPAs has to be finalized by SPCB and CPCB for the activities/industrial operation in the Singrauli Area. MP

Pollution Control Board vide letter dated 15th July, 2020 and CPCB vide letter 12th October, 2020 has drawn action plan for the mines as well as thermal power plants in the said area. Among various action points one of the action point regarding source inventory/source apportionment study to be carried out for further planning of pollution control. Accordingly, committee was of the view PP shall carry out the site specific study of source apportionment.

The committee also recognized that while granting the EC to M/s Madhya Pradesh State Mining Development Corporation Limited (original allottee), the impact assessment and its mitigation measure was done based on baseline data prior to 2008. It is felt that these mitiagation measure need to be strengthened in view of the critically polluted area, declared afterward. Thus, taking into account of these factors, EAC proposed that a fresh one-month baseline data of environment parameters shall be collected and impact assessment shall be reanalyzed to evolve the mitigation measure in the present context, which shall be part of Environmental Clearance after period of 12 years of EC. Also, details of public hearing conducted, issues raised during that time and their compliance shall be furnished. It was also observed that earlier EC has a condition about keeping mining activity at safe distance from Kanchan Muda nala and Kanchan River and R&R of about 965 PAPs. PP may inform the changes if any due to change in area. Also detailed layout of mining activity shall be presented before EAC for stipulating safeguard conditions (if any).

Further, EAC desires that PP shall apply on Ministry's PARIVESH Portal for any further deliberation on the subject.

The meeting ended with thanks to the Chair.

*****

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 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 statue be established in the core zone as well as in the buffer zone for monitoring of pollutants, namely PM_{10}, $PM_{2.5}$, SO_2 and NO_x. Location of the stations shall be decided based on the meteorological data, topographical features and environmentally and ecologically sensitive targets in consultation with the State Pollution Control Board. Online ambient air quality monitoring stations may also be installed in addition to the regular monitoring stations as per the requirement and/or in consultation with the SPCB. Monitoring of heavy metals such as Hg, As, Ni, Cd, Cr, etc to be carried out at least once in six months.

(ii) The Ambient Air Quality monitoring in the core zone shall be carried out to ensure the Coal Industry Standards notified vide GSR 742 (E) dated 25th September, 2000 and as amended from time to time by the Central Pollution Control Board. Data on ambient air quality and heavy metals such as Hg, As, Ni, Cd, Cr and other monitoring data shall be regularly reported to the Ministry/Regional Office and to the CPCB/SPCB.

(iii) Transportation of coal, to the extent permitted by road, shall be carried out by covered trucks/conveyors. Effective control measures such as regular water/mist sprinkling/rain gun etc shall be carried out in critical areas prone to air pollution (with higher values of PM_{10}/$PM_{2.5}$) such as haul road, loading/unloading and transfer points. Fugitive dust emissions from all sources shall be controlled regularly. It shall be ensured that the Ambient Air Quality parameters conform to the norms prescribed by the Central/State Pollution Control Board.

(iv) The transportation of coal shall be carried out as per the provisions and route envisaged in the approved Mining Plan or environment monitoring plan. Transportation of the coal through the existing road passing through any village shall be avoided. In case, it is proposed to construct a 'bypass' road, it should be so constructed so that the impact of sound, dust and accidents could be appropriately mitigated.

(v) Vehicular emissions shall be kept under control and regularly monitored. All the vehicles engaged in mining and allied activities shall operate only after obtaining 'PUC' certificate from the authorized pollution testing centres.

(vi) Coal stock pile/crusher/feeder and breaker material transfer points shall invariably be provided with dust suppression system. Belt-conveyors shall be fully covered to avoid air borne dust. Side cladding all along the conveyor gantry should be made to avoid air borne dust. Drills shall be wet operated or fitted with dust extractors.

(vii) Coal handling plant shall be operated with effective control measures w.r.t. various environmental parameters. Environmental friendly sustainable technology should be implemented for mitigating such parameters.

(c) Water quality monitoring and preservation

(i) The effluent discharge (mine waste water, workshop effluent) shall be monitored in terms of the parameters notified under the Water Act, 1974 Coal Industry Standards vide GSR 742 (E) dated 25th September, 2000 and as amended from time to time by the Central Pollution Control Board.

(ii) The monitoring data shall be uploaded on the company's website and displayed at the project site at a suitable location. The circular No.J-20012/1/2006-lA.11 (M) dated 27th May, 2009 issued by Ministry of Environment, Forest and Climate Change shall also be referred in this regard for its compliance.

(iii) Regular monitoring of ground water level and quality shall be carried out in and around the mine lease area by establishing a network of existing wells and constructing new piezometers during the mining operations. The monitoring of ground water levels shall be carried out four times a year i.e. pre-monsoon, monsoon, post-monsoon and winter. The ground water quality shall be monitored once a year, and the data thus collected shall be sent regularly to MOEFCC/RO.

(iv) Monitoring of water quality upstream and downstream of water bodies shall be carried out once in six months and record of monitoring data shall be maintained and submitted to the Ministry of Environment, Forest and Climate Change/Regional Office.

(v) Ground water, excluding mine water, shall not be used for mining operations. Rainwater harvesting shall be implemented for conservation and augmentation of ground water resources.

(vi) Catch and/or garland drains and siltation ponds in adequate numbers and appropriate size shall be constructed around the mine working, coal heaps & OB dumps to prevent run off of water and flow of sediments directly into the river and water bodies. Further, dump material shall be properly consolidated/ compacted and accumulation of water over dumps shall be avoided by providing adequate channels for flow of silt into the drains. The drains/ ponds so constructed shall be regularly de-silted particularly before onset of monsoon and maintained properly. Sump capacity should provide adequate retention period to allow proper settling of silt material. The water so collected in the sump shall be utilised for dust suppression and green belt development and other industrial use. Dimension of the retaining wall constructed, if any, at the toe of the OB dumps within the mine to check run-

off and siltation should be based on the rainfall data. The plantation of native species to be made between toe of the dump and adjacent field/habitation/water bodies.

(vii) Adequate groundwater recharge measures shall be taken up for augmentation of ground water. The project authorities shall meet water requirement of nearby village(s) after due treatment conforming to the specific requirement (standards).

(viii) Industrial waste water generated from CHP, workshop and other waste water, shall be properly collected and treated so as to conform to the standards prescribed under the standards prescribed under Water Act 1974 and Environment (Protection) Act, 1986 and the Rules made there under, and as amended from time to time. Adequate ETP /STP needs to be provided.

(ix) The water pumped out from the mine, after siltation, shall be utilized for industrial purpose viz. 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 rivarine/riparian ecosystem conservation and management plan should be prepared and implemented in consultation with the irrigation / water resource department in the state government.

(d) Noise and Vibration monitoring and prevention

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

(ii) Controlled blasting techniques shall be practiced in order to mitigate ground vibrations, fly rocks, noise and air blast etc., as per the guidelines prescribed by the DGMS.

(i) The noise level survey shall be carried out as per the prescribed guidelines to assess noise exposure of the workmen at vulnerable points in the mine premises, and report in this regard shall be submitted to the Ministry/RO on six-monthly basis.

(e) Mining Plan

(i) Mining shall be carried out under strict adherence to provisions of the Mines Act 1952 and subordinate legislations made there-under as applicable.

(ii) Mining shall be carried out as per the approved mining plan(including Mine Closure Plan) abiding by mining laws related to coal mining and the relevant circulars issued by Directorate General Mines Safety (DGMS).

(iii) No mining shall be carried out in forest land without obtaining Forestry Clearance as per Forest (Conservation) Act, 1980.

(ii) Efforts should be made to reduce energy and fuel consumption by conservation, efficiency improvements and use of renewable energy.

(f) Land reclamation

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

(ii) The final mine void depth should preferably be as per the approved Mine Closure Plan, and in case it exceeds 40 m, adequate engineering interventions shall be provided for sustenance of aquatic life therein. The remaining area shall be backfilled and covered with thick and alive top soil. Post-mining land be rendered usable for agricultural/forestry purposes and shall be diverted. Further action will be treated as specified in the guidelines for Preparation of Mine Closure Plan issued by the Ministry of Coal dated 27th August, 2009 and subsequent amendments.

(iii) The entire excavated area, backfilling, external OB dumping (including top soil) and afforestation plan shall be in conformity with the "during mining"/"post mining" land-use pattern, which is an integral part of the approved Mining Plan and the EIA/EMP submitted to this Ministry. Progressive compliance status vis-a-vis the post mining land use pattern shall be submitted to the MOEFCC/RO.

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

(v) Further, it may be ensured that as per the time schedule specified in mine closure plan it should remain live till the point of utilization. The topsoil shall temporarily be stored at earmarked site(s) only and shall not be kept unutilized. The top soil shall be used for land reclamation and plantation purposes. Active OB dumps shall be stabilised with native grass species to prevent erosion and surface run off. The other overburden dumps shall be vegetated with native flora species. The excavated area shall be backfilled and afforested in line with the approved Mine Closure Plan. Monitoring and management of rehabilitated areas shall continue until the vegetation becomes self-sustaining. Compliance status shall be submitted to the Ministry of Environment, Forest and Climate Change/ Regional Office.

(vi) The project proponent shall make necessary alternative arrangements, if grazing land is involved in core zone, in consultation with the State government to provide alternate areas for livestock grazing, if any. In this context, the project proponent shall implement the directions of Hon'ble Supreme Court with regard to acquiring grazing land.

(g) Green Belt

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

(ii) Greenbelt consisting of 3-tier plantation of width not less than 7.5 m shall be developed all along the mine lease area as soon as possible. The green belt comprising a mix of native

species (endemic species should be given priority) shall be developed all along the major approach/ coal transportation roads.

(h) Public hearing and Human health issues

(i) Adequate illumination shall be ensured in all mine locations (as per DGMS standards) and monitored weekly. The report on the same shall be submitted to this ministry & it's RO on six-monthly basis.

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

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

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

(v) The project proponent shall follow the mitigation measures provided in this Ministry's OM No.Z-11013/5712014-IA.I1 (M) dated 29th October, 2014, titled 'Impact of mining activities on habitations-issues related to the mining projects wherein habitations and villages are the part of mine lease areas or habitations and villages are surrounded by the mine lease area'.

(i) Corporate Environment Responsibility

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

(ii) The company shall have a well laid down environmental policy duly approve by the Board of Directors. The environmental policy should prescribe for standard operating procedures to have proper checks and balances and to bring into focus any infringements/deviation/violation of the environmental/forest/wildlife norms/conditions. The company shall have defined system of reporting infringements/deviation/violation of the environmental/forest/wildlife norms/conditions and/or shareholders/stake holders.

(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; PM_{10}, SO_2, NOx (ambient levels) or critical sectoral parameters, indicated for the projects and display the same at a convenient location for disclosure to the public and put on the website of the company.

(v) The project proponent shall submit six-monthly reports on the status of the compliance of the stipulated environmental conditions on the website of the ministry of Environment, Forest and Climate Change at environment clearance portal.

(vi) The project proponent shall follow the mitigation measures provided in this Ministry's OM No.Z-11013/5712014-IA.I1 (M) dated 29th October, 2014, titled 'Impact of mining activities on habitations-issues related to the mining projects wherein habitations and villages are the part of mine lease areas or habitations and villages are surrounded by the mine lease area'.

(vii) The project proponent shall submit the environmental statement for each financial year in Form-V to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently and put on the website of the company.

(viii) The project authorities shall inform to the Regional Office of the MOEFCC regarding commencement of mining operations.

(ix) The project authorities must strictly adhere to the stipulations made by the State Pollution Control Board and the State Government.

(x) The project proponent shall abide by all the commitments and recommendations made in the EIA/EMP report, commitment made during Public Hearing and also that during their presentation to the Expert Appraisal Committee.

(xi) No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment, Forests and Climate Change.

(xii) Concealing factual data or submission of false/fabricated data may result in revocation of this environmental clearance and attract action under the provisions of Environment (Protection) Act, 1986.

(xiii) The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.

(xiv) The Ministry reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions.

(xv) The Regional Office of this Ministry shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the officer (s) of the Regional Office by furnishing the requisite data / information/monitoring reports.

(xvi) The above conditions shall be enforced, inter-alia under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986, Hazardous and Other Wastes (Management and Trans-boundary Movement) Rules, 2016 and the Public Liability Insurance Act, 1991 along with their amendments and Rules and any other orders passed by the Hon'ble Supreme Court of India / High Courts and any other Court of Law relating to the subject matter.

***

Annexure-II

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

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

I. Statutory compliance:

(i) The Environmental clearance shall be subject to orders of Hon'ble Supreme Court of India, Hon'ble High Courts, NGT and any other Court of Law, from time to time, and as applicable to the project

(ii) The project proponent shall obtain forest clearance under the provisions of Forest (Conservation) Act, 1986, in case of the diversion of forest land for non-forest purpose involved in the project.

(iii) The project proponent shall obtain clearance from the National Board for Wildlife, if applicable.

(iv) The project proponent shall prepare a Site-Specific Conservation Plan / Wildlife Management Plan and approved by the Chief Wildlife Warden. The recommendations of the approved Site-Specific Conservation Plan / Wildlife Management Plan shall be implemented in consultation with the State Forest Department. The implementation report shall be furnished along with the six-monthly compliance report. (incase 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_2 and NO_x. Location of the stations shall be decided based on the meteorological data, topographical features and environmentally and ecologically sensitive receptors in consultation with the State Pollution Control Board. Monitoring of heavy metals such as Hg, As, Ni, Cd, Cr, etc. to be carried out at least once in six months. Online ambient air quality monitoring station/stations may also be installed in addition to the regular air monitoring stations as per the requirement and/or in consultation with the SPCB

ii. The Ambient Air Quality monitoring in the core zone shall be carried out to ensure the Coal Industry Standards notified vide GSR 742 (E) dated 25.9.2000 and as amended from time to time by the Central Pollution Control Board. Data on ambient air quality and heavy metals such as Hg, As, Ni, Cd, Cr and other monitoring data shall be regularly reported to the Ministry/Regional Office and to the CPCB/SPCB.

iii. Transportation of coal, to the extent permitted by road, shall be carried out by covered trucks/conveyors. Effective control measures such as regular water sprinkling/rain gun/ mist sprinkling etc., shall be carried out in critical areas prone to air pollution with higher level of particulate matter all through the coal transport roads, loading/unloading and transfer points. Fugitive dust emissions from all sources shall be controlled regularly. It

shall be ensured that the ambient air quality parameters conform to the norms prescribed by the Central/State Pollution Control Board.

iv. Major approach roads shall be black topped and properly maintained.

v. The transportation of coal shall be carried out as per the provisions and route proposed in the approved mining plan. Transportation of the coal through the existing road passing through any village shall be avoided. In case, it is proposed to construct a 'bypass' road, it should be so constructed that the impact of sound, dust and accidents could be appropriately mitigated.

vi. Vehicular emissions shall be kept under control and regularly monitored. All the vehicles engaged in mining and allied activities shall operate only after obtaining 'PUC' certificate from the authorized pollution testing centres.

vii. Coal stock pile/crusher/feeder and breaker material transfer points shall invariably be provided with dust suppression system. Belt-conveyors shall be fully covered to avoid air borne 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-lA.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 purpose viz. watering the mine area, roads, green belt development etc. The drains shall be regularly desilted particularly after monsoon and maintained properly.

ix. Industrial waste water from coal handling plant and mine water shall be properly collected and treated so as to conform to the standards prescribed under the Environment (Protection) Act, 1986 and the Rules made thereunder, and as amended from time to time. Oil and grease trap shall be installed before discharge of workshop effluent. Sewage treatment plant of adequate capacity shall be installed for treatment of domestic waste water.

x. Adequate groundwater recharge measures shall be taken up for augmentation of ground water. The project authorities shall meet water requirement of nearby village(s) in case the village wells go dry due to dewatering of mine.

xi. The surface drainage plan including surface water conservation plan for the area of influence affected by the said mining operations shall be prepared, considering the presence of any river/rivulet/pond/lake etc., with impact of mining activities on it, and implemented by the project proponent. The surface drainage plan and/or any diversion of natural water courses shall be as per the provisions of the approved Mining Plan/ EIA-EMP submitted to this Ministry and the same should be done with due approval of the concerned State/GoI Authority. The construction of embankment to prevent any danger against inrush of surface water into the mine should be as per the approved mining plan and as per the permission of DGMS.

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

IV. Noise and Vibration monitoring and prevention

i. Adequate measures shall be taken for control of noise levels below 85 dB(A) in the work environment. Workers engaged in underground mining operations, operation of HEMM, etc. shall be provided with personal protective equipments (PPE) like ear plugs/muffs in conformity with the prescribed norms/guidelines in this regard. Progress in usage of such accessories to be monitored. Adequate awareness programme for users to be conducted.

ii. The noise level survey shall be carried out as per the prescribed guidelines to assess noise exposure of the workmen at vulnerable points in the mine premises, and report in this regard shall be submitted to the Ministry/RO on six-monthly basis.

V. **Mining Plan**

i. Mining shall be carried out under strict adherence to provisions of the Mines Act 1952 and subordinate legislations made there-under as applicable.

ii. No change in mining method i.e. UG to OC, calendar programme and scope of work shall be made without obtaining prior approval of the Ministry of Environment, Forests and Climate Change (MoEFCC).

iii. Mining shall be carried out as per the approved mining plan (including mine closure plan) abiding by mining laws related to coal mining and the relevant circulars issued by Directorate General Mines Safety (DGMS).

iv. Underground work place environmental conditions shall be rendered ergonomic and air breathable with adequate illumination in conformance with DGMS standards.

v. No mining activity shall be carried out in forest land without obtaining Forestry Clearance as per Forest (Conservation) Act, 1980 and also adhering to The Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006 read with provisions of Indian Forest Act, 1927.

vi. Efforts should be made to reduce energy and fuel consumption by conservation, efficiency improvements and use of renewable energy.

VI. Land reclamation

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

ii. Post-mining land be rendered usable for agricultural/forestry purposes and shall be handed over to the respective State Government, as specified in the Guidelines for Preparation of Mine Closure Plan, issued by the Ministry of Coal dated 27th August, 2009 and subsequent amendments.

iii. Regular monitoring of subsidence movement on the surface over and around the working areas and its impact on natural drainage pattern, water bodies, vegetation, structure, roads and surroundings shall be continued till movement ceases completely. In case of observation of any high rate of subsidence beyond the limit prescribed, appropriate effective mitigation measures shall be taken to avoid loss of life and materials. Cracks should be effectively plugged in with ballast and clay soil/suitable material.

iv. Fly ash shall be used for external dump of overburden, backfilling or stowing of mine as per provisions contained in clause (i) and (ii) of subparagraph (8) of fly ash notification issued vide SO 2804 (E) dated 3rd November, 2009 as amended from time to time. Efforts shall be made to utilize gypsum generated from Flue Gas Desulfurization (FGD), if any, alongwith 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 OM No.Z-11013/5712014-IA.I1 (M) dated 29th October, 2014, titled 'Impact of mining activities on habitations-issues related to the mining projects wherein habitations and villages are the part of mine lease areas or habitations and villages are surrounded by the mine lease area'.

IX. **Corporate Environment Responsibility**

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

ii. The company shall have a well laid down environmental policy duly approve by the Board of Directors. The environmental policy should prescribe for standard operating procedures to have proper checks and balances and to bring into focus any infringements/deviation/violation of the environmental / forest / wildlife norms / conditions. The company shall have defined system of reporting infringements / deviation / violation of the environmental / forest / wildlife norms / conditions and / or shareholders / stake holders. The copy of the board resolution in this regard shall be submitted to the MoEF&CC as a part of six-monthly report.

iii. A separate Environmental Cell both at the project and company head quarter level, with qualified personnel shall be set up under the control of senior Executive, who will directly to the head of the organization.

iv. Action plan for implementing EMP and environmental conditions along with responsibility matrix of the company shall be prepared and shall be duly approved by competent authority. The year wise funds earmarked for environmental protection measures shall be kept in separate account and not to be diverted for any other purpose. Year wise progress of

implementation of action plan shall be reported to the Ministry/Regional Office along with the Six Monthly Compliance Report.

v. Self environmental audit shall be conducted annually. Every three years third party environmental audit shall be carried out.

X. Miscellaneous

i. The project proponent shall make public the environmental clearance granted for their project along with the environmental conditions and safeguards at their cost by prominently advertising it at least in two local newspapers of the District or State, of which one shall be in the vernacular language within seven days and in addition this shall also be displayed in the project proponent's website permanently.

ii. The copies of the environmental clearance shall be submitted by the project proponents to the Heads of local bodies, Panchayats and Municipal Bodies in addition to the relevant offices of the Government who in turn has to display the same for 30 days from the date of receipt.

iii. The project proponent shall upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and update the same on half-yearly basis.

iv. The project proponent shall submit six-monthly reports on the status of the compliance of the stipulated environmental conditions on the website of the ministry of Environment, Forest and Climate Change at environment clearance portal.

v. The project proponent shall submit the environmental statement for each financial year in Form-V to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently and put on the website of the company.

vi. The project authorities shall inform to the Regional Office of the MOEFCC regarding commencement of mining operations.

vii. The project authorities must strictly adhere to the stipulations made by the State Pollution Control Board and the State Government.

viii. The project proponent shall abide by all the commitments and recommendations made in the EIA/EMP report, commitment made during Public Hearing and also that during their presentation to the Expert Appraisal Committee.

ix. No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment, Forests and Climate Change (MoEF&CC).

x. Concealing factual data or submission of false/fabricated data may result in revocation of this environmental clearance and attract action under the provisions of Environment (Protection) Act, 1986.

xi. The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.

xii. The Ministry reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions.

xiii. The Regional Office of this Ministry shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the officer (s) of the Regional Office by furnishing the requisite data / information/monitoring reports.

xiv. The above conditions shall be enforced, inter-alia under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986, Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 and the Public Liability Insurance Act, 1991 along with their amendments and Rules and any other orders passed by the

Hon'ble Supreme Court of India / High Courts and any other Court of Law relating to the subject matter.

xv. Any appeal against this EC shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.

***

Annexure-III

Standard EC Conditions for Coal Washery Project

I. Statutory compliance:

(i) The project proponent shall obtain forest clearance under the provisions of Forest (Conservation) Act, 1986, in case of the diversion of forest land for non-forest purpose involved in the project.

(ii) The project proponent shall obtain clearance from the National Board for Wildlife, if applicable.

(iii) The project proponent shall prepare a Site-Specific Conservation Plan / Wildlife Management Plan and approved by the Chief Wildlife Warden. The recommendations of the approved Site-Specific Conservation Plan / Wildlife Management Plan shall be implemented in consultation with the State Forest Department. The implementation report shall be furnished along with the six-monthly compliance report. (incase of the presence of schedule-I species in the study area)

(iv) The project proponent shall obtain Consent to Establish / Operate under the provisions of Air (Prevention & Control of Pollution) Act, 1981 and the Water (Prevention & Control of Pollution) Act, 1974 from the concerned State pollution Control Board/ Committee.

(v) The project proponent shall obtain the necessary permission from the Central Ground Water Authority.

(vi) Solid waste/hazardous waste generated in the washery needs to addressed in accordance to the Solid Waste Management Rules, 2016 / Hazardous & Other Waste Management Rules, 2016.

(vii) Coal beneficiation practices shall be carried out under strict adherence to provisions of the Factories Act, 1957 and subordinate legislations made there under.

II. Air quality monitoring and preservation

i. Adequate ambient air quality monitoring stations shall be established in the core zone as well as in the buffer zone for monitoring of pollutants, namely particulates, SO2 and NOx. 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 statue be established in the core zone as well as in the buffer zone for monitoring of pollutants, namely PM_{10}, $PM_{2.5}$, SO_2 and NO_x. Location of the stations shall be decided based on the meteorological data, topographical features and environmentally and ecologically sensitive targets in consultation with the State Pollution Control Board. Online ambient air quality monitoring stations may also be installed in addition to the regular monitoring stations as per the requirement and/or in consultation with the SPCB. Monitoring of heavy metals such as Hg, As, Ni, Cd, Cr, etc to be carried out at least once in six months.

iii. Transportation of coal by road shall be carried out by covered trucks/conveyors. The transportation of clean coal and rejects shall be by rail with wagon loading through silo. Effective measures such as regular water sprinkling shall be carried out in critical areas prone to air pollution and having high levels of particulates such as roads, belt conveyors, loading/unloading and transfer points. Fugitive dust emissions from all sources shall be

controlled at source. It shall be ensured that the ambient air quality parameters conform to the norms prescribed by the Central/State Pollution Control Board

iv. All approach roads shall be black topped and internal roads shall be concreted. The roads shall be regularly cleaned. Coal transportation shall be carried out by covered trucks.

v. Covered trucks shall be engaged for mineral transportation outside the washery upto the railway siding, shall be optimally loaded to avoid spillage en-route. Trucks shall be adequately maintained and emissions shall be below notified limits.

vi. Facilities for parking of trucks carrying raw material from linked mine shall be created within the unit.

vii. Vehicular emissions shall be kept under control and regularly monitored. The vehicles having 'PUC' certificate from authorized pollution testing centres shall be deployed for washery operations.

viii. Hoppers of the coal crushing unit and other washery units shall be fitted with high efficiency bag filters/mist spray water sprinkling system shall be installed and operated effectively at all times of operation to check fugitive emissions from crushing operations, transfer points of closed belt conveyor systems and from transportation roads.

ix. The raw coal, washed coal and coal wastes (rejects) shall be stacked properly at earmarked site (s) within stockyards fitted with wind breakers/shields. Adequate measures shall be taken to ensure that the stored mineral does not catch fire.

x. The temporary reject sites should appropriate planned and designed to avoid air and water pollution from such sites.

III. **Water quality monitoring and preservation**

i. The effluent discharge (mine waste water, workshop effluent) shall be monitored in terms of the parameters notified under the Water Act, 1974 Coal Industry Standards vide GSR 742 (E) dated 25.9.2000 and as amended from time to time by the Central Pollution Control Board.

ii. The monitoring data shall be uploaded on the company's website and displayed at the project site at a suitable location. The circular No. J-20012/1/2006-lA.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 river front 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 of from reject dumping sites.

vii. An Integrated Surface Water Management Plan for the washery area up to its buffer zone considering the presence of any river/rivulet/pond/lake etc. with impact of coal washing activities on it, shall be prepared, submitted to MoEFCC and implemented.

viii. Waste Water shall be effectively treated and recycled completely either for washery operations or maintenance of green belt around the plant.

ix. Rainwater harvesting in the washery premises shall be implemented for conservation and augmentation of ground water resources in consultation with Central Ground Water Board.

x. No ground water shall be used for coal washing unless otherwise permitted in writing by competent authority (CGWA) or MoEFCC. The make-up water requirement of washery should not exceed 1.5 m3/tonne of raw coal.

xi. Regular monitoring of ground water level and quality shall be carried out in and around the mine lease area by establishing a network of existing wells and constructing new piezometers during the mining operations. The monitoring of ground water levels shall be carried out four times a year i.e. pre-monsoon, monsoon, post-monsoon and winter. The ground water quality shall be monitored once a year, and the data thus collected shall be sent regularly to MOEFCC/RO.

xii. 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.

xiii. 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.

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 outsoured 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 OM No.Z-11013/5712014-IA.I1 (M) dated 29th October, 2014, titled 'Impact of mining activities on habitations-issues related to the mining projects wherein habitations and villages are the part of mine lease areas or habitations and villages are surrounded by the mine lease area'.

VIII. **Corporate Environment Responsibility**

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

ii. The company shall have a well laid down environmental policy duly approve by the Board of Directors. The environmental policy should prescribe for standard operating procedures to have proper checks and balances and to bring into focus any infringements/deviation/violation of the environmental / forest / wildlife norms / conditions. The company shall have defined system of reporting infringements / deviation / violation of the environmental / forest / wildlife norms / conditions and / or shareholders / stake holders. The copy of the board resolution in this regard shall be submitted to the MoEF&CC as a part of six-monthly report.

iii. A separate Environmental Cell both at the project and company head quarter level, with qualified personnel shall be set up under the control of senior Executive, who will directly to the head of the organization.

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

v. Self environmental audit shall be conducted annually. Every three years third party environmental audit shall be carried out.

IX. Miscellaneous

i. The project proponent shall make public the environmental clearance granted for their project along with the environmental conditions and safeguards at their cost by prominently advertising it at least in two local n

ii. ewspapers of the District or State, of which one shall be in the vernacular language within seven days and in addition this shall also be displayed in the project proponent's website permanently.

iii. The copies of the environmental clearance shall be submitted by the project proponents to the Heads of local bodies, Panchayats and Municipal Bodies in addition to the relevant offices of the Government who in turn has to display the same for 30 days from the date of receipt.

iv. The project proponent shall upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and update the same on half-yearly basis.

v. The project proponent shall monitor the criteria pollutants level namely; PM_{10}, SO_2, 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.

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 a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.

***

ANNEXURE-IV

Generic ToR for coal washery

i. Siting of washery is critical considering to its environmental impacts. 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 washery 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 alongwith 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 ElA in case coal mine, TPP and other washeries are located within 10km radius. The ElA 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. alongwith 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 (PM_{10}, $PM_{2.5}$, 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 ElA/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 alongwith Action Plan.

xiv. O.M.no.J-ll0I3/25/2014-IA.I dated 11th August, 2014 to be followed with regard to CSR activities.

xv. Details of Public Hearing, Notice(s) issued in newspapers, proceedings/minutes of Public Hearing, points raised by the general public and response/commitments made by the proponent along with the Action Plan and budgetary provisions be submitted in tabular form. If the Public Hearing is in the regional language, an authenticated English translation of the same should be provided. Status of any litigations/ court cases filed/pending, if any, against the project should be mentioned in EIA.

xvi. Analysis of samples indicating the following be submitted:

Characteristics of coal prior to washing (this includes grade of coal, other characteristics of ash, S and heavy levels of metals such as Hg, As, Pb, Cr etc).

Characteristics and quantum of coal after washing.

Characteristics and quantum of coal rejects.

xvii. Details of management/disposal/use of coal rejects should be provided. The rejects should be used in TPP located close to the washery as far as possible. If TPP is within a reasonable distance (10 km), transportation should be by conveyor belt. If it is far away, the transportation should be by rail as far as possible.

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

xix. Corporate Environment Responsibility:

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

xx. A detailed action Plan for Corporate Social Responsibility for the project affected people and people living in and around the project area should be provided.

xxi. Permission of drawl of water shall be pre-requisite for consideration of EC.

xxii. Wastewater /effluent should confirm to the effluent standards as prescribed under Environment (Protection) Act, 1986

xxiii. Details of washed coal, middling and rejects along with the MoU with the end-users should be submitted.

***

ANNEXURE-V

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-channelling 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.	Landuse	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_{10}, $PM_{2.5}$, SO_x, NO_x and heavy metals such as Hg, Pb, Cr, As, etc), noise, water (surface and groundwater), soil - along with one-season met data coinciding with the same season for AAQ collection period should be provided.

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

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

(xvii) Details of mineral reserves, geological status of the study area and the seams to be worked, ultimate working depth and progressive stage-wise working scheme until the end of mine life should be provided on the basis of the approved rated capacity and calendar

plans of production from the approved Mining Plan. Geological maps and sections should be included. The Progressive mine development and Conceptual Final Mine Closure Plan should also be shown in figures. Details of mine plan and mine closure plan approval of Competent Authority should be furnished for green field and expansion projects.

(xviii) Details of mining methods, technology, equipment to be used, etc., rationale for selection of specified technology and equipment proposed to be used vis-à-vis the potential impacts should be provided.

(xix) Impact of mining on hydrology, modification of natural drainage, diversion and channeling of the existing rivers/water courses flowing though 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^{o} 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 maximising 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 Landuse and Reclamation Area (ha)

S.N.	Land use Category	Present (1st Year)	5th Year	10th Year	20th Year	24th 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.	1st year										
2.	3rd year										
3.	5th year										
4.	10th year										
5.	15th year										
6.	20th year										
7.	25th year										
8.	30th year										
9.	34th year(end of mine life)										
10.	34- 37th Year (Post-mining)										

* As a representative example

(xxxi) Conceptual Final Mine Closure Plan and post mining land use and restoration of land/habitat to the pre- mining status should be provided. A Plan for the ecological restoration of the mined out area and post mining land use should be prepared with

detailed cost provisions. Impact and management of wastes and issues of re-handling (wherever applicable) and backfilling and progressive mine closure and reclamation should be furnished.

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

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

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

(xxxiii) Occupational health issues. Baseline data on the health of the population in the impact zone and measures for occupational health and safety of the personnel and manpower in the mine should be given.

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

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

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

(xxxvii) Details of R&R. Detailed project specific R&R Plan with data on the existing socio-economic status of the population (including tribals, SC/ST, BPL families) found in the study area and broad plan for resettlement of the displaced population, site for the resettlement colony, alternate livelihood concerns/employment for the displaced people, civic and housing amenities being offered, etc and costs along with the schedule of the implementation of the R&R Plan should be given.

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

(xxxix) Corporate Environment Responsibility:

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 forestland
		If more than , provide details of each FC			

ANNEXURE -VI

GENERIC TORs FOR AN UNDERGROUND COALMINE PROJECT

(i) An EIA-EMP Report shall be prepared for..... MTPA rated capacity in an ML/project area of.....ha based on the generic structure specified in Appendix III of the EIA Notification, 2006.

(ii) An EIA-EMP Report would be prepared for..... MTPA rated capacity to cover the impacts and environment management plan for the project specific activities on the environment of the region, and the environmental quality encompassing air, water, land, biotic community, etc. through collection of data and information, generation of data on impacts including prediction modeling for..... MTPA of coal production based on approved project/Mining Plan for.....MTPA. Baseline data collection can be for any season (three months) except monsoon.

(iii) A Study area map of the core zone (project area) and 10 km area of the buffer zone (1: 50,000 scale) clearly delineating the major topographical features such as the land use, surface drainage pattern including rivers/streams/nullahs/canals, locations of human habitations, major constructions including railways, roads, pipelines, major industries/mines and other polluting sources. In case of ecologically sensitive areas such as Biosphere Reserves/National Parks/WL Sanctuaries/ Elephant Reserves, forests (Reserved/Protected), migratory corridors of fauna, and areas where endangered fauna and plants of medicinal and economic importance found in the 15 km study area should be given.

(iv) Map showing the core zone delineating the agricultural land (irrigated and un-irrigated, uncultivable land as defined in the revenue records, forest areas (as per records), along with other physical features such as water bodies, etc should be furnished.

(v) A contour map showing the area drainage of the core zone and 25 km of the study area (where the water courses of the core zone ultimately join the major rivers/streams outside the lease/project area) should also be clearly indicated in the separate map.

(vi) A detailed Site plan of the mine showing the proposed break-up of the land for mining operations such as the quarry area, OB dumps, green belt, safety zone, buildings, infrastructure, CHP, ETP, Stockyard, township/colony (within and adjacent to the ML), undisturbed area -if any, and landscape features such as existing roads, drains/natural water bodies to be left undisturbed along with any natural drainage adjoining the lease /project areas, and modification of thereof in terms of construction of embankments/bunds, proposed diversion/re-channelling of the water courses, etc., approach roads, major haul roads, etc should be indicated.

(vii) Original land use (agricultural land/forestland/grazing land/wasteland/water bodies) of the area should be provided as per the tables given below. Impacts of project, if any on the land use, in particular, agricultural land/forestland/grazing land/water bodies falling within the lease/project and acquired for mining operations should be analyzed. Extent of area under surface rights and under mining rights should be specified.

S.N	ML/Project Land use	Area under Surface Rights(ha)	Area Under Mining Rights (ha)	Area under Both (ha)
1.	Agricultural land			
2.	Forest Land			

3.	Grazing Land			
4.	Settlements			
5.	Others (specify)			

Area under Surface Rights

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

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

(ix) Details of mineral reserves, geological status of the study area and the seams to be worked, ultimate working depth and progressive stage-wise working scheme until the end of mine life should be provided on the basis of the approved rated capacity and calendar plans of production from the approved Mining Plan. Geological maps and sections should be included. The Progressive mine development and Conceptual Final Mine Closure Plan should also be shown in figures. Details of mine plan and mine closure plan approval of Competent Authority should be furnished for green field and expansion projects.

(x) Details of mining methods, technology, equipment to be used, etc., rationale for selection of specified technology and equipment proposed to be used vis-à-vis the potential impacts should be provided.

(xi) Impact of mining on hydrology, modification of natural drainage, diversion and channeling of the existing rivers/water courses flowing though 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_{10}, $PM_{2.5}$, SO_x, NO_x and heavy metals such as Hg, Pb, Cr, As, etc), noise, water (surface and groundwater), soil - along with one-season met data coinciding with the same season for AAQ collection period should be provided.

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

for water testing for both ground water and surface water as per ISI standards and CPCB classification wherever applicable. Observed values should be provided along with the specified standards.

(xiv) Impact of mining and water abstraction from the mine on the hydrogeology and groundwater regime within the core zone and 10 km buffer zone including long-term monitoring measures should be provided. Details of rainwater harvesting and measures for recharge of groundwater should be reflected in case there is a declining trend of groundwater availability and/or if the area falls within dark/grey zone.

(xv) Study on subsidence including modeling for prediction, mitigation/prevention of subsidence, continuous monitoring measures, and safety issues should be carried out.

(xvi) Detailed water balance should be provided. The break up of water requirement as per different activities in the mining operations, including use of water for sand stowing should be given separately. Source of water for use in mine, sanction of the Competent Authority in the State Govt. and impacts vis-à-vis the competing users should be provided.

(xvii) Impact of choice of mining method, technology, selected use of machinery and impact on air quality, mineral transportation, coal handling & storage/stockyard, etc, Impact of blasting, noise and vibrations should be provided.

(xviii) Impacts of mineral transportation within the mining area and outside the lease/project along with flow-chart indicating the specific areas generating fugitive emissions should be provided. Impacts of transportation, handling, transfer of mineral and waste on air quality, generation of effluents from workshop etc, management plan for maintenance of HEMM and other machinery/equipment should be given. Details of various facilities such as rest areas and canteen for workers and effluents/pollution load emanating from these activities should also be provided.

(xix) Effort be made to reduce/eliminate road transport of coal inside and outside mine and for mechanized loading of coal through CHP/ Silo into wagons and trucks/tippers.

(xx) Details of various facilities to be provided to the workers in terms of parking, rest areas and canteen, and effluents/pollution load resulting from these activities should also be given.

(xxi) The number and efficiency of mobile/static water sprinkling system along the main mineral transportation road inside the mine, approach roads to the mine/stockyard/siding, and also the frequency of their use in impacting air quality should be provided.

(xxii) Impacts of CHP, if any on air and water quality should be given. A flow chart showing water balance along with the details of zero discharge should be provided.

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

(xxiv) Greenbelt development should be undertaken particularly around the transport route and CHP. Baseline data on the health of the population in the impact zone and measures for occupational health and safety of the personnel and manpower for the mine should be submitted.

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

(xxvi) Details of R&R. Detailed project specific R&R Plan with data on the existing socio-

economic status of the population (including tribals, SC/ST, BPL families) found in the study area and broad plan for resettlement of the displaced population, site for the resettlement colony, alternate livelihood concerns/employment for the displaced people, civic and housing amenities being offered, etc and costs along with the schedule of the implementation of the R&R Plan should be given.

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

(xxviii) Corporate Environment Responsibility:

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

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

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

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

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

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

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

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

ANNEXURE-VII

GENERIC TORs FOR AN OPENCAST-CUM-UNDERGROUND COALMINE PROJECT

(i) An EIA-EMP Report would be prepared for a combined peak capacity of .....MTPA for OC-cum-UG project which consists of .... MTPA in an ML/project area of ..... ha for OC and .... MTPA for UG in an ML/project area of ..... ha based on the generic structure specified in Appendix III of the EIA Notification 2006.

(ii) An EIA-EMP Report would be prepared for..... MTPA rated capacity to cover the impacts and environment management plan for the project specific activities on the environment of the region, and the environmental quality encompassing air, water, land, biotic community, etc. through collection of data and information, generation of data on impacts including prediction modeling for..... MTPA of coal production based on approved project/Mining Plan for.....MTPA. Baseline data collection can be for any season (three months) except monsoon.

(iii) The ToRs prescribed for both opencast and underground mining are applicable for opencast – cum-underground mining.

***

ANNEXURE-VIII

LIST OF PARTICIPANTS OF EAC (COAL) IN 3rd MEETING OF HELD DURING 27th OCTOBER, 2020 THROUGH VIDEO CONFERENCING

1.	**Shri G.P Kundargi**			**DAY-1**
		-	**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	P
8.	Shri Prasant Kumar Mohapatra	-	Member	P
9.	Professor S S Rai, Representative of IIT/ISM Dhanbad	-	Member	P
10.	Shri M.P Singh, Representative of CEA	-	Member	P
11.	Dr. Santosh Kumar Hampannavar	-	Member	P
12.	Prof R.K. Giri Representative of IMD	-	Member	P
13.	Dr. S.K. Paliwal Representative of Central Pollution Control Board	-	Member	A
14.	Shri Lalit Bokolia, Director, MoEFCC	-	Member Secretary	P