

MINUTES OF 2nd MEETING OF THE EXPERT APPRAISAL COMMITTEE FOR ENVIRONMENTAL APPRAISAL OF COAL MINING PROJECTS CONSTITUTED UNDER THE EIA NOTIFICATION, 2006, HELD ON 28-29th SEPTEMBER, 2020.

DAY 1- Thursday, 28th September, 2020

Confirmation of the Minutes of 1st Meeting of the EAC (Coal) held on 17-18th August 2020: No comment was made from members of the committee on the minutes of the 1st meeting of the EAC held on during 17-18 August, 2020, therefore the Minutes of the Meeting (MoM) of 1st 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 2nd meeting of the Expert Appraisal Committee (EAC) for coal mining projects was held on 28-29 September, 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. 2.1

Gare Palma Sector -II Coal mine Project of 23.60 MTPA (OC-22.0 MTPA+UG-1.6 MTPA) of M/s Maharashtra State Power Generation Company Limited (MSPGCL) in an area of 2583.48 ha in District Raigrah (Chhattisgarh) – For Environment Clearance - reg.

[IA/CG/CMIN/52019/2016; File No J-11015/72/2016-IA.II(M)]

The proposal is for Environment Clearance for Gare Palma Sector II Coal Mine Project of Open Cast 22.0 MTPA + Under Ground-1.6 MTPA capacity in mine lease area of 2583.48 ha of M/s Maharashtra State Power Generation Company Ltd (MSPGCL) located in village-Tihli Rampur, Kunjemura, Gare, Saraitola, Murogaon, Radopali, Pata, Chitwahi, Dholnara, JhinkaBahal, Dolesara, Bhalumura, Sarasmal and Libra, Tehsil-Gharghoda, District- Raigarh, (Chhattisgarh).

2.1.1 The EAC noted the followings: -

The proposal was earlier considered by the sectoral EAC in its 51st EAC meeting held on 5th December, 2019, wherein the Committee deferred the proposal for want additional information. Now, the PP has submitted the replies/compliance to observations of EAC, which is tabulated below: -

Sr. No.	Observations of EAC in 51st EAC meeting	Compliance / replies of Project Proponent
1	The EIA report to be revised as per the terms of reference granted for the project, and shall conform to Appendix III of the EIA Notification, 2006.	EIA report has been revised as per the terms of reference granted for the project and as per Appendix III of the EIA Notification 2006 and subsequent EAC meetings observations
2	Stage-I FC for forest land of 214.869 ha for diversion of non-forestry activity shall be submitted.	<ul style="list-style-type: none"> ▪ Application for obtaining forest clearance submitted vide letter dt 26.07.2016, proposal no FP/CG/MIN/20495/2016. ▪ All requirements with regards to FC stage 1 application is completed, except CA land identification. ▪ All activities in processing the application for grant of FC Stage-I has been completed and the relevant documents has been submitted to DFO office on 16.05.2020. <p>File will be recommended by DFO to CCF shortly for further onwards approval</p>
3	Form#2 on Parivesh should be filled with all details and correct information	Form#2 on Parivesh has been filled with all details and correct information and updated in Parivesh portal.
4	Copy of Agreement for supply of power shall be uploaded on Form#2	Chhattisgarh State Power Distribution Co. Ltd., Raipur vide its Letter No. 02-02/SE (HT)/RGH-327/373 dt 29.05.20 has agreed to provide 23 MVA power supply (Annexure 2 of EIA Report)
5	Approval of Wild Life conservation from concerned statutory authorities	<p>Wildlife conservation plan submitted (Annexure 3 of the EIA Report) to DFO on 14.11.2019.</p> <p>DFO recommended the WCP to CCF on 24.01.2020</p> <p>CCF recommended the WCP to PCCF on 20.02.2020 (Annexure 4 of the EIA report). The WCP report is enclosed as Annexure 24 of the EIA report.</p> <p>The budget of Rs 488.50 Lakhs for conservation of wild life is provided during the period of 5 years (2020-21 to 2025-26).</p>
6	One month of baseline data as the given data is almost 3 years old and validity of baseline data is about to expire as per Ministry's OM shall be collected	Additional 3 months baseline data (Nov 2019 to Jan 2020) has been collected and the same is incorporated in the revised EIA report
7	Hydrological Study and impact of mining activity on hydrology shall be	Hydrology study and embankment design was carried out by Min Mec Consultancy Pvt Ltd., New

	submitted from the expert agency	Delhi The report is at Annexure 5 in the EIA report
8	Permission for extraction of groundwater from CGWA shall be obtained	NOC for ground water abstraction obtained from CGWA, New Delhi Vide Lr no. CGWA/NOC/MIN/ORIG/2020/7943 dated 03.07.2020. The sanctioned water quantity is 1454 m³/day (Annexure 6 of EIA report)
9	Permission for usage for surface water i.e. from kelo river (as proposed for initial 3 years) for mining operation/domestic purpose shall be obtained from concerned statutory authority	<ul style="list-style-type: none"> ➤ Application for construction of annicut for water withdrawal from Kelo River submitted to Executive Engineer on 23.01.2020 (Annexure 8 of the EIA Report) and request for water availability was submitted on 26.05.2020 ➤ Executive Engineer, Kelo Pariyogna Sarvekshan Sambhag, Raigarh, approved the same on 26.05.2020 (Annexure 9 of the EIA Report). ➤ Executive Engineer also confirmed that 6000 m³/day water is available for MAHAGENCO.
10	Carrying capacity of the area shall be carried considering the presence of the other coal mines and mitigation measures shall be proposed accordingly.	<ul style="list-style-type: none"> ▪ Carrying capacity study of the area has been carried out for Gare Palma Sector II coal mine and its surroundings. ▪ There are 14 coal mines and 2 Thermal Power Plants in the study area ▪ In all, 6 coal mines are in operation, 4 coal mines are not working and 4 coal mines are proposed and 2 TPPs are in operation.
11	Mining Lease or Letter of Intent for the project area shall be submitted by PP from concerned state government authorities.	<ul style="list-style-type: none"> ➤ Mining lease application submitted on 08.12.2015 (Annexure 11 of EIA Report), ➤ Ministry of Coal has granted previous approval for mining lease vide its letter dated 20.02.2018 (Annexure 12 of the EIA Report). ➤ Further, State Government has issued Letter of Intent for mining lease vide letter dated 24th February 2020. ➤ Lease agreement will be executed after obtaining EC/FC from MOEF&CC as mentioned in letter of State Government dated 24th February 2020.
12	Compliance of issues raised during Public Hearing shall be submitted with certain timeline and allocation.	Compliance of issues raised during Public Hearing were addressed adequately.
13	Social Impact Assessment Study for	➤ Social Impact Assessment report for the

	<p>the proposed displacement of Tribals/SC/ST.</p>	<p>proposed displacement of Tribals/SC/ST prepared by Greencindia Consulting Private Limited (Annexure 13 of the EIA Report)</p> <ul style="list-style-type: none"> ➤ R & R plan based on SIA report is approved by Chhattisgarh Government vide letter dated 06.03.2020 (enclosed approval Letter Annexure 13a of the EIA Report). ➤ The mine lease area is falling under 14 villages and out of which 8 villages are going to be displaced and the other 6 villages/settlements/habitations are not going to be displaced (only land area is affected partially). ➤ Project Displaced population (PDP) and project affected population (only land oustees) is 7063 & 2574 respectively out of this 55.81% & 47.92% are ST and 8.15% & 4.01% are SC respectively. ➤ R&R package towards land cost payment is Rs 2435 Crores, however R&R entitlement and cost will be finalized by the District Administration
14	<p>Impact of mine drainage and diversion of nallah based on quality and quantity (inflow of river).</p>	<p>Impact of mine drainage and diversion of nallah based on quality and quantity is covered in Hydrology study and embankment design report prepared by Min Mec Consultancy and enclosed as Annexure 14 of EIA</p> <ul style="list-style-type: none"> ➤ Kelo river will not be diverted due to the prevailing topography, shape of the block and presence of other coal blocks all around. ➤ Flow in Kelo river, reduction is 0.8%, low impact is envisaged on downstream water balance.
15	<p>Details of hazardous waste generation (if any) during mining operations and further handling/disposal shall be provided in details.</p>	<p>The major types of hazardous waste and biomedical waste generated from the proposed mining activities are as follows.</p> <ul style="list-style-type: none"> ➤ Hazardous wastes like used oil barrels, waste oil barrels, used transformer oil barrels, scrapped batteries, empty oil and grease drums shall be handled and disposed off in accordance with the procedure laid down in HWM Rules. ➤ Used oil, spent oil, batteries shall be disposed-off to the recyclers having valid registration from CPCB/CECB for recycling

		<p>or recovery.</p> <p>Empty oil & grease barrels shall be detoxified prior to their disposal to outside agencies</p>
16	Impact on villages due to mining activity present in core zone (not proposed to be displaced) shall be provided.	Anticipated impacts on the surrounding villages (present in vicinity of Mine Lease Area) and mitigation measures has been submitted during presentation
17	The activities and fund provisions for CER shall be made as per the guidelines issued by the ministry regarding CER on 1 st May, 2018.	Project cost is Rs. 7463 Crores CER budget proposed is Rs 45.35 Crores as per the MoEF&CC OM dt 1 st May, 2018
18	Clarification from DFO/PCCF whether there is any presence of Elephant Corridor or movement of elephants in the region.	<ul style="list-style-type: none"> ➤ DFO clarified that there is no presence of Elephant Corridor for movement of elephants in the project area (letter dated 05.03.2020.) ➤ As per DFO letter movement of elephants is approximately 6 km away from the project boundary
19	Impact of mine drainage on kelo river shall be submitted in detail.	<ul style="list-style-type: none"> ➤ The core area (coal block) has two catchments, western side of Kelo river is catchment area of Nala "A" tributary to Pajhar Nadi , eastern side of Kelo river is Karnara Nala coveys storm water from hills on eastern side to Kelo river. ➤ Based on the annual flood peak series of Kelo river observed at Kelo G&D station (Latitude 21°53' 47", longitude 83°24'22") the flood peaks of Kelo with return period of 50 yrs and 100 yrs have been estimated using statistical method i.e. flood frequency method and the values of the flood peaks works out as 1357 cumecs and 1522 cumecs, respectively and peaks are increased by an order of 10% for embankment. The 50 years and 100 years return period peaks thus work out as 1493 cumecs and 1674 cumecs respectively.
20	Detailed Traffic impact assessment/ study for road transportation of coal to linked Railway Siding / Power Plant shall be conducted	<ul style="list-style-type: none"> ➤ In case of the development of Bhalumuda station of CERL as well as extension of railway connectivity to GPII block gets delayed, the mined coal shall be transported from mine to nearest operational railway head by road and from there by rail to Koradi Thermal Power

		<p>Station.</p> <ul style="list-style-type: none"> ➤ At present the nearest operational Railway siding is Gharghoda station of CERL. Gharghoda Railway siding has been notified and opened for Rail traffic on 21.02.2020. ➤ From GP-II mine by road distance of Gharghoda siding is about 35 Kms. ➤ The access will require developing of about 4 Kms within Mine road to touch the Milupara-Tamnar ODR. ➤ The route to Gharghoda Railway siding is GP-II Mine-Gare-Hukradipa-Tamnar-Punjipatra-Bhalumuda- Gharghoda by-pass-Gharghoda siding. ➤ The entire road is two way black top road in good condition. The Coal transportation trucks already ply via this road. ➤ The traffic studies have been conducted to know the prevailing traffic volumes on the existing roads. ➤ The existing baseline scenario of NO_x levels are 36 µg/m³. After implementation of project,, the predicted contribution of NO_x is 8.3µg/m³ and future predicted baseline value of NO_x is 44.3µg/m³ which is within the prescribed standards. ➤ The existing baseline scenario of CO levels is recorded 2700 µg/m³. After addition of predicted traffic the predicted line source values is 2.7 µg/m³ and the future predicted baseline value is 2702.7 µg/m³. Which is within the prescribed standards (4000 µg/m³-One hour) . ➤ However, Incremental air emissions are limited only upto a stretch of 30 m on either side of the approach road. <p>The transportation/evacuation of coal during initial years will be via roadways, once the railway line completed, then the 100% coal evacuation will be done through rail only</p>
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2.1.2 During deliberations on the proposal, the Committee also noted the following: -

The proposal is for Environment Clearance for Gare Palma Sector II Coal Mine Project of Open Cast 22.0 MTPA + Under Ground-1.6 MTPA capacity in mine lease area of 2583.48 ha by M/s

Maharashtra State Power Generation Company Ltd (MSPGCL), which is located in 14 villages namely Tihli Rampur, Kunjemura, Gare, Saraitola, Murogaon, Radopali, Pata, Chitwahi, Dholnara, JhinkaBahal, Dolesara, Bhalumura, Sarasmal and Libra at Tehsil Gharghoda, District-Raigarh, (Chhattisgarh).

The Public Consultation of project was conducted on 27.09.2019 at Dolesara village, Tamar Tehsil, Raigarh District Chhattisgarh at the premises of Government Primary school. The public hearing was held under the chairmanship of Shri R.A. Kuruvanshi, Additional District Magistrate Raigarh, Chhattisgarh who was nominated by District Collector, Raigarh.

The issues raised during consultation were on local employment, tree plantation, medical facility, education and providing water supply to locals, etc. Response to concerns raised by public has been addressed adequately and PP committed to provide the facilities to locals. The company committed to comply all these concerns for locals by year 2020-26. However, Committee also noted that Report of Indian Council of Medical Research (ICMR) health assessment and project of health of people living in Tamnar Block is yet to completed.

The committee also deliberated the overall impact of proposed mines with cumulative impact of surrounding mines and Thermal Power Plants. Out of total 14 coal mines in Gare Palma Sector –II, only 6 coal mines are in operation, 4 are not functional at present and 4 coal mines are proposed and 2 thermal Power Plants are in operation. The AAQ data was collected from year 2011 to 2019 from various secondary sources and additional one-month data as requested in earlier meeting of EAC. The maximum particulate matter PM10, PM2.5 SOX were found to be in range of 49.5 $\mu\text{g}/\text{m}^3$ to 80 $\mu\text{g}/\text{m}^3$; 54 $\mu\text{g}/\text{m}^3$; 10.5 to 40 $\mu\text{g}/\text{m}^3$ in that order respectively. The existing average baseline value of NOx levels is 36 $\mu\text{g}/\text{m}^3$. After implementation of project, the predicted contribution of NOx is 8.3 $\mu\text{g}/\text{m}^3$ and future predicted baseline value of NOx is 44.3 $\mu\text{g}/\text{m}^3$ which will be within the prescribed standards. With regard to impact of air emission due to transportation of coal to nearest railway station, the Committee, however, noted that incremental air emissions are limited only to stretch of 30 m on either side of the approach road and in this context, PP has conducted the traffic study.

The Committee also took a note of additionality of coal washery operation in the proposed project, though this was not part of TOR granted by MoEF&CC. In this regard, the Committee directs the Project Proponent to submit separate proposal for Coal Washery. However, changes occurring after separating this activity need recalculation, e.g. water requirement, etc. and PP asked to submit in due course.

As per the submission, total water required for mining project is 2785 KLD, of which fresh water requirement will be 1785 KLD and 1000 KLD will be recycled water. Out of 1785 KLD of fresh water requirement, a quantity of 1239 KLD will be for consumptive use for colony, village etc. and 546 KLD is for industrial use. The domestic waste water will be treated in STP of 1000 KLD capacity and treated water will be used for plantation and dust suppression measures and vehicle washing. For treating Industrial wastes water from mine seepage, rainwater accumulated in mine pit, two settling ponds of 5 ha each are proposed. Part of treated water will be reused for mining project (dust suppression, vehicle washing, etc.) and remaining excess treated water will

be discharged into Kelo River. Additionally, one ETP of appropriate capacity in line with approved Mining Plan shall also be established for treatment of waste water from Workshop.

In this context, the committee is of the view that project should go for advance treatment technology for STP and ETP so that treated water could be recycled and reused for different purposes including tree plantation in nearby area as proposed by PP. No wastewater shall be discharged in to the river. If require, necessary arrangement shall be made to reuse the treated water from STP and ETP to nearby TPP or coal washery /or future coal washery by entering suitable agreement.

Total forest land involved in the Project is 214.869 Ha pending for diversion for non-forestry activity. Permission for Stage-I FC from MoEF&CC is yet to be granted. Application for obtaining forest clearance has been submitted vide proposal no FP/CG/MIN/20495/2016 dated 26.07.2016,

The Committee also noted that project has made adequate arrangements for embankment all along the western and eastern banks of Kelo. The height, free board, alignment and design has been prepared for the bund and given in the “Hydrology Study & embankment Design by M/s Min Mec Consultancy Pv. Ltd.” The height of the bund shall vary from 3 m to 10 m. The committee recommends that the PP shall take all care about design of bunds and construction of the same.

2.1.3 *The EAC, after deliberations found responses given by PP are satisfactory and recommended the proposal for grant of Environment Clearance to Gare Palma Sector -II Coal mine Project of 23.60 MTPA (OC-22.0 MTPA+UG-1.6 MTPA) of M/s Maharashtra State Power Generation Company Limited (MSPGCL) in an area of 2583.48 ha in District Raigrah (Chhattisgarh), 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 peak capacity of 23.60 MTPA (OC-22.0 MTPA+UG-1.6 MTPA) prior to commencement.*
- (ii) *PP shall submit Stage-I FC for forest land involved in the project for non-forestry activity.*
- (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.*
- (iv) *Top soil should be stored separately at marked area and necessary vegetation shall be maintained to avoid any entrainment of dust.*
- (v) *All the recommendation of carrying capacity study shall be completed within stringent timeframe.*
- (vi) *PP shall construct embankment leaving 100 mtrs away from HFL of kelo river and the same shall be taken prior approval from DGMS*
- (vii) *Transportation of coal from Coal Handling Plant shall be through mechanized covered trucks for 5 years. No transportation by trucks after 5 years and proposed railway siding should be constructed without any delay.*
- (viii) *As proposed fresh water requirement will be 1785 KLD, which shall be met from Kelo river*

- initially and later by groundwater. 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*
- (ix) All the villages coming under the zone of influence as in hydrology study shall be provided with suitable water supply alongwith sanitation facility.*
 - (x) All the recommendation in Social Impact Assessment study shall be complied within stringent timeframe. Timeline should be submitted to District Collector for necessary action points.*
 - (xi) Commitment made during public consultation process shall be adhere to. As proposed, Rs. 45.35 Crore is earmarked for CER activities, which shall be accomplished within period of 5 years.*
 - (xii) Water quality and Bioassay test of kelo shall be monitored quarterly and submitted to State Pollution Control Board. No water shall be discharged in river.*
 - (xiii) Quarterly monitoring of quality of water from bore hole used for drinking purpose shall be conducted and report thereof shall be submitted to SPCB.*
 - (xiv) Progressive backfilling of mine and progressive reclamation of OB dump shall be done.*
 - (xv) To control the production of dust at source, the crusher and in-pit belt conveyors shall be provided with mist type sprinklers.*
 - (xvi) 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.*
 - (xvii) Continuous monitoring of occupational safety and other health hazards, and the corrective actions need to be ensured.*
 - (xviii) Permission from State Water Department for diversion of two nalas, one in the west side (Nala A) and one on the East side (Karnara nala) of Kelo river shall be taken before any diversion work. Impact of diversion in terms of availability of water in river shall be studied before diversion and submitted to State Water Department.*
 - (xix) PP shall take permission of State Public Works Department before the proposed for diversion Roads from Bajamura to Ghargoda (approx. 11.6 km) and Milupara to Tamnar (app 3 km).*
 - (xx) Persons of nearby villages shall be given training on livelihood and skill development to make them employable.*
 - (xxi) PP shall submit Mine Closure Plan as per MoC latest 2019 guidelines to this Ministry within one year.*
 - (xxii) Mining shall be carried out only by surface miners for the project and silo loading till railway siding through in-pit conveyor should be installed to avoid road transportation in 5 years.*
 - (xxiii) 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.*
 - (xxiv) Active OB Dump should not be kept barren/open and should be covered by temporary grass to avoid air born of particles*

- (xxv) PP shall conduct the stability study of OB dump by reputed agencies and necessary approval of DGMS.
- (xxvi) As proposed, total plantation shall be done in 2256.60ha area of land till closure of mine. 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 comply 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.

The proposal was **recommended** with above specific conditions

Agenda No. 2.2

Basantpur Tapin Coking Coal Washery of 4MTPA in an area of 32.47 ha of M/s Central Coalfields Limited, located in Kedla, District Ramgarh (Jharkhand) – Environment Clearance –reg

[IA/JH/CMIN/77450/2018; File No J-11015/97/2018-IA.II(M)]

2.2.1 The proposal is for Environment Clearance for Basantpur Tapin Coking Coal Washery Project of 4 MTPA capacity in lease area of 32.03 Ha by M/s Central Coal Field Limited located in Village Basantpur, Post- Kedla, District- Ramgarh (Jharkhand).

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

- (i) The project area is covered under Survey of India Topo Sheet No. F45B9 and is bounded by the geographical coordinates ranging from Latitude: 23° 49' 48.78" N to 23° 49' 22.16"N and Longitude: 85° 33' 44.76" E to 85° 34' 01.87" E
- (ii) Coal linkage of the project is proposed for Washed Coal (Power), Clean Coal, Reject use for various destination.
- (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 200 employment to the persons will be provided from the project.
- (vi) The project is reported to be beneficial in terms of Social, Environment, and Financial status.
- (vii) Ministry granted Terms of Reference for the said project vide MoEF&CC letter No. J-11015/97/2018-IA. II(M) dated 7th January, 2019
- (viii) The plan for washery has been approved by CCL board 483rd (No. 03 of 2020) meeting held on 03/02/2020 and communicated vide no. CS/BM/483/2020/153 dtd. 25/02/2020.
- (ix) Baseline data for air quality (PM10, PM2.5, SO2, NOX) (6 stations), noise (day & night) (6 stations), water (surface (2 stations), drinking water (2 stations), effluent water (1 station)), have been collected from March, 2019 to June, 2019. All the points have been considered in

Air quality modeling. The Air Quality Impact Prediction has been carried out with AERMOD (Version 9.4) software of USEPA.

- (x) Washed coal, power coal and rejects will be sent to railway siding through proposed Basantpur Tapin road of approximately 1.708 km.
- (xi) The land usage pattern of the project is as follows:

S. No.	Land Use	Area (ha)	Total
1	Agricultural Land	30.93	30.93
2	Forest Land	0	0
3	Wasteland	0.70	0.70
4	Grazing Land	0.40	0.40
5	Surface Water Bodies	0	0
6	Settlements	0	0
7	Others (Specify)	0	0.
Total Project Area		32.03	32.03

Post Washery

Sl. No.	Land Use	Land Use in Ha			
		Plantation	Water Body	Public Use	Total
1	Roads	0	0	2.03	2.03
2	Built-up Area	0	0	2.00	2.00
3	Green Belt	28	0	0	28.00
Total Area =		28.00	0.00	4.03	32.03

- (xii) Life of mine (Washery) is 18 years.
- (xiii) Transportation of raw coal has been proposed from Tapin South OCP, Tapin North OCP, Parej East OCP and Jharkhand OCP
- (xiv) A sum total of Rs. 81.40 Lakhs have been proposed for development of green belt. This amount includes green belt development of Rs. 15 Lakhs under Air pollution control measures, Rs, 5 Lakhs for development of green belt under conservation plan.

Details of Green belt proposed

SN		Area in Ha	Length in KM	No. of Plants
1	During Washery Operation	9.39	0.00	23475
2	Post Washery Operation in addition to during operation	18.61	0.00	46525
3	Road side Plantation		1.708	800
Total		28.00 Ha	1.708 km	70800

- (xv) No forest land is involved for diversion of non-forestry activity
- (xvi) No National Parks, Wildlife Sanctuaries and Eco-Sensitive Zones have been reported with 10 km boundary of the project.

- (xvii) Conservation plan for Peacock (schedule I species) has been prepared and submitted to DFO Ramgarh and PCCF (CWLW), Jharkhand on 24.02.2020
- (xviii) The ground water level has been reported to be varying between 3.0 m to 10.2 m during pre-monsoon and between 1.78 m to 7.93 m during post-monsoon. Total water requirement for the project is 730 KLD.
- (xix) Application for obtaining the approval of the Central Ground Water Authority for Basantpur Tapin Coking Coal Washery has been submitted on 01/04/2020.
- (xx) Public hearing for the project of 4 MTPA capacity in an area of 32.03 ha was conducted on 09/10/2019 at Shiv Mandir in Basantpur Village, Post-Kedla Dist- Ramgarh. Major issues raised in the public hearing include pollution control measures, ground water, surface water, employment generation, CSR activities, plantation etc raised.
- (xxi) Cost of the project is ₹ 36000 Lakhs

2.2.3 The EAC during deliberations noted the following

The proposal is for Environment Clearance for Basantpur Tapin Coking Coal Washery Project of 4 MTPA capacity in lease area of 32.03 Ha by M/s Central Coal Field Limited located in Village Basantpur, Post- Kedla, District- Ramgarh (Jharkhand).

Ministry granted Terms of Reference for the said project vide MoEF&CC letter No. J-11015/97/2018-IA.II(M) dated 7th January, 2019. Public Hearing was conducted on 9th October, 2019 at Mandir Parishar, Basantpur in the presence of Shri Jugnu Minz, Additional Collector, Ramgarh. Shri Ashok Kumar Yadav, Regional Officer, JSPCB, Hazaribagh and Mithilesh Jha, Assistant Scientific Officer, JSPCB HQ, Ranchi were present from Jharkhand State Pollution Control Board.

As per secondary sources, Avifauna Peafowl come under Schedule-I species as per Indian wildlife (protection) Act, 1972 was found in the buffer zone. Conservation plan for Peacock (schedule I species) has been prepared and submitted to DFO Ramgarh and PCCF (CWLW), Jharkhand on 24.02.2020

2.2.4 The EAC found several inconsistencies in the proposal & submission given by project proponent w.r.t traffic management, flora fauna, pollution mitigation measures, etc. Therefore, after deliberation, EAC deferred the proposal for want following information:

- i. Explore the possibility of laying conveyor belt for transportation of coal from nearest mine. PP shall provide the plan for reduction of number of trucks for transportation of coal and fleet to be redesigned.*
- ii. PP shall submit plan for utilization of water only from mine and no ground water shall be used.*
- iii. Plan of utilisation of washery rejects with MoU with FBC boilers/power plants as per the MoEF&CC notification.*
- iv. Impact of washery on nearby agricultural land and flora-fauna. Proper flora management plan needs to be prepared.*
- v. Proper Air pollution mitigation measures at site with installation of Continuous Ambient Air Quality Station during operation of project.*

- vi. *Adherence to the compliance to Issues raised during Public Consultation with the timeline and budgetary provision.*
- vii. *Fund allotment for greenbelt is too less and more fund should be allotted for developing peripheral plantation.*
- viii. *Distance of Chutuwa nallah/stream near washery and impact due to washery operations shall be presented.*
- ix. *Land of dumping of rejects shall be reduced to keep the rejects only for 2 months and accordingly greenbelt land should be increased.*
- x. *PP shall rework on the layout of washery so that coal storage area, crushing units and rejects storage area shall not be near the villages.*

*The proposal was **deferred** on above lines for compliance by project proponent.*

Agenda No.2.3

Expansion of Pauni-II Opencast Coal Mining Project from 0.6 MTPA to 3.25 MTPA of M/s Western Coalfields Limited in mine lease area of 1095.52 ha located in District Chandrapur (Maharashtra) - For Amendment in Environment Clearance-reg

[IA/MH/CMIN/170637/2020; File No J-11015/80/2016-IA.II(M)]

2.3.1 The EAC during deliberations noted the following: -

The proposal is for amendment in Environment Clearance. PP vide letter dated 20.08.2020 has requested for amendment of the two specific conditions in existing EC i.e. condition no. (iii) and (xviii). EC has *inter-alia* stipulated the following Specific conditions:

(iii) PP shall implement in-pit belt conveyor system in next 3 years from the issue of this letter”

(xviii) the Percentage of CER may be at least 2 times the amount given in the OM dated 01st May, 2018 recommended by EAC and item wise details along with time bound action plan shall be prepared and submitted to Ministry’s Regional Office”

Earlier EC was granted by Ministry to the project of Expansion of Pauni-II Opencast Coal Mining Project from 0.6 MTPA to 3.25 MTPA of M/s Western Coalfields Limited in mine lease area of 1095.52 ha located in District Chandrapur (Maharashtra) vide its letter no. J-11015/80/2016-IA. II(M) dated 13 March, 2020.

2.3.2 PP has submitted that the deployment of In-pit belt conveyor system in the mine is technically difficult proposition and the same is not included in the approved Project Report / Mining Plan. Further, there is presence of multi section workings wherein one composite seam of thickness ranging from 17.65 m to 20.79 m with top section thickness of 10m and bottom section thickness of 4m and Parting between both the section varies from 1.33 m to 5.13 m. These top & bottom sections are being worked separately. So, deployment of in-pit conveying for 2 sections separately will make the operation most difficult.

Also, there are two quarries i.e. quarry – I & quarry-II are being worked simultaneously. Quarry – I, which is a smaller quarry with multi section seam working and restricted strike & working width. Quarry-II also has multi section workings. So, deployment of in-pit conveyor in quarry-II is not possible and because of these reasons, deployment has been ruled out in the approved mining plan of Expansion of Pauni – II OC.

Similarly, for specific condition no. xviii as state above, PP has proposed for modification with the condition that the project proponent shall comply with the provisions contained in this ministry's OM dated 1st May, 2018 as applicable, regarding Corporate Environment Responsibility.

2.3.3 The EAC observed that as per the justification given by PP, there are technical difficulties in implementing inpit conveyor system so it may be considered for modification. Accordingly, the committee recommended for modification of specification condition iii

With regard to modification of specific conditions (xviii), the said condition is stipulated in view of Hon'ble NGT order in the matter of OA 1038/2018 dated 19th August, 2019 for formulation of a mechanism for environmental management of critically and severely polluted areas and consideration of activities/project in such areas. Ministry vide its OM dated 31st October, 2019 issued in compliance of this order. Hence, the conditions may not be considered for amendment, however, EAC suggested that if project proponent bring clarification/communication from Central Pollution Control Board that project does not fall under CPA/SPA areas (as contended by PP) then EAC shall consider accordingly.

Therefore, in view of above, EAC recommended the proposal for amendment in specific condition (iii) only and modified the condition as below:

- *PP shall implement off pit conveyor system i.e. from Coal Handling Plant to Railway siding with silo loading facility in three years (i.e. 2023).*

Agenda No.2.4

Cluster VIII Coal Mining Project of production capacity 5.603 MTPA in total mine lease area of 1183.92 ha of M/s Bharat Coking Coal Limited located in Jharia Coalfields, District Dhanbad (Jharkhand)- For Amendment in Environment Clearance-reg

[IA/JH/CMIN/169486/2020; File No J-11015/298/2010-IA.II(M)]

2.4.1 The EAC during deliberations noted the following: -

The proposal is for Amendment of Environment Clearance for Cluster VIII Coal Mining Project of 5.603 MTPA capacity in mine lease area of 1183.92 Ha. (1200.41-16.49) of M/s Bharat Coking Coal Limited located in District Dhanbad (Jharkhand).

Earlier, the environment clearance to the project was granted by MoEF&CC vide letter No F.No.J-11015/298/2010-IA.II (M) dated 15th February, 2013 for 5.603 MTPA in mine lease area of 1183.92 ha and later amended vide EC No J-11015/298/2010-IA.II (M) dated 15th June, 2018. The amendment was taken for restructuring of cluster of mines with approved production capacity.

Total mining lease area as per block allotment is 1183.92 ha. Mining Plan (Including Progressive Mine Closure Plan) for mine undergoing change i.e. Bastacolla Colliery has been approved by the Board of Members of M/s BCCL in the 368th meeting held on 31st July, 2020.

250.57 ha of forest land has been reported to be involved in the project. Approval under the Forest (Conservation) Act, 1980 for diversion of 234.08 ha of forest land for non-forestry purposes has been obtained vide MoEF&CC letter No. 8-44/2009-FC dated 09.08.2010.

Now, project proponent has again requested for amendment for speedier operation at Bastacolla Colliery (S.No. 1 in following table) only to:

- To facilitate complete extraction of Coal up to the Bottom Seam,
- To make available larger space for keeping OB, thereby reducing the requirement of re-handling of OB enabling better and speedier reclamation (technical and biological) works.
- The de-coaled areas will provide space for storage of OB extracted for fiery coal excavation within the cluster to implement the Master Plan approved by Govt. of India.

Following is the details of production capacity with mine lease area from original EC dated 15th February, 2013 and later amended dated 15th June, 2018 and further changes proposed

Sl. No	Name of the Mine	Lease Area (Ha)	Initial EC		Amendment dated 15.06.2018 (Existing)		Modification sought			
			Type of Mine	Peak Production Capacity (MTY)	Type of Mine	Peak Production Capacity (MTPA)	Proposed Amendment	Type of Mine	Peak Production Capacity (MTPA)	Lease Area (Ha)
1	Bastacolla Colliery	239.45	OC	0.130	OC	0.13	Increase in Capacity	Mixed	1.80	239.45
			UG	0.429	UG	0.429				
2	Bera Colliery	209.56	OC	0.195	OC	0.195	No Change	OC	0.195	209.56
			UG	0.247	UG	0.247	No Change	UG	0.247	
3	Dobari Colliery	146.9	UG	0.312	OC	3.86	No Change	OC	3.86	146.90
4	Ghanoodi h Colliery	73.0	OC	1.820	OC	1.820	No Change	OC	1.82	73.0
5	Kuya Colliery	324.01 (340.50-)	UG	0.130	OC	2.60	No Change	OC	2.60	324.01 (340)

		16.49)	OC	0.780						.50-16.49)
	Goluckdih (NC)		OC	1.560						
6	Kujama Colliery	191.00	OC	0.78	OC	0.780	No Change	OC	0.78	191.0
	Total	1183.92				5.603*	Total		5.603*	1183.92

2.4.2 After detailed deliberation, the Committee agreed with proposal in view of benefits involved and **recommends** the proposal for the amendment in Environment Clearance as proposed in table above (particularly changing the production capacity of Bastacolla Colliery) without any change in overall production capacity and mine lease area to Cluster VIII Coal Mining Project of production capacity 5.603 MTPA in total mine lease area of 1183.92 ha of M/s Bharat Coking Coal Limited located in Jharia Coalfields, District Dhanbad (Jharkhand), In addition, all the conditions of EC dated dated 15th February, 2013 shall remain also be applicable along with the following conditions mentioned below: -

- (i) Fog Canon/Mist Sprinkler shall be procured and installed in six months for dust suppression at Bastacolla colliery
- (ii) Fixed Long range sprinkling system along the railway siding shall be implemented.
- (iii) As proposed, three Thousand (3000) Avenue Plantation and Twelve Thousand Block Plantation through State Forest Deptt. will be done along transport route, residential colonies road, railway siding etc. in year 2020-21 (Total 15000).
- (iv) Development of Greenbelt around quarry. Grassing of OB dump slopes shall be done using grasses for stabilizing inactive OB Dump. Plantation will be done on external dump and reclaimed area.
- (v) Controlled Blasting shall be carried out using Electronic Detonator with appropriate design of the geometry of blast holes in daytime period to minimize ground vibration and dust generation.
- (vi) One Continuous Online PM10 Analyzer shall be installed for monitoring the quality of air in Bastacolla Colliery
- (vii) Coal transportation will be done through covered trucks with turpline sheets .
- (viii) Persons of nearby villages shall be given training on livelihood and skill development to make them employable.
- (ix) Continuous monitoring of occupational safety and other health hazards, and the corrective actions need to be ensured.
- (x) A third party assessment of EC compliance shall be undertaken once in three years through reputed Government Institutes or any other expert agency identified by the Ministry.
- (xi) Active OB Dump should not be kept barren/open and should be covered by temporary grass to avoid air born of particles
- (xii) In-active OB dump shall not be kept barren/open. They should be immediately reclaimed and re-graded to improve the land form and covered by temporary grass etc. for better land use post mine closure
- (xiii) 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.

- (xiv) *The Project Proponent shall comply 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.*
- (xv) *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 NIOH for ensuring good occupational environment for mine workers shall be implemented; The prevention measure for burns, malaria and provision of antsnake venom including all other paramedical safeguards may be ensured before initiating the mining activities.*
- (xvi) *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".*
- (xvii) *The illumination and sound at night at project sites disturb the villages in respect of both human and animal population. Consequent sleeping disorders and stress may affect the health in the villages located close to mining operations. Habitations have a right for darkness and minimal noise levels at night. PPs must ensure that the biological clock of the villages is not disturbed; by orienting the floodlights/ masks away from the villagers and keeping the noise levels well within the prescribed limits for day light/night hours.*
- (xviii) *Hon'ble Supreme Court in an Writ Petition(s) Civil No. 114/2014, Common Cause vs Union of India & Ors vide its judgement dated 8th January, 2020 has directed the Union of India to impose a condition in the mining lease and a similar condition in the environmental clearance and the mining plan to the effect that the mining lease holders shall, after ceasing mining operations, undertake re-grassing the mining area and any other area which may have been disturbed due to their mining activities and restore the land to a condition which is fit for growth of fodder, flora, fauna etc. Compliance of this condition after the mining activity is over at the cost of the mining lease holders/Project Proponent".*

Agenda No.2.5

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

[IA/JH/CMIN/149735/2020; J-11015/133/2007-IA.II(M)]

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

2.5.2 Earlier the proposal was considered by EAC during its 56th meeting held on 30th June, 2020 and deferred the proposal with following observations:

PP did not applied the amendment within the time of EC conditions, this may be considered as non-compliance of EC conditions and accordingly the ministry may take necessary action on non-compliance. Further EAC noted that land have been acquired for coal mine but PP is unable to acquire land for compliance of EC conditions such as railway siding. EAC desires that Ministry may write to Ministry of Power and Managing Director/Chairman of the PP to strictly comply with EC conditions within stipulated timeline. Ministry may also issue clarification on Gazette

In view of above observation, PP has submitted undertaking that mining operation has not been started at the said mining site and the coal extraction and transportation by road are also not being carried out by NTPC, as on date.

Earlier, the Ministry in accordance with the Environmental Impact Assessment (EIA) Notification, 2006 and subsequent amendment thereto had accorded Environmental Clearance (EC) for Chhattibariatu Opencast Coal Mine Project of 7 MTPA in an ML area of 646.23 ha in North Karanpura Coalfields, villages Chhattibariatu, Jordag and Pagar, District Hazaribagh (Jharkhand) to M/s National Thermal Power Corporation Limited subject to compliance of terms and conditions stipulated therein vide letter No. J-11015/133/2007-IA.II (M) dated 19th April, 2010.

Pursuant to cancellation of Coal Block by judgment and order of the Hon'ble Supreme Court, Ministry of Coal vide its Allotment Order No.103/26/2015/NA dated 8th September, 2015 allotted the said mine to the Successful Allottee i.e. M/s NTPC Ltd who were already in possession of EC letter No.J-11015/133/2007-IA.II (M) dated 19th April, 2010.

The said EC was revalidation in favour of M/s National Thermal Power Corporation Limited for Chhattibariatu Opencast Coal Mine Project of 7 MTPA in an ML area of 646.23 ha in North Karanpura Coalfields, villages Chhattibariatu, Jordag and Pagar, District Hazaribagh (Jharkhand) subject to the certain terms & condition vide Ministry's letter dated 3rd March, 2016.

Now project proponent has submitted that the construction of dedicated conveyor system to the railway siding is being delayed and will take about 3 years to complete but the coal mine is in advance stage of development and will be ready to dispatch coal from January 2021 onwards. Therefore, it is proposed to transport of coal (10,000 TPD from Chattibariatu CMP) by road through 25 tonne capacity tippers/ dumpers from mine to Shivpur siding till the dedicated conveyor system becomes operational, whichever is earlier. However, in view of MOEF&CC Gazette Notification dated 21.05.2020, the existing Environmental Clearances stand modified so as to make the above conditions operative for relevant sectors. A clarification may be issued in this regard.

2.5.3 *The EAC after deliberations observed that compliance of condition for implementing conveyor system till Railway siding is important for air emission reduction in place of road transportation. However, considering the delay due to land procurement and undertaking that no coal is transported by PP yet by road and also no coal extraction has not been started, the EAC recommended the amendment of Environment Clearance dated 19th April, 2016 (revalidated dated 3rd March, 2016) for three years. Further, following specific conditions may be additionally complied for road transportation.*

- *Width of the road shall be at least 7 mts before the start of the transportation and necessary permission shall be taken from Stage PWD.*
- *PP shall use high axle truck/dumpers (30-40 tonne capacity only) to reduce the number of fleet on road.*
- *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”.*
- *Project proponent to plant 100,000 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.*

The above is recommended subject to submission of legal undertaking by Head of Organisation to Ministry confirming that implementation of the conveyor system will be completed and made operational within these three years and failing which action will be taken as per extant norms

Agenda No.2.6

Expansion of Block-B Opencast Coal Mine from 5.47 MTPA to 8 MTPA / 10 MTPA (Normative/Peak) by M/s Northern Coalfields Limited at village Naudhiya, P.O.-Gorbi, Tehsil Chitrangi, Singrouli, (Madhya Pradesh) - Term of Reference – reg.

[IA/MP/CMIN/159829/2020; FileNo. J-11015/80/2013-IAII (M)]

The proposal is for Terms of Reference for Expansion of Block-B OCP (Normative- 8.0 MTPA / Peak- 10.0 MTPA) capacity in mine leases area of 2257.17 ha of M/s Block-B OCP Project, Northern Coalfields Limited located in Village Naudhiya, Tehsil Chitrangi, District Singrauli (Madhya Pradesh).

2.6.1 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) Earlier, the environment clearance to the project was granted vide Ministry's letter No. J-11015/80/2013 IA.II (M) dated 06.08.2014 for 5.47 MTPA in ML area of 1339 ha.
- (ii) The project area is covered under Survey of India Topo Sheet No 63-L/12 (RF: 1:50,000) and is bounded by the geographical coordinates ranging from 24°08'59.72"N to 24°12'35.31"N latitudes and 82°31'48.19"E to 82°36'0.12"E longitudes.
- (iii) Coal linkage of the proposed project is for Kota & Suratgarh TPS of RRVUNL and Obra TPS of UPRUVNL. It will also serve as a Basket Linkage to meet the overall demand of coal from NCL including availability for coal for e-auction.
- (iv) Project does not fall in the Critically Polluted Area (CPA).
- (v) Employment generated/to be generated: 1268 (Sanctioned manpower as per REPR).
- (vi) The project is reported to be beneficial in terms of supplying coal to Thermal Power Plants and other consumers through E-auction.
- (vii) Total mining lease area as per block allotment is 2257.17 ha. Mining Plan (Including Progressive Mine Closure Plan) has been approved by the CIL Board on 22.07.2019. No activity shall be undertaken outside mine lease area.
- (viii) The land usage pattern of the project is as follows:

S.N.	LANDUSE	Within ML Area (ha)
1	Agricultural land	243.140
2	Forest land	622.783
3	Wasteland	--
4	Grazing land	--
5	Surface water bodies	--
6	Settlements	--
7	Others (Govt. Land)	52.247
	Old Excavation Area (Quarry)	460.200
	Old OB Dumps	429.100
	Roads & Mine Infrastructure	143.480
	R & R Colony	0.0
	Staff Colony	81.100
	Green Belt	40.500
	Balance Area (Others/safety zone etc.)	184.620
	Total Project Area =	2257.170

Post Mining						
S. No.	Land use	Land use (ha)				Total
		Plantation	Water Body	Public Use	Undisturbed	
1	External OB Dump	1004.85				1004.85
2	Top Soil Dump	Will be utilized for topping external dump and grow plants				
3	Excavation	349.43				349.43
4	Roads					

5	Built-up Area			130.73		130.73
6	Green Belt	376.08				376.08
7	Undisturbed Area					
8	Safety Zone /Rationalization Area	18.08				18.08
9	Diversion /Below River /Nala /Canal					
10	Water Body		360.14			360.14
11	Staff Colony			17.86		17.86
	Total Area =	1748.44	360.14	148.59		2257.170

- (x) Total geological reserve reported in the mine lease area is 144.96 MT with 138.07 MT mineable reserves. Out of total mineable reserve of 138.07 MT, 138.07 MT are available for extraction. Percent of extraction is 95.246 %.
- (xi) Purewa merged and Turra seams with thickness ranging from 19 to 25 m and 15 to 25 m respectively are workable. Grade of coal is G7 to G13, stripping ratio 4.33cum/tes, while gradient is 4° to 22°.
- (xii) Method of mining operations envisages by Shovel Dumper system of mining.
- (xiii) Life of mine is 19 years (w.e.f. 01.04.2018)
- (xiv) The project has 2 nos. External OB Dumps (one existing External OB dump and one external OB dump South is proposed) in an area of 1004.85 ha with 90.0 m height and can accommodate 482.73 Mm³ of OB. 3nos.Internal dumps in an area of 349.43 ha with 114.69 Mm³ of OB is envisaged in the project.
- (xv) Total quarry area is 709.57 ha out of which backfilling will be done in 349.93 ha, while final mine void will be created in an area of 360.14 ha with a depth of 30-40 m. Backfilled quarry area of 349.93 ha shall be reclaimed with plantation. Final mine void will be converted into water body.
- (xvi) Transportation of coal has been proposed by Shovel/Dumpers in mine pit head, from surface to siding by Dumpers and at sidings by Coal Handling Plant.
- (xvii) Reclamation Plan in an area of 1748.44 ha, comprising of 1004.85 ha of external dump, 349.43 ha of internal dump and 376.08 ha of green belt. In addition to this, an area of 18.08 ha included in the safety zone/rationalization area, has also been proposed for green belt development.
- (xviii) About 1069.783 ha of forest land have been reported to be involved in the project. Approval under the Forest (Conservation) Act, 1980 for diversion of 447.00 ha of forest land for a non-forestry purpose has been obtained vide MoEF&CC letter No. F.No. 8-59/2005-FC dated 14.09.2006. For balance 622.783 ha forest land, application for Stage-I FC has been submitted vide application no. FP/MP/MIN/44294/2020dated 03.02.2020.
- (xix) No National Parks, Wildlife Sanctuaries and Eco-Sensitive Zones have been reported within 10 km boundary of the project.
- (xx) The ground water level has been reported to vary between 1.25 m bgl (2017) to 24.57 m.bgl (2017) during pre-monsoon and 0.87 m.bgl (2016)-23.52 m.bgl (2019) during post-monsoon. Total water requirement for the project is 3728 KLD (Industrial water

requirement) and 2273KLD (Domestic water requirement).

- (xxi) Application for obtaining the approval of the Central Ground Water Authority for the existing project has been submitted on 28.09.2019 vide Application no. 21-4/881/MP/MIN/2019
- (xxii) Previous Public hearing for the project of 3.50 MTPA capacity in an area of 1339 ha was conducted on 26.08.2003 at Block-B, Gorbi. Appropriate actions to address the issues raised in the Public Hearing have already been taken.
- (xxiii) Consent to Operate for the existing capacity was obtained from the M.P.P.C.B. on 30.01.2017 and is valid till 31.03.2022.
- (xxiv) No River/nalla is flowing in mining area of lease.
- (xxv) Regular monitoring of ambient air quality is being carried out on fortnightly basis. The documented report is submitted to MPPCB Singrauli and also to Regional Office MoEF&CC, Bhopal along with half yearly EC compliance report. In general, the results of ambient air quality monitoring data were found within prescribed limits except few aberrations which can be attributed to the specific local conditions during the day of sampling.
- (xxvi) No court cases, violation cases are pending against the project of the PP.
- (xxvii) The project does not involve violation of the EIA Notification, 2006 and amendment issued there under. The coal production from the mine was started from the year 2007 onwards. No excess production of coal from the sanctioned capacity has been realized since the commencement of mining operations. The coal production, realized from the project, from 2006-07 onwards :

Year	EC sanctioned (MTPA)	Actual production (MTPA)	Excess production beyond the EC capacity (MTPA) sanctioned capacity
2006-07	3.50	-	-
2007-08	3.50	2.152	NIL
2008-09	3.50	3.431	NIL
2009-10	4.375	3.355	NIL
2010-11	4.375	3.807	NIL
2011-12	4.375	4.007	NIL
2012-13	4.375	4.375	NIL
2013-14	4.375	4.375	NIL
2014-15	5.47	4.475	NIL
2015-16	5.47	4.101	NIL
2016-17	5.47	5.231	NIL
2017-18	5.47	5.468	NIL
2018-19	5.47	5.469	NIL
2019-20	5.47	5.469	NIL

- (xxviii) The project involves 207 project affected families. R&R of the PAPs will be done as per CIL's R & R policy.
- (xxix) Total cost of the project is Rs. 1549.03 Crores. Cost of production is Rs. 1073.56/te (100% Capacity). CSR cost : As per CSR policy of CIL, the fund for CSR is allocated based on 2% of Average Net profit of the Company for the 3 immediate preceding years or Rs. 2/tonne of coal production for previous year whichever is higher. R&R cost Rs 159.9158

Crores. Environment Management Cost is Rs. 178.61Crores.

2.6.2 The EAC during deliberations noted the following:-

The proposal is for Terms of Reference for Expansion of Block-B OCP (Normative- 8.0 MTPA / Peak- 10.0 MTPA) capacity in mine leases area of 2257.17 ha of M/s Block-B OCP Project, Northern Coalfields Limited located in Village Naudhiya, Tehsil Chitrangi, District Singrauli (Madhya Pradesh).

1069.783 ha of forest land has been reported to be involved in the project. Approval under the Forest (Conservation) Act, 1980 for diversion of 447.00 ha of forest land for non-forestry purposes has been obtained vide MoEF&CC letter No. F.No. 8-59/2005-FC dated 14.09.2006. For balance 622.783 ha forest land, application for Stage-I FC has been submitted vide application no. FP/MP/MIN/44294/2020dated 03.02.2020

Standard ToR dated 8th September, 2020 has been granted by Ministry. The proposal is being considered by EAC for specific conditions.

2.6.3 *The EAC after deliberation recommends the proposal for grant of Terms of Reference to Expansion of Block-B OCP (Normative- 8.0 MTPA / Peak- 10.0 MTPA) capacity in mine leases area of 2257.17 ha of M/s Block-B OCP Project, Northern Coalfields Limited located in Village Naudhiya, Tehsil Chitrangi, District Singrauli (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) *Cumulative Impact Assessment Study of the area shall be carried over by project proponent*
- (iii) *Stage-I clearance for the entire forestland involved the project shall be obtained.*
- (iv) *Clarification from District Forest Officer that mine does not fall under corridors of any National Park and Wildlife Sanctuary.*
- (v) *PP shall prepare Mine Plan including Mine Closure Plan for Peak production capacity as per latest guidelines of Ministry of Coal.*
- (vi) *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*
- (vii) *Inpit conveyor belt with silo loading should be proposed and installed for transportation of coal till railway siding.*
- (viii) *PP shall explore the possibilities of utilization of OB material for different purposes (in construction of roads, manufacture of artificial sand, aggregates, use for farmers etc.) and accordingly Plan shall be included in EIA/EMP Report*
- (ix) *Project proponent to prepare Environmental Cost Benefit Analysis for the project in EIA/EMP Report.*

- (x) *Permission for ground water withdrawal shall be obtained from Central Ground Water Authority (CGWA), if applicable*
- (xi) *Fund allocation for Corporate Environment Responsibility (CER) shall be made as per Ministry's O.M. No. 22-65/2017-IA.III dated 30th September 2020 and based on commitment made during public consultation process for incorporating in EIA-EMP for deliberation of EAC.*
- (xii) *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*
- (xiii) *Heavy metals including other parameters in surface water quality (also of Ghagri river) shall be analyzed and provided in EIA Report.*
- (xiv) *The parameters Arsenic, Lead and Silica shall also be analyzed in ambient air quality*
- (xv) *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.*

Agenda No.2.7

Gourangdih ABC Opencast Coal Mining Project of 2.5 MTPA in an ML area of 356.575 ha by M/s West Bengal Mineral Development and Trading Corporation Limited (WBMDCL) located in District Paschim Bardhaman (West Bengal) – Environment Clearance reg.

[IA/WB/CMIN/65801/2017; File No J-11015/80/2017-IA.II(M)]

2.7.1 The proposal is for Environment Clearance to Gourangdih ABC Coal Mine Project of 2.5 MTPA capacity in mine lease area of 213.27 ha by M/s West Bengal Mineral Development and Trading Corporation Limited (WBMDTCL) located in villages Panuria, Kantapahari, Jamgram, Shibdhawra, Banddhawra, Lalbandh, Gourangdih and Bhuiapara in Barabani CD Block of Tehsil Barabani, District Paschim Bardhaman (West Bengal).

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

- (i) The project area is covered under Survey of India Open Series Map no. F45C13 and F45D1 and is bounded by the geographical coordinates ranging from longitude 23°48'30" to 23°49'45" N and latitude 86°57'45" to 87°00'15" E
- (ii) Coal linkage of the project is proposed for commercial sale and use for various purposes
- (iii) Terms of Reference (TOR) for preparation of EIA/EMP Report was issued in favor of WBMDTCL by MoEF&CC vide letter no. J-11015/80/2017-IA.II (M) dated 29th September, 2017.
- (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, direct employment to 762 persons will be provided from the project.
- (vi) The project is reported to be beneficial in terms of employment generation (direct and

indirect), development of area in terms of infrastructure, health, education etc. under CSR/CER and will provide much needed coal to the MSME sector of West Bengal

- (vii) Total mining lease area is 213.27 ha and project area is 356.575 ha. Revised Mining Plan (first revision) (including Progressive Mine Closure Plan) has been approved by the Ministry of Coal, Government of India vide letter No. 13016/77/2006-CA-I (Part) dt. 28-06-2011.
- (viii) Mine was allotted by Ministry of Coal vide allotment order no. F.No. 103/6/2016/NA dated 29.09.2016 for sale of coal. Coal produced from the mine will be sold through: (i) e-auction for supply of coal over a period of time pursuant to a contract (Coal Supply Agreement); and/or (ii) e-auction for specified quantity of coal (Spot Sale) as per the provisions stipulated in clause – 8 of the Allotment Agreement dated 24.08.2016 executed between the Nominated Authority, Ministry of Coal, GoI and the Project Proponent.
- (ix) The land usage pattern of the project is as follows:

Pre-mining land use details (Area in Ha)

Sl.	Land pattern	Total Area	Within ML area	Outside ML area
1	Agricultural Land	48.43	48.3	-
2	Forest land (protected & jungle)	109.459	96.440	13.019
3	Water body	15.44	7.640	7.800
4	Settlements (Built up area)	60.86	26.140	34.720
5	Fallow land (Danga)	44.07	21.40	22.670
6	Degraded land (Old quarry area)	61.316	13.220	48.096
7	Non agricultural land for colony	5.00	-	5.00
8	Non agricultural land for Rehabilitation	12.00	-	12.00
	Total	356.575	213.270	143.305

Post-mining land use details (Area in Ha)

S. No.	Land Use	Plant - ation	Agri- culture	Agro- forest ry	Wat er body	Public use	Undist urbed	Total
1.	External OB Dump	0.19	51.88	10.9	-	-	-	62.97
2.	Top soil dump		13.73					13.73
3.	Excavation			213.27				213.27
4.	Roads			4		4		8
5.	Builtup area			10.23		17		27.23
6.	Green Belt	7.52						7.52
7.	Undisturbed area	23.85						23.85
	Total Area	31.56	65.61	238.4	0	21	0	356.57

- (x) Total geological reserve reported in the mine lease area is 129.15 MT with 68.37 MT mineable reserve. Out of total mineable reserve of 68.37 MT, 61.54 MT are available for extraction. Percent of extraction is 90%.
- (xi) 8 seams with thickness ranging from 1 meter to 25.07 are workable. Grade of coal is C to G, stripping ratio 2.91 Cum/t, while gradient is 8 to 13 degree.

- (xii) Method of mining operations envisages by Opencast mechanised method
- (xiii) Life of mine is 27 years.
- (xiv) The project has 3 external OB dumps in an area of 62.97 ha with 85 m height and 37.15 Mm³ of OB. Two internal OB dumps in an area of 132.50 ha with 129.18 Mm³ of OB is envisaged in the project.
- (xv) Total quarry area is 213.27 ha out of which backfilling will be done in 132.5 ha (by end of life of mine) while final mine void will be created in an area of 80.77 ha (by end of life of mine) with a depth of 120 m in Block-A and 210 m in Block-C. This 80.77 ha too shall be backfilled in post mine closure stage using OB from external & internal dumps. Backfilled quarry area of 213.27 ha shall be reclaimed with plantation. Final mine void will be completely backfilled and converted into plantation, agriculture and agro-forestry.
- (xvi) Transportation of coal has been proposed by dumpers from mine to pit head, from surface to consumer by road or rail. In case of rail, to siding by road.
- (xvii) Reclamation Plan in an area of 335.57 ha, comprising of 62.97 ha of external dump, 13.73 ha top soil dump and 213.27 ha of internal dump & quarry. In addition to this, an area of 31.37 ha, included in the safety zone and undisturbed area, has also been proposed for green belt development.
- (xviii) 109.459 ha of forest land has been reported to be involved in the project. Approval under the Forest (Conservation) Act, 1980 for diversion of 109.459 ha of forest land for non-forestry purposes is under process vide proposal no. FP/WB/MIN/26869/2017 dated 12.07.2017.
- (xix) No National Parks, Wildlife Sanctuaries and Eco-Sensitive Zones fall within 10 km boundary of the project
- (xx) The ground water level has been reported to be varying between 2.44 m to 39.62 m during pre-monsoon and between 0.3 to 2.83 m during post-monsoon in study area. Total water requirement for the project is 984 KLD.
- (xxi) Ambient air quality data was collected for winter season during 1st December 2017 to 28th February 2018 from eight monitoring stations in study area.
- (xxii) Application for obtaining the approval for ground water withdrawal has been approved by SWID, West Bengal vide letter dated 09.12.2019
- (xxiii) Public hearing for the project of 2.5 MTPA capacity in an area of 356.57 ha was conducted on 20.09.2018 at Agniveena Hall at the office campus of Barabani Block Office, Dist- Paschim Bardhaman, West Bengal. Major issues raised in the public hearing include employment, pollution, R & R package, water table, traffic and Implementation of CSR commitments. Appropriate action to address the issues raised in the Public Hearing have already been taken/proposed to be taken
- (xxiv) No River/ perennial nalla is flowing within the boundary of lease. No nallah will be diverted .
- (xxv) Regular monitoring of ambient air quality will be carried out on commencement of the project and documented report will be submitted to MoEF&CC along with half yearly EC compliance report.
- (xxvi) No court cases, violation cases are pending against the project of the PP.
- (xxvii) The project does not involve violation of the EIA Notification, 2006 and amendment issued thereunder. The coal production from the mine is yet to be started.
- (xxviii) The project involves 629 project affected families. R&R of the PAPs will be done as per R&R policy of WBMDTCL
- (xxix) Total cost of the project is Rs. 621.71 crores lakhs. Cost of production is Rs. 2486.83/- per tonne., CSR cost is 2% of the net profit of last three years, R&R cost is Rs. 105.95 crores

(Option 1) or Rs. 91.81 crores (Option 2). Environment Management Cost is Rs. 17.27 crores (Capital) and Rs. 6.35 crores/year. (Recurring)

2.7.2 The EAC during deliberations noted the following details:

The proposal is for Environment Clearance to Gourangdih ABC Coal Mine Project of 2.5 MTPA capacity in mine lease area of 213.27 ha of M/s West Bengal Mineral Development and Trading Corporation Limited (WBMDTCL) located in villages Panuria, Kantapahari, Jamgram, Shibdhawra, Banddhawra, Lalbandh, Gourangdih and Bhuiapara in Barabani CD Block of Tehsil Barabani, District Paschim Bardhaman (West Bengal).

Terms of Reference (TOR) for preparation of EIA/EMP Report was issued in favour of WBMDTCL by MoEF&CC vide letter no. J-11015/80/2017-IA.II (M) dated 29th September, 2017.

109.459 ha of forest land has been reported to be involved in the project. Approval under the Forest (Conservation) Act, 1980 for diversion of 109.459 ha of forest land for non-forestry purposes is under process vide proposal no. FP/WB/MIN/26869/2017 dated 12.07.2017 and the same is under process

Proposal is pending at State Government. WBMDTCL has cleared all the points raised by MoEF&CC on 16.07.2019 except the one that all the patches of CA land should be more than 5 Ha. WBMDTCL has identified the CA land having all the patches 5 ha or more. As the lands are government land, getting approval from GoWB is under process for inter departmental transfer. DGPS Survey has been carried out.

Mine was allotted by Ministry of Coal vide allotment order no. F.No. 103/6/2016/NA dated 29.09.2016 for sale of coal. Coal produced from the mine will be sold through: (i) e-auction for supply of coal over a period of time pursuant to a contract (Coal Supply Agreement); and/or (ii) e-auction for specified quantity of coal (Spot Sale) as per the provisions stipulated in clause – 8 of the Allotment Agreement dated 24.08.2016 executed between the Nominated Authority, Ministry of Coal, GoI and the Project Proponent.

PP has submitted that in the three block of ABC in the lease area of said coal block allocated to them, mine will be executed in two blocks i.e. AC and leaving block B as there is large settlements in the area and R &R is not possible. Life of the mine will change accordingly. Also PP has proposed to station CHP and OB dump outside the mine lease area.

2.7.3 The EAC after deliberation was of the view that proposal is not in order from environment management point of view and deferred the proposal for want of further inputs/clarification on following points.

- i. PP shall submit the Stage-I FC for diversion of 109.459 ha of forest land for non-forestry purposes*
- ii. since area B is not intended to be mine and No OB dump and CHP should be located outside Mine Lease area, PP shall submit Revised Mine Plan including Mine Closure Plan*
- iii. Progressive reclamation mine closure plan/backfilling shall be prepared to reduce the requirement of land.*

- iv. *Consequential impact of ground water in B -Block area to be carried due to mining activity out in A & C Blocks.*
- v. *PP shall provide details of water harvesting for fulfilling the need area B since it comes under the zone influence of mining activity and primarily ground water is source of water for settlement on area B.*
- vi. *Consequential impact of OB dump by reducing the fleet size shall be prepared after change in rearranging the areas.*
- vii. *Proper response of public consultation with regard to pollution mitigation measures and demands of local people.*
- viii. *Details of control blasting with adequate safeguard for nearby people particularly locals residing in block B.*
- ix. *Comprehensive Plan for supplying water to the nearby habitation in villages/settlements (zone of influence) as pointed out in the public hearing*
- x. *Propose the measures to be taken for reduction of air pollution by transportation of OB dump.*
- xi. *Project Proponent should submit approved R&R plan from District Collector*
- xii. *Certification of PCCF about absence of Schedule-I species in the project and buffer area. Further certifying that no wildlife/National Sanctuary in 10 km project area.*
- xiii. *Details of ecological restoration as per Terms of reference shall be submitted.*

The proposal was **deferred** on above lines for submission of compliance of observation.

Agenda No.2.8

Expansion of Coal Washery from 1.2 MTPA (Dry Process) to 3.6 MTPA (By Adding 2.4 MTPA through Wet Process) by M/s Maheshwari Coal Beneficiation and Infrastructure Pvt. Ltd located in village Parasda, Sirgitti Industrial Areas Tehsil & District Bilaspur (Chhattisgarh) - For Environmental Clearance – reg.

[Online Proposal No. IA/CG/CMIN/151149/2007; F. No. J-11015/82/2016-IA.II (M)]

2.8.1 The proposal is for Environment Clearance for expansion in capacity of coal washery from 1.2 MTPA (Dry Process) to 3.6 MTPA (By Adding 2.4 MTPA Through Wet Process) of M/s Maheshwari Coal Beneficiation and Infrastructure Pvt. Ltd located in village Parasda, Sirgitti Industrial Areas Tehsil & District Bilaspur (Chhattisgarh).

2.8.2 The proposal was earlier considered by the sectoral EAC in its 56th meeting held on 30th June, 2020, wherein the Committee deferred the proposal for want of information and returned the proposal. Now, PP submitted the point-wise compliance to observations of EAC .

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

Sr. No.	Observations of EAC	Compliance / Submission of Project Proponent
1	Quantity of wastewater generated and discharge is mentioned same in	The makeup water consumption for process is 400 KLD. The water after washing will be re-

	Form#2 at PARIVESH Portal. No loss of water is included for justifying zero liquid discharge.	circulated after treatment (Closed circuit). For dust separation in Coal yard and CHP, 38 KLD water which will be lost in evaporation. For Domestic use we need 5 KLD water out of which approx. 2 KLD will be wastewater. It will be disposed in septic tanks and soak pits (we are also exploring modular STP for treatment).
2	Form#2 at Sr. No. 32 in green belt plan- only proposed map of green belt development plan is submitted. PP shall submit year wise plantation with fund allocation for the same	Total project area is 21.6 Ha. 7.13 Ha area is already developed as green belt (33%). PP planted 31150 saplings out of which 27018 plants have survived. The density of plantation is more than 2500 trees per ha. However PP proposed to plant additional 1500 saplings in the available open area around the proposed washery area
3	Form#2 at Sr. No. 32 (i) and Sr. No. 22 regarding area of green belt is not matching	The correct figure is 7.13 Ha. Land Utilization of Washery Area was provided
4	The values of air quality mentioned in Form#2 at Sr. No. 14.1 and Sr. No. 18.1 are different. PP shall justify the same.	In Sr. No. 14.1 all the figures are correct except SO ₂ (max) which is 24.1 µg/m ³ . Inadvertently typed as 21.6 µg/m ³ . In Sr. no. 18.1 we have given concentrations measured at Project Site (AAQ1 – Sirgitti Industrial Area). Mostly fugitive coal dust emissions are observed inside washery (if water sprinklers are not operated and DES are not functioning). Therefore AAQ1 depicts the maximum observed values Location AAQ5 is located 4 km away north direction from the project site (Bilaspur City).
5	Copy of agreement of power requirement is not enclosed in Form# 2 at Sr. No. 19	Letter to Chhattisgarh State Electricity Board (Govt of Chhattisgarh Undertaking) stating our Power Requirement to operate the new coal washery. CSEB will enter into agreement when PP will complete the construction of new washery.
6	Action taken report and action plan for compliance of conditions on the basis RO report shall be submitted.	Certified Compliance report and Action taken report already submitted to MOEFCC. - PP carried out ambient air quality monitoring at 4 locations outside the plant (compliance General condition point 3) in March 2020.

		<ul style="list-style-type: none"> - Fugitive Dust monitoring inside the plant premises has been done (compliance point 4). - Noise quality monitoring inside the plant premises done (compliance point 6) - PP engaged MOEF&CC recognized Lab to carry out all the environmental monitoring (compliance point 8). - Next monitoring is due in the post-monsoon season (October to December 2020) PP engaged MOEF&CC recognized Lab to carry out all the environmental monitoring (compliance point 5). <p>All test reports has been given in EIA Report.</p>
7	Clarification from District Forest Officer regarding no presence of schedule I species in the project area and buffer zone shall be submitted.	<p>Within 10 km radial area around the project site there is no national park or wildlife sanctuary. No Reserve Forests or Protected Forests are present within 10 km radius of the project site. During the EIA study, no Schedule 1 species has been observed by the Ecology Expert. Therefore, comments of Chief Wildlife Warden is not required.</p>
8	PP shall enclose Attendance of Public Hearing and Letter of Member Secretary to MoEF regarding information of Public Hearing proceedings	Attendance of public hearing and letter of Member Secretary to MoEF regarding information of Public Hearing proceedings has been submitted.
9	In EIA report: 0.48 MTPA of coal rejects will be generated during coal washing. The rejects will be stored in an earmarked place for sale to power plants and cement plants having CFBC and AFBC boilers for steam generation. No rejects shall be sold to brick and briquette manufacturers. Updated MoU or plan for utilization of rejects should be provided	<p>There are more than 10 large cement plants and 10 large steel plants in Bilaspur, Champa, Durg and Raipur districts. (ACC / Grasim/ Ultratech/Lafarge/ Emami/ JK Lakshmi/ Jindal/ All are having CPP. We are already supplying our rejects to many captive power plants.</p> <p>Due to restrictions imposed by these companies due to covid-19 pandemic, we are unable to approach them for meetings / discussions.</p> <p>PP to submit the MOU to MOEFCC within 6-month time.</p>
10	PP shall provide water balance with its quantity of usage at each points.	Provided
11	Traffic Impact Assessment form coal mine to washery and impact on habitation along the road and 100 m from the corners of the road	<p>The project has a dedicated railway siding inside the plant premises and coal shall be transported using this railway siding.</p> <p>Traffic impact assessment due to vehicular traffic</p>

		has been done on locations either side of the road. Results are given in Table 4.10 page 97 of EIA Report. It has been concluded that the impact of additional vehicular traffic shall be limited within 25 m distance from either side of the road and become insignificant beyond 25 m distance.
12	Proposed Green belt development program along-with time line and budgetary allocation needs to be provided.	PP proposed to plant additional 1500 saplings in the available open area around the proposed washery area within in a year
13	Air quality modelling for PM10 maximum value of 70.7 ug/m ³ shall be conducted instead of 64.5 ug/m ³ for impact modelling	Maximum GLC has been revised
14	Impact modelling considering crusher stack and fugitive dust shall be conducted and also modelling for SO ₂ , NO _x has to be done	The fugitive dust generated from the coal handling plant (screens, crushers) has been done. The coal washing process will not generate any SO ₂ and NO _x .
15	Details of past production figure vis-à-vis previous EC shall be submitted	Detail of past production provided in presentation

2.8.4 The EAC during deliberation also noted the following:

TOR was granted for proposed expansion vide letter no. J-11015/82/2016-IA.II (M) dated 6.04.2017.

Conventional Heavy Media Cyclone Bath selected based on the washability characteristics of ROM coal. 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. The makeup water consumption for process is 400 KLD.

Rainwater Harvesting inside plant premises 2.45 ha land has been earmarked for making water reservoir.

There is no forest area located within 10 km radial distance from the project site.

The Committee noted that the responses given by PP and information given to clarifications are satisfactory. Issues raised during the public hearing has been properly addressed in the EIA/EMP report. The EAC has deliberated the proposal and has made due diligence in the process as notified under the provisions of the EIA Notification, 2006, as amended from time to time and accordingly made the recommendations to the proposal. The Committee deliberated the compliance of the Ministry's OM No. 22-23/ 2018-IA.III (Pt) dtd. 31st October, 2019 pertaining to mechanism formulated for environmental management of critically and severely polluted areas.

The Committee found the plan is on order. The Experts Members of the EAC have found the proposal in order and have recommended for grant of Environmental Clearance (EC).

2.8.5 *The EAC, after detailed deliberation, recommended the proposal for grant of environmental clearance for Expansion of Coal Washery from 1.2 MTPA (Dry Process) to 3.6 MTPA (By Adding 2.4 MTPA through Wet Process) of M/s Maheshwari Coal Beneficiation and Infrastructure Pvt. Ltd located in village Parasda, Sirgitti Industrial Areas Tehsil & District Bilaspur (Chhattisgarh), under the provision of the Environment Impact Assessment Notification, 2006 and subsequent amendments/circulars thereto subject to the compliance of the following terms & conditions / specific conditions:-*

- (i) *As proposed by PP, water shall be sourced from proposed water pond within the premises and no groundwater shall be extracted for coal washery plant.*
- (ii) *The coal washery shall be operated on 'Zero Liquid Discharge Principle'. There will not be any effluent discharge from the coal washery plant. Domestic effluent will be treated in STP. Treated water will be used for gardening and other non-potable purposes within the plant premises.*
- (iii) *Clarification from PCCF, State Government stating that no Schedule-I species present in 10 km buffer zone.*
- (iv) *Washery rejects shall be only be used in FBC based power plant and MoU for 100% utilization of rejects shall be submitted to Ministry's Regional Office within six months of issue of this letter.*
- (v) *PP shall comply all the observations highlighted by Ministry's Regional Office in its certified compliance report in 6 months.*
- (vi) *Monitoring of compliance of EC conditions may be submitted with third party audit every year.*
- (vii) *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.*
- (viii) *The State Pollution Control Board, while considering consent to operate for the project, may stipulate stringent conditions to ensure that with the proposed transportation of washery rejects by road, air quality would remain within the national ambient air quality standards. Permission may be considered based on carrying capacity of entire area.*
- (ix) *The Green Belt shall be developed all along the boundary of railway siding and permanent green sheet barricade shall be placed with fixed type mist spray to suppress dust.*
- (x) *100% transportation of raw coal, clean coal, middling and rejects shall be through rail only.*
- (xi) *Fixed type water sprinklers shall be installed along the periphery of the plant boundary.*
- (xii) *Quantity of stored coal and rejects should not exceed more than 2 months of total capacity.*
- (xiii) *Mitigating measures shall be undertaken to control dust and other fugitive emissions all along the roads by providing sufficient 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) *The project proponent shall conduct periodical training for the truck drivers for imparting*

safety training. The safety audit shall be conducted through a third party once in every two years.

- (xv) Commitment made during public consultation held on 10.08.2018 shall be strictly followed and complied with action taken report as part of six monthly report.

Agenda No.2.9

Expansion of Belpahar Opencast Coalmine Project (6 MTPA to 9 MTPA in an ML area of 1444.053 ha + 59.63 Ha outside ML area) total area 1503.683 ha of M/s Mahanadi Coalfields Ltd located in Ib Valley Coalfields, in villages Darlipali Chharla, Tehsil Banaharpali District Jharsuguda (Odisha) - Amendment in Environment Clearance –reg

[IA/OR/CMIN/166026/2020; File No J-11015/189/2008-IA.II(M)]

2.9.1 The EAC during deliberations noted the following:-

The proposal is for extension of validity of Environment Clearance for Belpahar Project of 9 MTPA capacity in an ML area of 1444.053 ha + 59.63 Ha outside ML area) total area 1503.683 ha by M/s Mahanadi Coalfields Ltd located in Ib Valley Coalfields, in villages Darlipali Chharla, Tehsil Banaharpali District Jharsuguda (Odisha)

Earlier, the environment clearance to the project was granted vide Ministry's letter no. No. J-11015/189/2008-IA.II (M) dated 22nd January, 2015 for 9.0 MTPA for a mine life of 6 years. Total mining lease area as per block allotment is 1444.053 ha. Addendum to Mining plan (including Progressive Mine closure plan) has been approved by MCL Board on 28.01.2019.

PP vide letter 21.08.2020 submitted that earlier estimation of coal reserve and on ground situation are different and that there is still some extractable reserve. There is no change in existing configuration (area and capacity) of approved Environmental Clearance. Only the mine life will get extended till 20-23 due to availability of more coal reserves. Therefore, it is requested to extend the validity of EC till 2022-23.

As per Ministry's notification dated 29th April, 2015 regarding validity of environmental clearance and its extension, it states as below: -

(i) The "Validity of Environmental Clearance" is meant the period from which a prior environmental clearance is granted by the regulatory authority, or may be presumed by the applicant to have been granted under sub paragraph (iv) of paragraph 7 above, to the start of production operations by the project or activity, or completion of all construction operations in case of construction projects (item 8 of the Schedule), to which the application for prior environmental clearance refers. The prior environmental clearance granted for a project or activity shall be valid for a period of ten years in the case of River Valley projects (item 1(c) of the Schedule), project life as estimated by Expert Appraisal Committee or State Level Expert Appraisal Committee or District Level Expert Appraisal Committee subject to a maximum of thirty years for mining projects and seven years in the case of all other projects and activities.

(ii) Where the application for extension under sub-paragraph (ii) has been filed-

(a) within one month after the validity period of EC, such cases shall be referred to concerned Expert Appraisal Committee (EAC) or State Level Expert Appraisal Committee (SEAC) or District Level Expert Appraisal Committee and based on their recommendations, the delay shall be condoned at the level of the Joint Secretary in the Ministry of Environment, Forest and Climate Change or Member Secretary, SEIAA, as the case may be;

(b) more than one month after the validity period of EC but less than three months after such validity period, then, based on the recommendations of the EAC or the SEAC or the DEAC, the delay shall be condoned with the approval of the Minister in charge of Environment, Forest and Climate Change or Chairman, as the case may be :

Provided that no condonation for delay shall be granted for any application for extension filed 90 days after the validity period of EC.”

2.9.2 The EAC, after deliberation observed that since the project proponent has applied within time limit of said notification, no condonation of delay is warranted. EAC also observed that there is several non-compliance of EC conditions given in the report of RO, inspected in 2015 as well as no ground water permission has so far been obtained from CGWA. Taking this in to account and considering that there is available time up to 20.01.2020, the committee, therefore, meanwhile has desired the following information:

- i. Action taken on non-compliance of Certified Compliance Report of EC conditions and its verification with latest report from Ministry's Regional Office, Bhubaneshwar.
- ii. Permission/No Objection Certificate of Central Ground Water Authority for extraction of ground water from mining activity
- iii. Mine Closure Plan for taking environmental safeguard measure as per latest guidelines of Ministry of Coal.

The proposal is **deferred** on above lines.

Agenda No. 2.10

Expansion of Umrer Opencast coal mine project from 3.50 MTPA to 4.90 MTPA in an area of 944.65 ha M/s Western Coalfields Limited located in Village Kanhwa Tehsil Umrer District Nagpur(Maharashtra) – Amendment in Environment Clearance –reg

[IA/MH/CMIN/166052/2020; File No J-11015/86/2005-IA.II(M)]

2.10.1 The EAC during deliberations noted the following: -

The proposal is for extension of validity of Environmental Clearance for Expansion of Umrer Opencast coal mine project from 3.50 to 4.90 MTPA capacity in mine lease area of 944.65 ha of M/s Western Coalfields Limited located in village Kanhwa, Tehsil Umrer, District Nagpur (Maharashtra).

Earlier, Environmental Clearance was granted by Ministry vide letter F. no. J – 11015/86/2005-IA-II(M) dated 11.01.2019. EC has been granted for a period of one-year subject to compliance of certain terms & conditions. Life of mine as per EC issued on 11.01.2019 is 02 years.

Extension of EC validity was granted by MoEF&CC vide letter F. no. J – 11015/86/2005-IA-II(M) dated 06.12.2019. Extension was granted for a period of 30 years or life of the mine, whichever is earlier.

Total mining lease area as per approved mining plan is 944.65 ha. Mining Plan (Including Progressive Mine Closure Plan) (pertaining to enhancement in production capacity from 3.50 to 4.90 MTPA within the existing ML area of 944.65 ha) has been approved by the WCL Board on 24-05-2018 as communicated vide letter no WCL/BD/SECTT/BM-300/2018/93 dated 31-05-2018. Central Ground Water Authority (CGWA) granted NoC for Groundwater Abstraction vide letter no. CGWA/NOC/MIN/ORIG/2019/5653 dated 11/07/2019

Now, project proponent vide his application dated 31.07.2020 submitted that mine is in **its last phase of operation**. The reserves are being extracted with due consideration of conservation of coal before final closure of the mine. In this case, the mine proposed for end of mining operation by FY 2020-21 with production of 1.88 MT. But now, it is seen that there is about 3.0 MT (precisely 3.12 MT) of Coal, which was locked up for safety issues (barrier etc.). And while retreating, this additional coal of 3.12 MT needs to be extracted before finally closing the mine for better conservation of Mineral i.e Coal reserves. Life of mine for extraction of coal reserves and OB removal is 03 years from 01.04.2020 i.e. till 2023.

As per Ministry's notification dated 29th April, 2015 regarding validity of environmental clearance and its extension, it states as below

(i) The "Validity of Environmental Clearance" is meant the period from which a prior environmental clearance is granted by the regulatory authority, or may be presumed by the applicant to have been granted under sub paragraph (iv) of paragraph 7 above, to the start of production operations by the project or activity, or completion of all construction operations in case of construction projects (item 8 of the Schedule), to which the application for prior environmental clearance refers. The prior environmental clearance granted for a project or activity shall be valid for a period of ten years in the case of River Valley projects (item 1(c) of the Schedule), project life as estimated by Expert Appraisal Committee or State Level Expert Appraisal Committee or District Level Expert Appraisal Committee subject to a maximum of thirty years for mining projects and seven years in the case of all other projects and activities.

(ii) Where the application for extension under sub-paragraph (ii) has been filed-

(c) within one month after the validity period of EC, such cases shall be referred to concerned Expert Appraisal Committee (EAC) or State Level Expert Appraisal Committee (SEAC) or District Level Expert Appraisal Committee and based on their recommendations, the delay shall be condoned at the level of the Joint Secretary in the Ministry of Environment, Forest and Climate Change or Member Secretary, SEIAA, as the case may be;

(d) more than one month after the validity period of EC but less than three months after such validity period, then, based on the recommendations of the EAC or the SEAC or the DEAC, the delay shall be condoned with the approval of the Minister in charge of Environment, Forest and Climate Change or Chairman, as the case may be :

Provided that no condonation for delay shall be granted for any application for extension filed 90 days after the validity period of EC.”

2.10.2 The EAC, after deliberation observed that since the project proponent has applied within time limit of said notification (i.e. 06.12.2020), no condonation of delay is desired. Further, EAC **recommends** the proposal for extension in validity of Environment Clearance to Expansion of Umrer Opencast coal mine project from 3.50 to 4.90 MTPA capacity in mine lease area of 944.65 ha of M/s Western Coalfields Limited located in village Kanhwa, Tehsil Umrer, District Nagpur (Maharashtra) for life of the mine (three years i.e. till 2023 as project proponent committed that excuaction of mineral will be completed in three years during presentation in EAC) or 30 years whichever is earlier as per EIA Notification, 2006 with all the condition stipulated in EC dated 11th January, 2019 shall remain the same and subject to additional conditions as mentioned below for environment safeguards: -

- No untreated mine water shall be discharged in Amb river which is adjacent to the boundary of the mine.
- 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”.

Agenda No. 2.11

Gevra Opencast coal mine from 45 MTPA to 49 MTPA of M/s South Eastern Coalfields Limited in mine lease area of 4184.486 ha in District Korba (Chhattisgarh)- For Amendment in Environment Clearance –reg

[IA/CG/MIN/168038/2020; File No J-11015/85/2010-IA.II(M)]

2.11.1 The EAC, during deliberations noted the following details:-

The proposal is for amendment in Environment Clearance production capacity of Gevra Opencast coal mine from 45 MTPA to 49 MTPA of M/s South Eastern Coalfields Limited in mine lease area of 4184.486 ha in District Korba (Chhattisgarh)

Earlier, the Environmental Clearance of Gevra opencast was accorded :

- a. Vide MoEF&CC letter no. J-11015/484/2007-IA.II (M) dated 3rd June, 2009 for expansion from 25 MTPA to 35 MTPA and in leasehold area of 4184.486 Ha, under the provisions of the EIA Notification, 2006 with public hearing. Public hearing was held on 22.08.2008.
- b. vide letter no. J-11015/85/2010-IA.II (M) dated 31st January, 2014 for expansion from 35 MTPA to 40 MTPA under clause 7(ii) of EIA Notification, 2006 and subsequent OM J-11015/30/2004.IA.II(M) dated 19.12.2012 issued to facilitate one time capacity expansion without public hearing, which inter-alia stipulated an upper limit of 5 MTPA.
- c. Further, accorded amendment in the EC vide letter No. J-11015/85/2010-IA.II (M) dated 6th February, 2015 for incremental difference in the production capacity from 40 MTPA to 41 MTPA in accordance to OM J-11015/30/2004.IA.II (M) dated 2.9.2014.
- d. Meanwhile, MoEF & CC issued OM no. J-11015/224/2015-IA.II (M) dated 15.09.2107 for environmental clearance for expansion of coal mining projects upto 40% with exemption of public hearing.
- e. On the basic of OM no. J-11015/224/2015-IA.II (M) dated 15.09.2107; a fresh application was submitted by PP for expansion of Gevra Opencast coalmine project from 41 MTPA to 49 MTPA without public hearing in mining lease area of 4184.486ha vide his letter no. SECL/BSP/Envt/Gevra OC_49/17/6772 dated 20.10.2017.The project was accorded EC for production capacity from 41 MTPA to 45 MTPA in an area of 4184.486 ha vide File no. J-11015/85/2010-IA.II (M)pt Dated: 21.02.2018 with validity upto 31.03.2019.
- f. Accordingly, EC for continuance of 45 MTPA was issued by the MoEF&CC vide No: J-11015/85/2010-IA.II (M) on 04.06.2020 with following observations at Para No. 4 of EC letter that “The decision on further expansion up to 49 MTPA may be taken later based on the final outcome of the proposed studies and the other compliance etc.”

Now project proponent has submitted observations of EAC has been complied and action has been already taken based on the recommendation.

- Carrying capacity of Eco- System by IIT BHU, Varanasi
- Catchment area treatment plan by Chhattisgarh Council of Science & Technology (CCOST), Govt. of CG, Raipur.
- Action taken report on additional conditions stipulated in EC dated 04.06.2020, submitted to RO, MoEFCC on 30.06.2020.
- RO, MoEFCC Nagpur inspected mine on 24.08.2020 for issuance of Certified Compliance Report & submitted his Certified Compliance report to MoEF&CC, New Delhi vide letter no.F.No.3-28/2014 (ENV)/7115 Dtd:4th September 2020.

Mining plan for 49 MTPA was approved by SECL Board in its 262nd meeting held on 10th/11th October 2017. Mine closure plan is an integral part of mining plan.

2.11.2 The EAC, after deliberations noted the proposal is for expansion of production capacity so ideally project proponent should have applied in expansion category instead in amendment category. Further PP has submitted action plan based recommendation of above mentioned study. However, action plan is still not promising and needs to be submitted with stringent timelines. Further all the recommendation of both the study and action on observation of Ministry's RO, Nagpur shall be commensurate with actionable points within certain timeframe. EAC desired that one-month baseline data shall be collected and progressive reclamation plan of OB as well as progressive mine close plan shall also be presented.

Finally, EAC recommended to apply the afresh application for seeking EC as per OM no. J-11015/224/2015-IA.II (M) dated 15.09.2017 under expansion category.

In view of above, proposal was **returned** for compliance of EAC observations

Agenda No. 2.12

Nandira Underground Coal Mining Project of 0.33 MTPA in ML area 474 ha of M/s Mahanadi Coalfield Limited located in villages Jambubahali, Danara, Badajorada and Natedi, Tehsil Thalcher, District Angul (Odisha) - Revalidation of Environmental Clearance (as per Ministry's Notification dated 6th April, 2018) - reg.

[IA/OR/CMIN/19782/1900; F.No. J-11015/866/2007-IA.II(M)]

2.12.1 The proposal is for Re-validation of Environment Clearance granted on 18.06.2007 vide MoEF&CC's letter no. J-11015/866/2007-IA. II(M) for Nandira underground coal mine Project of 0.33 MTPA capacity in mine lease area of 370.0 Ha by M/s. Mahanadi Coalfields Limited located in village Danara, Jambubahali, Badajorada etc. Tehsil Talcher, District: Angul, (Odisha) as mandated under the Ministry's Notification dated 6th April, 2018.

Earlier, the proposal was considered by EAC in its 45th meeting held on 27th May, 2019. The Committee, desired for inputs/details in respect of the following table. Project proponent has now submitted the following responses.

Sr. No.	Observation of EAC meeting held on 27th May, 2019	Submission of project proponent
1	Public notice shall be issued through concerned SPCB for information of the stakeholders about the present coal mining operations inviting comments and their redressal,	The SPCB had published public notice on dated 25 12 2019 and report of the same submitted vide Letter No 4927 /IND-NOC-II-Misc 289 Date 04 06 2020 * No comments received from any stakeholders
2	Mining Plan and Progressive Mine Closure Plan duly approved by the competent authority	Mining plan (capacity of 0 33 MTY) has been approved by MoC on dtd 31 st May, 2011 Progressive Mine Closure Plan has been approved

		during 136 th meeting of Board of Directors of MCL held on dt 09 01 2012
3	Compliance status of the conditions stipulated in the environmental clearance from the concerned Regional Office of the Ministry	<p>The project was inspected by Scientist, MoEF&CC Eastern Region office Bhubaneswar on dt 28th August, 2019</p> <p>Certified Monitoring report has been submitted by MoEF&CC RO, BBSR vide Letter No 101- 218 / 1786, datd 3rd October, 2019</p> <p>Action Taken Report against the observations made by RO, BBSR MoEF&CC has been submitted by MCL on dated 8th November, 2019. Further a letter received from MoEF&CC Bhubaneswar region vide File No 101-442 / 08 Dtd 31st December, 2019 stating some issues to be complied and instructed PP to submit the report</p> <p>In reply, MCL has submitted action taken report vide letter no PO(N&N)/ENVT/ EC/ 2020/31 Dtd 21st February, 2020</p>
4	Valid Consent to operate from the State Pollution Control Board for the present mining operations	Consent to Operate (for the coal production quantity of 0.33 MTPA obtained on dtd 8 th February, 2017 validity upto 31 st March, 2022
5	Redressal of issues raised during the public hearing conducted by the SPCB	<p>Public Hearing was conducted on dt:16.08.2006 at Jagannath Kala Kendra, MCL, in District Angul , Orissa</p> <p>Redressal of issues/demand raised during the Public Hearing has been given in subsequent</p>
6	Coal production realized from the mine from 1993-94 vis-à-vis capacity stipulated in the environment clearance	Coal production realized from the mine since inception vis à vis capacity stipulated in the environmental clearance has been provided
7	Need assessment survey for the activities proposed under the CSR and the comprehensive plan to be prepared accordingly for implementation by the project proponent. Also, impact of the CSR activities undertaken at an interval of 5 years to be evaluated and a report to be submitted	<p>CSR activities are undertaken based on the CSR Policy of the Company</p> <p>Different CSR activities are identified based on he different proposals received from various Villages, State Administration, RPDAC (Rehabilitation Peripheral Development Advisory Committee), Areas of MCL and other Organizations</p> <p>As per the CSR Policy Keeping in view the DPEs</p>

		<p>guideline baseline survey is not insisted upon in every case and flexibility would be granted to opt other method including use of in house expertise and recourses for need assessment studies</p> <ul style="list-style-type: none"> • The CSR activities for high value project (more than Rupees one crore base line survey may be carried out and cost benefit analysis has to be ascertained through the above survey The base line survey may be carried out by an External Agency having proper credential in the field of social activities, as deemed fit by the CSR Committee • The CSR activities for providing infrastructural facilities like medical college, institution, where social benefit is involved, baseline survey is not required The cost benefit and justification for any project has to be ascertained • Meticulous documentation relating to CSR approaches policies, programmes, expenditures, procurement etc should be prepared and put in the Public Domain, (particularly through the internet) and made available to the National CSR Hub <p>Audit of CSR activities of MCL for the period 01-04-2010 to 31-03-2015 was done NRSM associates, Cuttack</p> <p>Impact Assessment Study of CSR activities of MCL for the period 2010-11 to 2014-15 was done through School of Management, NIT, Rourkela</p> <p>Impact Assessment Study of CSR activities of MCL for the period 2015-16 to 2019-20 is being done by Indian Institute of Corporate Affairs</p> <p>The CSR activities undertaken in the recent years (under the head of Nandira Colliery) is given</p>
8	Forest clearance for diversion of forest land as required under the Forest (Conservation) Act, 1980, as	325.38 Ha of forest land has been reported to be involved in the project. Approval (Stage-II) under the Forest (Conservation) Act, 1980 for diversion

	the case may be. Forest land involved in the project is 398 ha but FC clearance is for only 325 ha	of 325.38 Ha of forest land for non-forestry purposes has been obtained vide MoEF&CC letter No. F.No-8-74/2004-FC, Dated: 16.06.2009
9	Details of court cases and the compliance of the orders, if any	Nil

Application for obtaining the approval of the Central Ground Water Authority for Nandira UG mine has been submitted vide application no. 21-4/2049/ OR/MIN/2018, dated: 07.08.2018 and subsequently reply to query/ clarification also submitted on Dt: 25.09.2018. NoC is yet to be granted

It is also noted that PP has exceeded production capacity in the year 2002-2003 (only once) above base year of 1993-94 prior to grant of Environment Clearance. Life of mine is 30 years as per EC dated 18th June, 2007 and hence the balance life of mine is 17 years (as on date)

2.12.2 *The EAC, after detailed deliberations on the proposal and taking note of compliance of its earlier observations (table above), **recommends** for revalidation of the environmental clearance dated 18th June, 2007 to the Nandira Underground Coal Mining Project of 0.33 MTPA in ML area 474 ha by M/s Mahanadi Coalfield Limited located in villages Jambubahali, Danara, Badajorada and Natedi, Tehsil Thalcher, District Angul (Odisha), for life of the mine or 30 years, whichever is earlier as per EIA Notification, 2006, as mandated under the Ministry's Notification dated 6th April, 2018, subject to terms and conditions stipulated therein remaining the same and with additional conditions mentioned below:-*

- i. *Construction of Sewage Treatment Plant (latest technology SBR/MBBR/MBR) should be completed by July 2021 and treated water shall be reused for plantation. As documentary proof, STP photograph after its commission to be submitted to RO, MoEF&CC with copies of its CTE and CTO.*
- ii. *SPCB shall ensure no CTO shall be granted to project on fulfillment of condition no.1.*
- iii. *No untreated wastewater or treated water shall be discharged to any water bodies including river. All efforts to be made to reuse the water.*
- iv. *PP shall obtain No Objection Certificate from Central Ground Water Authority within six months and submit it Ministry's Regional Office.*
- v. *PP shall complete the work of blacktopping of existing WBM road (for a length of 460m) used for coal transportation by May 2021.*
- vi. *As proposed additional fixed type water sprinklers all around the coal stockyard/at the extension portion of firefighting system should be completed by March 2021 as the work of extension of pipeline for firefighting is in progress.*
- vii. *Green belt shall be enhanced up to 33% beyond the proposal plan of five years submitted by PP vide its letter dated 2nd October, 2020.*
- viii. *Compliance report of above EC conditions shall be submitted to RO, MoEF&CC under intimation to MoEF&CC, Delhi.*

Agenda No. 2.13

Pachwara South Coal Mine Project of 9 MTPA/13.50 MTPA (Normative/Peak) in an area of 715 ha. By M/s Neyveli Uttar Pradesh Power Limited located at Rajmahal Coalfield, Dumka District (Jharkhand)- Term of Reference – reg.

[IA/JH/CMIN/168045/2020; File No J-11015/18/2020-IA. II(M)]

2.13.1 The proposal is for Terms of Reference (ToR) for Pachwara South Coal Mine Project of 9 MTPA/13.50 MTPA (Normative/Peak) in an area of 715 ha. M/s Neyveli Uttar Pradesh Power Limited located at Rajmahal Coalfield, Dumka District, (Jharkhand).

213.2 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) Latitude and Longitude of the project: Latitude: 24° 29' 57.404" N-24° 31' 46.956" N (WGS84 45 R 2709584.08 N - 2712965.123 N). Longitude:87° 27' 22.010" E-87° 29' 56.150" E (WGS84 45 R 546208.62 E - 550540.973 E).
- (ii) If a Joint venture, the names & addresses of the JV partners including their share: Pachwara South Coal Block was allotted to Neyveli Uttar Pradesh Power Ltd. (NUPPL)- a joint venture of NLC India Limited and Uttar Pradesh Rajya Vidyut Utpadan Nigam Limited vide, allotment order no 13016/26/2004-CA-I/CA-III(Pt) (Vol.II), Dated 03.10.2016 by MoC, GOI. Share holding pattern of NLCIL & UPRVUNL 51:49. (iii) Joint venture cartel has been formed on 09.11.2012
- (iii) Coal from this project is linked to Ghatampur Thermal Power Plant with a capacity of 1980 MW (3 X 660 MW) at Ghatampur Tehsil in Kanpur Nagar District, Uttar Pradesh.
- (iv) Whether the project is in the Critically Polluted Area (CPA): No
- (v) Cost of the project: Rs. 1795.01 crores
- (vi) Employment generation: Direct-1288 and indirect employment generation shall be more than 3000.
- (vii) Benefits of the project: The project is reported to be beneficial in terms of employment to local people directly and indirectly. Indirect employment will be in the form of service providers, shopkeepers, mechanic, drivers, transporters etc. The lessee will be responsible for providing better social infrastructure benefits such as drinking water, healthcare measures, educational facilities, promotion of culture and religious activities in surroundings as part of their CER activities. The proposed mine will bring economic benefits to the state by the way of Royalty. The linked power plant of 1980 MW will produce of 14743.08 MU of power which will help the Uttar Pradesh state to meet out the shortfall in power requirements.
- (viii) The project area as specified in the Mining Plan including Mine Closure Plan of Pachwara South Coal Mine is 715 ha. The Mining Plan including Mine Closure Plan has been submitted at MoC, Govt. of India for approval.
- (ix) Type of Mine: (Open cast/Underground/mixed): Open Cast; Capacity of the mine applied for: 9.00 MTPA (Normative); 13.50 MTPA (Peak Rated); ML Area: As per block allotment: 715 Ha.; As per approved mine plan: 715 Ha. (Mining plan is submitted at MoC, Govt. of India for necessary approval.) Date of Board's approval: NUPPL Board

accorded approval for the Mining Plan and Mine Closure Plan in its 49th meeting held on 10th June 2020.

- (x) Any river/Nallah flowing near or adjacent to the proposed mine. If yes, please give details: No perennial river is passing through the block. However, Bansloi river is flowing parallel to the northern boundary of the block. Hence, a proposal has been made in Mining plan as well as in Pre-feasibility report for construction of an embankment parallel to the Bansloi river.
- (xi) Total estimated water requirement: 1660 KLD
- (xii) Geological Reserve: 415.02 Million Tonne (Gross Geological Reserve)
- (xiii) Technical Details
 - Total geological reserve: 373.52 Million Tonne (Net Geological Reserve); Mineable reserve: 269.58 Million Tonne; Extractable reserve: 262.84 Million Tonne; Per cent (%) of extraction: 70.37%
 - Range of ground water level: The proposed depth of Mining suggests intersection of ground water; hence a detail hydrogeological study will be carried out to investigate the range of ground water table level.
- (xiv) Details of Seams: No of seams: As per the Geological Report, there are nine Major Coal Seams – Seam-I to Seam-IX occurring in this block. However, including Splits and Local Coal Seams, total number of coal seams are 31 (Reserve estimation done). Seam L2 is not considered for mining for its limited intersection (3 no. of intersection) throughout the block; Thickness of seams to be worked on: 0.50 m.; Grade of coal: Avg. grade G10 (GCV 4300 to 4600); Stripping ratio: 3.25; Category of gaseousness: Not applicable (Not analyzed due to the open cast property.); Average gradient: 1 in 19 (4 to 6 degrees); Maximum thickness of seams: 19.43 m in Seam II; Method of mining: Mining will be carried out by opencast mechanized mining method.
- (xv) Life of mine: 38 years.
- (xvi) 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: Location for ambient air quality monitoring are identified within 10 km radius of Pachwara South Coal mine project. Monitoring will be carried out in post monsoon.
- (xvii) Details of O.B: External OB dumps: Yes; No of OB dumps: One; Area: 197.79 Ha; Height: 60 m from the surface.; Quantity (in MCum): 80.63 Mcum.; Year of back filling: Concurrent backfilling will commence from the 7th year from production commencement. Re-handling of the surface dump of the eastern part will commence from 7th year of the production commencement and proposed to be completed by 19th year from commencement of production.
- (xviii) Details of Internal Dumps: Number of internal dumps: One; Area: 523.62 Ha; Height: 360m from quarry floor and 60m from surface; Quantity: 853.27 Mcum.
- (xix) Details of final Mine Voids: Area: 120.14 Ha.; Depth: 320m
- (xx) Details of Quarry: Total quarry area: 643.76 Ha.; Backfilled quarry area will be of 523.62ha at the end of mine life; A void of 120.14 ha at a depth of 320m which is proposed to be converted into a waterbody.
- (xxi) Details of Land usage

Landuse Details (Pre-mining)

S.N.	LANDUSE	Within ML Area (ha)	Outside ML Area (ha)	TOTAL
1.	Agricultural land	136.40	-	136.40
2.	Forest land	397.39	-	397.39
3.	Wasteland		-	
4.	Grazing land	12.20	-	12.20
5.	Surface water bodies	10.32	-	10.32
6.	Settlements	139.13	-	139.13
7.	Others (road etc)	19.56	-	19.56
	TOTAL	715.00	-	715.00

Landuse Details (Post- Mining)

Sr. No.	TYPE	PROPOSED LAND USE	LAND USE (END OF MINE LIFE)
1	Excavation Area	643.76	
2	Backfilled Area		523.62
3	Excavated Void		120.14
4	Top Soil Dump	6.53	6.53
5	External Dump /surface Dump		
6	Safety Zone	10.84	10.84
7	Haul road between quarries	17.13	17.13
8	Road Diversion	3.31	3.31
9	Diversion/ Below River/Nala/ Canal		
10	Settling Pond	0.04	0.04
11	Road & Infrastructure	18.47	18.47
12	Rationalisation Area		
13	Garland Drain	4.89	4.89
14	Embankment	3.56	3.56
15	Greenbelt	3.06	3.06
16	Undisturbed/Mining Rights for UG	3.41	3.41
	Total	715	715

(xxii) Details of Forest issues

- Total forest area involved (in ha) for mining: 397.39 Ha.
- Status of Forest Clearance: Application will be submitted for seeking prior approval of Central Government under section 2 of the Forest (Conservation) Act,1980 for Diversion of fresh forest area.
- Is there any National Park, eco-sensitive Zones, within 10 km radius? If so, give the details. No.

- If the project is within 10 KM of radius of the wildlife sanctuary, whether the Wild Life Management Plan has been prepared and approved. If so, pl give the status, date of approval with the budgetary provision. Not applicable.
 - Extent of forest land in the project (including safety zone and all types of forest land) (in ha): Reserve Forest: 98.63 Ha.; CBBJ:298.76 Ha; Total: 397.39 Ha.
 - Details of wildlife issues involved, if any. If so, whether WL management plan has been prepared and pl. indicate the status. Not applicable
- (xxiii) Cost of the project: Total capital Cost: Rs.1795.01 Crore; Cost of Production: Rs.1071/tonne ; Sale Price: Captive use; CSR cost: As per F.No-22-65/2017-IA.III dated 1st May,2018, Govt. of India, MoEF & CC, Impact Assessment Division, Corporate Environment Responsibility (CER) cost for the Green field project from Rs.1000 cores to Rs.10000 cores is 0.5% of Capital Investment. Hence, estimated CER cost for Pachwara South Coal block is coming around Rs.8.97 cores.
- (xxiv) R&R Cost: At present, detailed SIA study is going on under the guidance of District Administration. More precise numbers of PAF's and PAP's along with estimated R&R cost will be informed after completion of the SIA study. ; No of PAFs:314
- (xxv) Environmental Management cost: Capital Investment- Rs 185 lakh, Recurring Cost- Rs 118 lakh.
- (xxvi) Details of transportation of coal:
- In pit: As proposed, Front end loader-dumper combination shall be deployed for Coal transportation from coal face to temporary coal stock yard. As the mine goes to depth, a steep angle conveyor system will be installed from mine face to temporary coal stock yard at later stage.
 - Surface to siding: As proposed, Coal transportation from mine site to Pachwara Railway Siding will be done through conveyor system. However, in the initial few years, till the conveyor laying is completed, coal will be transported through road.
 - Loading at Siding: As proposed, RLS and Bunkers will be installed for coal loading onto wagons.
- (xxvii) Details of reclamation: Total Afforestation plan shall be implemented covering of mining. This will include:
- Reclaimed external OB dump (in ha): Concurrent backfilling will commence from the 7th year from production commencement. Re-handling of the surface dump of the eastern part will commence from 7th year of the production commencement and proposed to be completed by 19th year from commencement of production.
 - Internal dump (in ha): Proposed back filled area will be 523.62 ha., out of which 122.29 ha shall be reclaimed with plantation.
 - Green belt (in ha): Green belt development shall be carried out at 10.84 ha in safety zone and 17.13 ha along the haul road. (up to mine closure)
 - Density of tree plantation (in no of plants): 1600 saplings/ Ha.
 - Void (in ha) at a depth of (in m) which is proposed to be converted into water body:
 - A void of 120.14 ha at a depth of 320m which is proposed to be converted into a waterbody.

- Others in ha (such as excavation area along ML boundary, along roads and infrastructure, embankment area and in township located outside the lease etc).
- (xxviii) Consultant: Name of the consultant who prepared the EIA/EMP report: Pre- Feasibility Report is prepared by Centre for Envotech and Management Consultancy Pvt. Ltd.
- (xxix) Whether the consultant has been accredited by the QCI and NABL and whether it is accredited with Quality Council of India (QCI) /National Accreditation Board of Education and Training (NABET) as per the MoEF OM dated 2nd December 2009: Yes, QCI Accreditation Sl. No-26.

2.13.3 The EAC during deliberations noted the following:-

The proposal is applied for expansion seeking Terms of Reference (ToR) for Pachwara South Coal Mine Project of 9 MTPA/13.50 MTPA (Normative/Peak) in an area of 715 ha. By M/s Neyveli Uttar Pradesh Power Limited located at Rajmahal Coalfield, Dumka District, (Jharkhand).

Pachwara South Coal Block was allotted to Neyveli Uttar Pradesh Power Ltd. (NUPPL)- a joint venture of NLC India Limited and Uttar Pradesh Rajya Vidyut Utpadan Nigam Limited vide, allotment order no 13016/26/2004-CA-I/CA-III(Pt) (Vol.II), Dated 03.10.2016.

Project involves 397.39 ha of forest land for non-forestry activity. PP has not applied yet for Stage-1 FC under Forest (Conservation) Act, 1980.

Three villages namely – Chirudih, Kundapahari and Mahuldabar will be affected within the block and around 314 family's needs Rehabilitation and Resettlement. Total number of PAP's assessed is about 1806

Bansloi river is flowing parallel to the northern boundary of the block. Hence, a proposal has been made in Mining plan as well as in Pre-feasibility report for construction of an embankment parallel to the Bansloi river.

*2.13.4 The EAC after deliberation **recommends** the proposal for grant of Terms of Reference to Pachwara South Coal Mine Project of 9 MTPA/13.50 MTPA (Normative/Peak) in an area of 715 ha. M/s Neyveli Uttar Pradesh Power Limited located at Rajmahal Coalfield, Dumka District, (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. *Stage-I clearance for the entire forestland involved the project shall be obtained.*
- iv. *Clarification from District Forest Officer that mine does not fall under corridors of any National Park and Wildlife Sanctuary.*

- v. *PP shall prepare Mine Plan including Mine Closure Plan for Peak production capacity as per latest guidelines of Ministry of Coal.*
- vi. *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.*
- vii. *Proper drainage system shall be prepared to avoid seepage of mining water to water bodies and seepage to ground water.*
- viii. *No OB dumping shall be undertaken in the forest land, near the river and villages.*
- ix. *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*
- x. *Inpit conveyor belt with silo loading should be proposed and installed for transportation of coal till railway siding.*
- xi. *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*
- xii. *Project proponent to prepare Environmental Cost Benefit Analysis for the project in EIA/EMP Report.*
- xiii. *Permission for ground water withdrawal shall be obtained from Central Ground Water Authority (CGWA), if applicable.*
- xiv. *Fund allocation for Corporate Environment Responsibility (CER) shall be made as per Ministry's O.M. No. 22-65/2017-IA.III dated 30th September 2020 and based on commitment made during public consultation process for incorporating in EIA-EMP for deliberation of EAC.*
- xv. *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*
- xvi. *Heavy metals including other parameters in surface water quality (also of Ghagri river) shall be analyzed and provided in EIA Report.*
- xvii. *The parameters Arsenic, Lead and Silica shall also be analyzed in ambient air quality*
- xviii. *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.*
- xix. *PP shall propose progressive greenbelt yearwise and fund allotted for the same.*

Additional Items with the approval of Chairman

2.14 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

2.14.1 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 is proposed for discussion for EAC.

2.14.2 EAC noted the following details:

The EC for the project was granted by this Ministry on 27th March, 2008 in favour of M/s MPSMDC Ltd in terms of EIA Notification, 2006 for total mine lease area of 1619 ha. This area involved 1182.21 ha of forest land.

Subsequent to cancellation of coal blocks by Hon'ble Supreme Court, this coal mine has been allocated to M/s THDC Ltd vide Allotment order vide vesting order F.No. 103/11/2016-NA dated 17th January, 2017 by Nominated Authority, Ministry of Coal. The EC was not transferred to new allottee as there was no forest clearance for the forest land involved under the project.

Now project proponent has submitted the revised Mining Plan (Including Mine Closure Plan) approved by Ministry of Coal vide its letter No. 34011/31/2019-CPAM dated 13th March, 2020 for the reduced capacity of 5.6 MTPA with the total area of 1180.2 ha. This area has 797.29 ha of forest land.

Since there was change in Mine Plan and Mining methodology, Ministry decided to seek the opinion of EAC (Coal Sector) on following points;

- (i) Environmental implications due to reduction/modification in the area due to revised Mine Plan and Mining methodology
- (ii) Earlier the project was considered for Opencast and underground mining both but now only opencast mining is proposed to be conducted which may increase the pollutants in the ambient air.
- (iii) 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.
- (iv) Water Demand and year of intersection of water table will change the overall ground water availability in nearby areas and hydrogeology of the area
- (v) 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.
- (vi) 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 near future then there must be impact due to this.
- (vii) Area of plantation as proposed earlier and current proposal due to change in area.
- (viii) 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.

- (ix) 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.
- (x) Environmental impact calculated with respect to Air, Water, Solid Waste for opencast cum underground viz-a-viz mining only through Opencast.

2.14.3 EAC noted that configuration of project on which EC was granted, has been changed with time (as EC was granted in 2008) due to modification in area of project, production capacity and mining methodology.

The EAC, after deliberations observed that project proponent should submit the proper reply on the above mentioned points then only EAC could able to give opinion on the proposal.

2.15 Coal Beneficiation Plant of 1 MTPA in an area of 3.5 ha of M/s Shree Nakoda Ispat Limited, located in Plot No. 109 and 75 in Siltara Industrial Growth Center, District Raipur (Chhattisgarh) – Amendment in Environment Clearance – reg.

2.15.1 The proposal is for amendment in Environment Clearance dated 10th February, 2010 granted by the Ministry in favour of M/s Shree Nakoda Ispat Ltd for their Coal Beneficiation plan of capacity 1 MTPA in an area of 3.5 ha at Plot No. 109& 75 in Siltara Industrial Growth Centre, District Raipur (Chhattisgarh).

2.15.2 The amendment has been sought to modify the specific conditions 2A(ii) & (x) of the said EC regarding utilization of coal washery rejects.

The proposal was considered sectoral EAC in its meeting held on 28th June, 2018, wherein the committee recommended for replacing the specific conditions.

Ministry vide letter dated 9th January, 2019 and reminder on 22nd May, 2019, has asked for clarification from Central Pollution Control Board (CPCB) regarding disposal and utilization of rejects from washery (i.e. OM dated 9th August, 2018 of standardized conditions) as mentioned below and to provide complete perspective for some control/regulation on use of washery rejects.

‘The rejects should be preferably be utilized in FBC Power Plants or disposed off through sale for its gainful utilization. If the coal washeries rejects are to be disposed off, it should be done in a safe and sustainable manner with adequate compaction and post closure arrangement to avoid water pollution due to leachate from rejects and surface run off from rejects dumping sites.’

It is submitted that the matter of finalization of guidelines of washery rejects is pending at Ministry of Coal and response from CPCB is still awaited

Since the matter was pending for finalisation and Ministry didn't receive any comments. After reminder of project proponent, file was again resubmitted for deliberation in the Ministry. During deliberation, it was found that PP has obtained Environment Clearance for the said project on 10th February, 2010 i.e. validity of EC was upto 10th February, 2017 (in case of non-operational plant

and no valid CTO). PP should have obtained extension in EC if the plant is not operational and did not have valid CTO. A para regarding validity of EC is reproduced below:-

*The "Validity of Environmental Clearance" is meant the period from which a prior environmental clearance is granted by the regulatory authority, or may be presumed by the applicant to have been granted under sub paragraph (iv) of paragraph 7 above, to the start of production operations by the project or activity, or completion of all construction operations in case of construction projects (item 8 of the schedule), to which the application for prior environmental clearance refers. The prior environmental clearance granted for a project or activity shall be valid for a period of ten years in the case of River Valley projects (item 1(c) of the schedule), project life as estimated by Expert Appraisal Committee or State Level Expert Appraisal Committee or District Level Expert Appraisal Committee subject to a maximum of thirty years for mining operations mining projects **and seven years in the case of all other projects and activities.***

The maximum extendable period is 3 years, if project proponent applied within the validity period or as per within 90 days subject to recommendation of EAC for condonation of delay to Hon'ble Minister.

However, the proposal for extension of validity of environmental clearance has not been submitted by project proponent yet and time for application is already completed as PP should have applied within the validity period of EC. Further, Factual status sought from PP about status of operation of washery and validity of Consent to Operate (CTO), its renewal (if any).

If the washery is not operational as stated above by PP and if there is no valid CTO then considering the validity of EC as 7 years then EC dated 10th February, 2010 is already expired and PP has to submit fresh proposal for ToR/EC.

PP had obtained "Consent to Operate Permission" U/s 25-26 of Water (Prevention and control of Pollution) Act 1974 and U/s 21 of Air (Prevention and Control of Pollution) Act 1981 from Chhattisgarh Environment Conservation Board, Raipur, Chhattisgarh on 03rd June 2013 for validity of one year and no further renewal CTO is present with project proponent.

Ministry even sought the date of commissioning (CoD) but PP has not submitted the details about CoD.

2.15.3 In view of above facts, EAC after deliberations observed as the plant has already been constructed based on earlier EC and also CTO was granted by SPCB subject to certain term & condition. However, PP did not apply for renewal of CTO as well as extension of EC within in validity period. The matter of validity of EC and no availability of CTO is a policy issue, therefore Ministry may take certain policy decision.

2.16 Pakri-Barwadih Coal Mine Project of 15 MTPA in an area of 3319.42 ha of M/s National Thermal Power Corporation Ltd located in Tehsil Barkagaon District Hazaribagh (Jharkhand)- amendment in Environment Clearance(EC) - reg

2.16.1 The proposal is for extension in amendment of environment clearance to Pakri Barwadih Coal Mine Project of 15 MTPA in an area of 3319.42 ha of M/s National Thermal Power Corporation Ltd located in Tehsil Barkagaon District Hazaribagh (Jharkhand).

Proposal was earlier considered by EAC in its 56th EAC Minutes of the meeting held on 30th June, 2020 and wherein it was recommended for extension of Environment Clearance amendment, further for a period of six months to transport the coal on proposed route again as an interim arrangement and further insisted on early erection of conveyor corridor system within certain time frame.

However, during in MoEF&CC, it was desired that EAC may reconsider the proposal again in view of 21st May, 2020 wherein implementation of condition by coal mine till delivery point as per agreement between coal miner and thermal points should be followed by coal miners

2.16.2 *Based on earlier submission of project proponent, EAC recommends the proposal for extension of EC for further period of period of two years (i.e. up to 28.06.2022) due to delay in construction of dedicated conveyor system to the railway siding and production from mine is in full swing for transportation of coal by road from Crusher Point at mine end to Banadag Railway Siding for a further subject to following conditions:*

- *PP shall submit legal undertaking that implementation of the conveyor system will be completed and made operational within these two years and failing which action will be taken as per extant norms.*
- *Width of the road shall be atleast 7 mts before the start of the transportation and necessary permission shall be taken from Stage PWD.*
- *The State Pollution Control Board, while considering consent to operate for the project, shall ensure that with the proposed coal transportation by road, air quality would remain within the national ambient air quality standards*

2.17 Expansion of Tapin South Open Cast Coal Mine Project from 0.6 MTPA to 2.00 MTPA Normative/2.50 MTPA Peak with an increase in ML area from 54.10 ha to 178.06 ha of M/s Central Coalfields Limited, located in Tehsil Churchu, District Hazaribagh (Jharkhand) – Environmental Clearance – reg

2.17.1 The proposal is for grant of Environmental Clearance to expansion of Tapin South Open Cast Coal Mine project from 0.6 MTPA to 2.00 MTPA Normative/2.50 MTPA Peak with an increase in ML area from 54.10 ha to 178.06 ha of M/s Central Coalfields Limited, located in Tehsil Churchu, District Hazaribagh (Jharkhand)

2.17.2 The proposal was recommended by the sectoral Expert Appraisal Committee (EAC) in the Ministry for Thermal & Coal Mining Sector in its meeting held during 28th June 2018 subject to necessary clarification regarding diversion/regularization of the forest land of 24.71 ha and compliance of terms and conditions as applicable, and the additional conditions thereto

2.17.3 PP has submitted the revised Mine Plan and Mine Closure Plan approved by M/s Central Coalfields Limited Board vide its letter dated 29th November, 2019 based on meeting held on 4th November, 2019. PP vide its letter dated 16th January, 2020 requested for grant of environmental

clearance by revising/reducing the land area from 178.06 ha to 151.93 ha i.e excluding the area of 24.71 ha forest land.

2.17.4 After the approval on file for taking the proposal in EAC again since PP proposed to change the area of the project.

2.17.5 The EAC in its 55th EAC Minutes held on 29th May, 2020, after deliberation on the submission of project proponent observed that forest land of 24.71 ha of which Stage-I FC has not been obtained and is excluded from project area and accordingly Mine Plan has been revised by project proponent. However, as submitted by PP, proponent was carrying out mining activity without any consent from State Pollution Control Board considering as deemed approved is not acceptable. Also, mine is operational since 1972 as mentioned in one of the points in Public Hearing and since PP is unable to provide Consent Order during the period of mining, this shall be considered as violation of EIA Notification. Further, as the project has been recommended by Expert Appraisal Committee (EAC) in its meeting held during 28th June 2018 itself, committee desired that project may be sent to EAC Violation as lateral entry to assess the environment damages and recovery as per the Ministry's guidelines.

EAC recommends for processing of this case by MoEF&CC as per its violation procedures expeditiously.

However, during deliberations on file in the Ministry for taking the proposal as Violation, it has been deliberated that Non-obtaining CTO is a violation of The Air (Prevention and Control of Pollution) Act, 1981 and The Water (Prevention and Control of Pollution) Act, 1974 and comes under the ambit of State Government

As per EIA submitted by project proponent during its 1st appraisal in EAC at Page Number – 4, it is already been stated that:

Prior to 1993-94, Tapin South OCP's maximum achieved coal production was 0.32 MT in the year 1983-84. Mining activity was abandoned after 2002-03 but resumed in the year 2011-12 having produced 0.20 MT, in 2012-13 it was 0.20 MT, in 2013-14 it was 0.319 MT, in 2015-16 it was 0.059 MT & there was no coal production in 2016-17. The mine is presently closed

Further, as per EIA submitted by project proponent at Page Number – 12, it is stated that

Tapin South OCP is a taken over mine. At the time of nationalization, it was producing about 0.20 MTY of coal from a number of small quarries. An Interim Feasibility Report was prepared for Tapin Opencast Project in September, 1975 and approved by the Board of Directors of CIL on 31st March 1976 at a capital investment of Rs 4.99 Crs. The rated capacity of the mine was 0.60 MTY. Earlier two opencast and one UG mines were worked in this block. One quarry known as Quarry No-45 has been worked in the west of Jharna Nala. This Quarry has been worked upto Seam IV/V combined leaving Seam II at the bottom. It has been worked from the in crop of IV/V seam and reached upto Jharna nala. Jharna nala has to be diverted to advance this mine. This Quarry No-45 is totally water filled. Tapin South has achieved a production of 0.319, 0.267 and 0.059 MT in the years 2013-14, 2014-15 and 2015-16 respectively. The project has stopped its production from 2016-17 to till date.

Also, prior production details since inception of the mine were submitted by proponent through email as below:

SN	Year	Coal Production (in TPA)	SN	Year	Coal Production (in TPA)
1	1975-76	1,48,152	24	1998-99	3,15,550
2	1976-77	1,83,253	25	1999-2000	2,48,320
3	1977-78	2,00,290	26	2000-01	95,410
4	1978-79	2,52,979	27	2001-02	78,540
5	1979-80	2,50,364	28	2002-03	0
6	1980-81	2,82,146	29	2003-04	0
7	1981-82	2,95,000	30	2004-05	0
8	1982-83	2,98,795	31	2005-06	0
9	1983-84	3,19,032	32	2006-07	0
10	1984-85	3,10,941	33	2007-08	0
11	1985-86	2,78,347	34	2008-09	0
12	1986-87	2,47,983	35	2009-10	0
13	1987-88	2,71,888	36	2010-11	0
14	1988-89	2,73,873	37	2011-12	1,09,063
15	1989-90	2,80,408	38	2012-13	1,98,356
16	1990-91	2,95,584	39	2013-14	3,19,031
17	1991-92	2,78,300	40	2014-15	2,67,074
18	1992-93	2,95,020	41	2015-16	59,116
19	1993-94	3,20,020	42	2016-17	0
20	1994-95	2,93,972	43	2017-18	0
21	1995-96	2,60,986	44	2018-19	55,590
22	1996-97	2,87,030	45	2019-20	3,16,318
23	1997-98	3,18,490			

From above, it can be seen that production did not increase above base year of 1993-94 as per Common Cause judgement of Hon'ble Supreme Court.

Based on above facts, Ministry further sought opinion of the sectoral EAC, that whether this project can be construed as violation or not. If not, then EAC may like to revise its recommendation.

In view of the above, the committee noted that followings;

- (i) *This reconsideration of proposal before EAC which was reported to be violation by recognizing that PP, since 1972 has not obtained CTO under any Environment laws i.e Water Act, 1974 and Air Act, 1982.*
- (ii) *Non obtaining CTO cannot construe as violation of EIA, Notification, 1994 & 2006 unless until there has been change in product mix or enhancement of production capacity or modernization. In this case, PP does not seem to make any change in the past.*
- (iii) *PP tends enter in the regime of EIA, Notification by taking EC, which he, in the past avoided, by taking advantage its establishment in 1972.*
- (iv) *It is also evident from the above table that annual production level has never gone beyond **base year of 1993-94**. This information is supplied by PP. it is seen that production did not increase above base year of 1993-94 as per Common Cause judgement of Hon'ble Supreme Court.*

- (v) *It also appears that earlier EAC while apprising the proposal in its meeting held on 29th May 2020 for grant EC, has focused on Consent to Operate from SPCB and treated it as violation and oversight their last proceedings.*

Project may be considered for grant of EC as matter was earlier discussed for EIA-EMP report and recommended by EAC of Coal Mining Sector in its meeting held during 28th June 2018 with specific condition therein.

The meeting ended with thanks to the Chair.

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 statute be established in the core zone as well as in the buffer zone for monitoring of pollutants, namely PM₁₀, PM_{2.5}, SO₂ and NO_x. Location of the stations shall be decided based on the meteorological data, topographical features and environmentally and ecologically sensitive targets in consultation with the State Pollution Control Board. Online ambient air quality monitoring stations may also be installed in addition to the regular monitoring stations as per the requirement and/or in consultation with the SPCB. Monitoring of heavy metals such as Hg, As, Ni, Cd, Cr, etc to be carried out at least once in six months.
- (ii) The Ambient Air Quality monitoring in the core zone shall be carried out to ensure the Coal Industry Standards notified vide GSR 742 (E) dated 25th September, 2000 and as amended from time to time by the Central Pollution Control Board. Data on ambient air quality and heavy metals such as Hg, As, Ni, Cd, Cr and other monitoring data shall be regularly reported to the Ministry/Regional Office and to the CPCB/SPCB.
- (iii) Transportation of coal, to the extent permitted by road, shall be carried out by covered trucks/conveyors. Effective control measures such as regular water/mist sprinkling/rain gun etc shall be carried out in critical areas prone to air pollution (with higher values of PM₁₀/PM_{2.5}) such as haul road, loading/unloading and transfer points. Fugitive dust emissions from all sources shall be controlled regularly. It shall be ensured that the

Ambient Air Quality parameters conform to the norms prescribed by the Central/State Pollution Control Board.

- (iv) The transportation of coal shall be carried out as per the provisions and route envisaged in the approved Mining Plan or environment monitoring plan. Transportation of the coal through the existing road passing through any village shall be avoided. In case, it is proposed to construct a 'bypass' road, it should be so constructed so that the impact of sound, dust and accidents could be appropriately mitigated.
- (v) Vehicular emissions shall be kept under control and regularly monitored. All the vehicles engaged in mining and allied activities shall operate only after obtaining 'PUC' certificate from the authorized pollution testing centres.
- (vi) Coal stock pile/crusher/feeder and breaker material transfer points shall invariably be provided with dust suppression system. Belt-conveyors shall be fully covered to avoid 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-IA.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 riverine/riparian ecosystem conservation and management plan should be prepared and implemented in consultation with the irrigation / water resource department in the state government.

(d) Noise and Vibration monitoring and prevention

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

(e) Mining Plan

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

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

(f) Land reclamation

- (i) Digital Survey of entire lease hold area/core zone using Satellite Remote Sensing survey shall be carried out at least once in three years for monitoring land use pattern and report in 1:50,000 scale or as notified by Ministry of Environment, Forest and Climate Change(MOEFCC) from time to time shall be submitted to MOEFCC/Regional Office (RO).
- (ii) The final mine void depth should preferably be as per the approved Mine Closure Plan, and in case it exceeds 40 m, adequate engineering interventions shall be provided for sustenance of aquatic life therein. The remaining area shall be backfilled and covered with thick and alive top soil. Post-mining land be rendered usable for agricultural/forestry purposes and shall be diverted. Further action will be treated as specified in the guidelines for Preparation of Mine Closure Plan issued by the Ministry of Coal dated 27th August, 2009 and subsequent amendments.
- (iii) The entire excavated area, backfilling, external OB dumping (including top soil) and afforestation plan shall be in conformity with the “during mining”/”post mining” land-use pattern, which is an integral part of the approved Mining Plan and the EIA/EMP submitted to this Ministry. Progressive compliance status vis-a-vis the post mining land use pattern shall be submitted to the MOEFCC/RO.
- (iv) Fly ash shall be used for external dump of overburden, backfilling or stowing of mine as per provisions contained in clause (i) and (ii) of subparagraph (8) of fly ash notification issued vide SO 2804 (E) dated 3rd November, 2009 as amended from time to time. Efforts shall be made to utilize gypsum generated from Flue Gas Desulfurization (FGD), if any, along with fly ash for external dump of overburden, backfilling of mines. Compliance report shall be submitted to Regional Office of MoEF&CC, CPCB and SPCB.
- (v) Further, it may be ensured that as per the time schedule specified in mine closure plan it should remain live till the point of utilization. The topsoil shall temporarily be stored at earmarked site(s) only and shall not be kept unutilized. The top soil shall be used for land reclamation and plantation purposes. Active OB dumps shall be stabilised with native grass species to prevent erosion and surface run off. The other overburden dumps shall be vegetated with native flora species. The excavated area shall be backfilled and afforested in line with the approved Mine Closure Plan. Monitoring and management of rehabilitated areas shall continue until the vegetation becomes self-sustaining. Compliance status shall be submitted to the Ministry of Environment, Forest and Climate Change/ Regional Office.
- (vi) The project proponent shall make necessary alternative arrangements, if grazing land is involved in core zone, in consultation with the State government to provide alternate areas for livestock grazing, if any. In this context, the project proponent shall implement the directions of Hon'ble Supreme Court with regard to acquiring grazing land.

(g) Green Belt

- (i) The project proponent shall take all precautionary measures during mining operation for conservation and protection of endangered/endemic flora/fauna, if any, spotted/reported in the study area. The Action plan in this regard, if any, shall be prepared and implemented in consultation with the State Forest and Wildlife Department.
- (ii) Greenbelt consisting of 3-tier plantation of width not less than 7.5 m shall be developed all along the mine lease area as soon as possible. The green belt comprising a mix of native species (endemic species should be given priority) shall be developed all along the major approach/ coal transportation roads.

(h) Public hearing and Human health issues

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

(i) Corporate Environment Responsibility

- (i) The project proponent shall comply with the provisions contained in this Ministry's OM vide F.No.22-65/2017-IA.III dated 1st May 2018, as applicable, regarding Corporate Environment Responsibility.
- (ii) The company shall have a well laid down environmental policy duly approved by the Board of Directors. The environmental policy should prescribe for standard operating procedures to have proper checks and balances and to bring into focus any infringements/deviation/violation of the environmental/forest/wildlife norms/conditions. The company shall have defined system of reporting infringements/deviation/violation of the environmental/forest/wildlife norms/conditions and/or shareholders/stake holders.
- (iii) A separate Environmental Cell both at the project and company head quarter level, with qualified personnel shall be set up under the control of senior Executive, who will directly report to the head of the organization.

- (iv) Action plan for implementing EMP and environmental conditions along with responsibility matrix of the company shall be prepared and shall be duly approved by competent authority. The year wise funds earmarked for environmental protection measures shall be kept in separate account and not to be diverted for any other purpose. Year wise progress of implementation of action plan shall be reported to the Ministry/Regional Office along with the Six Monthly Compliance Report.
- (v) Self environmental audit shall be conducted annually. Every three years third party environmental audit shall be carried out.
- (j) Miscellaneous**
- (i) The project proponent shall make public the environmental clearance granted for their project along with the environmental conditions and safeguards at their cost by prominently advertising it at least in two local newspapers of the District or State, of which one shall be in the vernacular language within seven days and in addition this shall also be displayed in the project proponent's website permanently.
- (ii) The copies of the environmental clearance shall be submitted by the project proponents to the Heads of local bodies, Panchayats and Municipal Bodies in addition to the relevant offices of the Government who in turn has to display the same for 30 days from the date of receipt.
- (iii) The project proponent shall upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and update the same on half-yearly basis.
- (iv) The project proponent shall monitor the criteria pollutants level namely; PM₁₀, SO₂, NO_x (ambient levels) or critical sectoral parameters, indicated for the projects and display the same at a convenient location for disclosure to the public and put on the website of the company.
- (v) The project proponent shall submit six-monthly reports on the status of the compliance of the stipulated environmental conditions on the website of the ministry of Environment, Forest and Climate Change at environment clearance portal.
- (vi) The project proponent shall follow the mitigation measures provided in this Ministry's OM No.Z-11013/5712014-IA.II (M) dated 29th October, 2014, titled 'Impact of mining activities on habitations-issues related to the mining projects wherein habitations and villages are the part of mine lease areas or habitations and villages are surrounded by the mine lease area'.
- (vii) The project proponent shall submit the environmental statement for each financial year in Form-V to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently and put on the website of the company.
- (viii) The project authorities shall inform to the Regional Office of the MOEFCC regarding commencement of mining operations.
- (ix) The project authorities must strictly adhere to the stipulations made by the State Pollution Control Board and the State Government.
- (x) The project proponent shall abide by all the commitments and recommendations made in the EIA/EMP report, commitment made during Public Hearing and also that during their presentation to the Expert Appraisal Committee.
- (xi) No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment, Forests and Climate Change.

- (xii) Concealing factual data or submission of false/fabricated data may result in revocation of this environmental clearance and attract action under the provisions of Environment (Protection) Act, 1986.
- (xiii) The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.
- (xiv) The Ministry reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions.
- (xv) The Regional Office of this Ministry shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the officer (s) of the Regional Office by furnishing the requisite data / information/monitoring reports.
- (xvi) The above conditions shall be enforced, inter-alia under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986, Hazardous and Other Wastes (Management and Trans-boundary Movement) Rules, 2016 and the Public Liability Insurance Act, 1991 along with their amendments and Rules and any other orders passed by the Hon'ble Supreme Court of India / High Courts and any other Court of Law relating to the subject matter.

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, SO₂ and NO_x. Location of the stations shall be decided based on the meteorological data, topographical features and environmentally and ecologically sensitive receptors in consultation with the State Pollution Control Board. Monitoring of heavy metals such as Hg, As, Ni, Cd, Cr, *etc.* to be carried out at least once in six months. Online ambient air quality monitoring station/stations may also be installed in addition to the regular air monitoring stations as per the requirement and/or in consultation with the SPCB
- ii. The Ambient Air Quality monitoring in the core zone shall be carried out to ensure the Coal Industry Standards notified vide GSR 742 (E) dated 25.9.2000 and as amended from time to time by the Central Pollution Control Board. Data on ambient air quality and heavy metals such as Hg, As, Ni, Cd, Cr and other monitoring data shall be regularly reported to the Ministry/Regional Office and to the CPCB/SPCB.
- iii. Transportation of coal, to the extent permitted by road, shall be carried out by covered trucks/conveyors. Effective control measures such as regular water sprinkling/rain gun/mist sprinkling *etc.*, shall be carried out in critical areas prone to air pollution with higher level of particulate matter all through the coal transport roads, loading/unloading and

transfer points. Fugitive dust emissions from all sources shall be controlled regularly. It shall be ensured that the ambient air quality parameters conform to the norms prescribed by the Central/State Pollution Control Board.

- iv. Major approach roads shall be black topped and properly maintained.
- v. The transportation of coal shall be carried out as per the provisions and route proposed in the approved mining plan. Transportation of the coal through the existing road passing through any village shall be avoided. In case, it is proposed to construct a 'bypass' road, it should be so constructed that the impact of sound, dust and accidents could be appropriately mitigated.
- vi. Vehicular emissions shall be kept under control and regularly monitored. All the vehicles engaged in mining and allied activities shall operate only after obtaining 'PUC' certificate from the authorized pollution testing centres.
- vii. Coal stock pile/crusher/feeder and breaker material transfer points shall invariably be provided with dust suppression system. Belt-conveyors shall be fully covered to avoid 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-IA.11 (M) dated 27.05.2009 issued by Ministry of Environment, Forest and Climate Change shall also be referred in this regard for its compliance.
- iii. Regular monitoring of ground water level and quality shall be carried out in and around the mine lease area by establishing a network of existing wells and constructing new piezometers during the mining operations. The monitoring of ground water levels shall be carried out four times a year i.e. pre-monsoon, monsoon, post-monsoon and winter. The ground water quality shall be monitored once a year, and the data thus collected shall be sent regularly to MOEFCC/RO.
- iv. Monitoring of water quality upstream and downstream of water bodies shall be carried out once in six months and record of monitoring data shall be maintained and submitted to the Ministry of Environment, Forest and Climate Change/Regional Office.
- v. Ground water, excluding mine water, shall not be used for mining operations. Rainwater harvesting shall be implemented for conservation and augmentation of ground water resources.
- vi. The project proponent shall not alter major water channels around the site. Appropriate embankment shall be provided along the side of the river/nallah flowing near or adjacent to the mine. The embankment constructed along the river/nallah boundary shall be of suitable dimensions and critical patches shall be strengthened by stone pitching on the river front side, stabilized with plantation so as to withstand the peak water pressure preventing any chance of mine inundation.

- vii. Garland drains (of suitable size, gradient and length) around the critical areas i.e. mine shaft and low lying areas, shall be designed keeping at least 50% safety margin over and above the peak sudden rainfall and maximum discharge in the area adjoining the mine sites. The sump capacity shall also provide adequate retention period to allow proper settling of silt material of the surface runoff
- viii. The water pumped out from the mine, after siltation, shall be utilized for industrial 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 reverian /riparian ecosystem conservation and management plan should be prepared and implemented in consultation with the irrigation / water resource department in the state government.

IV. Noise and Vibration monitoring and prevention

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

V. Mining Plan

- i. Mining shall be carried out under strict adherence to provisions of the Mines Act 1952 and subordinate legislations made there-under as applicable.
- ii. No change in mining method *i.e.* UG to OC, calendar programme and scope of work shall be made without obtaining prior approval of the Ministry of Environment, Forests and Climate Change (MoEFCC).

- iii. Mining shall be carried out as per the approved mining plan (including mine closure plan) abiding by mining laws related to coal mining and the relevant circulars issued by Directorate General Mines Safety (DGMS).
- iv. Underground work place environmental conditions shall be rendered ergonomic and air breathable with adequate illumination in conformance with DGMS standards.
- v. No mining activity shall be carried out in forest land without obtaining Forestry Clearance as per Forest (Conservation) Act, 1980 and also adhering to The Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006 read with provisions of Indian Forest Act, 1927.
- vi. Efforts should be made to reduce energy and fuel consumption by conservation, efficiency improvements and use of renewable energy.

VI. Land reclamation

- i. Digital Survey of entire lease hold area/core zone using Satellite Remote Sensing survey shall be carried out at least once in three years for monitoring land use pattern and report in 1:50,000 scale or as notified by Ministry of Environment, Forest and Climate Change(MOEFCC) from time to time shall be submitted to MOEFCC/Regional Office (RO).
- ii. Post-mining land be rendered usable for agricultural/forestry purposes and shall be handed over to the respective State Government, as specified in the Guidelines for Preparation of Mine Closure Plan, issued by the Ministry of Coal dated 27th August, 2009 and subsequent amendments.
- iii. Regular monitoring of subsidence movement on the surface over and around the working areas and its impact on natural drainage pattern, water bodies, vegetation, structure, roads and surroundings shall be continued till movement ceases completely. In case of observation of any high rate of subsidence beyond the limit prescribed, appropriate effective mitigation measures shall be taken to avoid loss of life and materials. Cracks should be effectively plugged in with ballast and clay soil/suitable material.
- iv. Fly ash shall be used for external dump of overburden, backfilling or stowing of mine as per provisions contained in clause (i) and (ii) of subparagraph (8) of fly ash notification issued vide SO 2804 (E) dated 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.II (M) dated 29th October, 2014, titled 'Impact of mining activities on habitations-issues related to the mining projects wherein habitations and villages are the part of mine lease areas or habitations and villages are surrounded by the mine lease area'.

IX. Corporate Environment Responsibility

- i. The project proponent shall comply with the provisions contained in this Ministry's OM vide F.No. 22-65/2017-IA.III dated 1st May 2018, as applicable, regarding Corporate Environment Responsibility.
- ii. The company shall have a well laid down environmental policy duly approve by the Board of Directors. The environmental policy should prescribe for standard operating procedures to have proper checks and balances and to bring into focus any infringements/deviation/violation of the environmental / forest / wildlife norms / conditions. The company shall have defined system of reporting infringements / deviation / violation of the environmental / forest / wildlife norms / conditions and / or shareholders / stake holders. The copy of the board resolution in this regard shall be submitted to the MoEF&CC as a part of six-monthly report.

- iii. A separate Environmental Cell both at the project and company head quarter level, with qualified personnel shall be set up under the control of senior Executive, who will directly to the head of the organization.
- iv. Action plan for implementing EMP and environmental conditions along with responsibility matrix of the company shall be prepared and shall be duly approved by competent authority. The year wise funds earmarked for environmental protection measures shall be kept in separate account and not to be diverted for any other purpose. Year wise progress of implementation of action plan shall be reported to the Ministry/Regional Office along with the Six Monthly Compliance Report.
- v. Self environmental audit shall be conducted annually. Every three years third party environmental audit shall be carried out.

X. Miscellaneous

- i. The project proponent shall make public the environmental clearance granted for their project along with the environmental conditions and safeguards at their cost by prominently advertising it at least in two local newspapers of the District or State, of which one shall be in the vernacular language within seven days and in addition this shall also be displayed in the project proponent's website permanently.
- ii. The copies of the environmental clearance shall be submitted by the project proponents to the Heads of local bodies, Panchayats and Municipal Bodies in addition to the relevant offices of the Government who in turn has to display the same for 30 days from the date of receipt.
- iii. The project proponent shall upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and update the same on half-yearly basis.
- iv. The project proponent shall submit six-monthly reports on the status of the compliance of the stipulated environmental conditions on the website of the ministry of Environment, Forest and Climate Change at environment clearance portal.
- v. The project proponent shall submit the environmental statement for each financial year in Form-V to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently and put on the website of the company.
- vi. The project authorities shall inform to the Regional Office of the MOEFCC regarding commencement of mining operations.
- vii. The project authorities must strictly adhere to the stipulations made by the State Pollution Control Board and the State Government.
- viii. The project proponent shall abide by all the commitments and recommendations made in the EIA/EMP report, commitment made during Public Hearing and also that during their presentation to the Expert Appraisal Committee.
- ix. No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment, Forests and Climate Change (MoEF&CC).
- x. Concealing factual data or submission of false/fabricated data may result in revocation of this environmental clearance and attract action under the provisions of Environment (Protection) Act, 1986.
- xi. The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.
- xii. The Ministry reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions.

- xiii. The Regional Office of this Ministry shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the officer (s) of the Regional Office by furnishing the requisite data / information/monitoring reports.
- xiv. The above conditions shall be enforced, inter-alia under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986, Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 and the Public Liability Insurance Act, 1991 along with their amendments and Rules and any other orders passed by the Hon'ble Supreme Court of India / High Courts and any other Court of Law relating to the subject matter.
- xv. Any appeal against this EC shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.

Standard EC Conditions for Coal Washery Project

I. Statutory compliance:

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

II. Air quality monitoring and preservation

- i. Adequate ambient air quality monitoring stations shall be established in the core zone as well as in the buffer zone for monitoring of pollutants, namely particulates, SO₂ and NO_x. Location of the stations shall be decided based on the meteorological data, topographical features and environmentally and ecologically sensitive receptors in consultation with the State Pollution Control Board. Monitoring of heavy metals such as Hg, As, Ni, Cd, Cr, etc. carried out at least once in six months.
- ii. Continuous ambient air quality monitoring stations as prescribed in the statute be established in the core zone as well as in the buffer zone for monitoring of pollutants, namely PM₁₀, PM_{2.5}, SO₂ and NO_x. Location of the stations shall be decided based on the meteorological data, topographical features and environmentally and ecologically sensitive targets in consultation with the State Pollution Control Board. Online ambient air quality monitoring stations may also be installed in addition to the regular monitoring stations as per the requirement and/or in consultation with the SPCB. Monitoring of heavy metals such as Hg, As, Ni, Cd, Cr, etc to be carried out at least once in six months.
- iii. Transportation of coal by road shall be carried out by covered trucks/conveyors. The transportation of clean coal and rejects shall be by rail with wagon loading through silo. Effective measures such as regular water sprinkling shall be carried out in critical areas prone to air pollution and having high levels of particulates such as roads, belt conveyors,

loading/unloading and transfer points. Fugitive dust emissions from all sources shall be controlled at source. It shall be ensured that the ambient air quality parameters conform to the norms prescribed by the Central/State Pollution Control Board

- iv. All approach roads shall be black topped and internal roads shall be concreted. The roads shall be regularly cleaned. Coal transportation shall be carried out by covered trucks.
- v. Covered trucks shall be engaged for mineral transportation outside the washery 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-IA.11 (M) dated 27.05.2009 issued by Ministry of Environment, Forest and Climate Change shall also be referred in this regard for compliance.
- iii. Industrial waste water shall be properly collected and treated so as to conform to the standards prescribed under the Environment (Protection) Act, 1986 and the Rules made there under, and as amended from time to time.
- iv. The project proponent shall not alter major water channels around the site. Appropriate embankment shall be provided along the side of the river/nallah flowing near or adjacent to the washery. The embankment constructed along the river/nallah boundary shall be of suitable dimensions and critical patches shall be strengthened by stone pitching on the 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 off from reject dumping sites.

- vii. An Integrated Surface Water Management Plan for the washery area up to its buffer zone considering the presence of any river/rivulet/pond/lake *etc.* with impact of coal washing activities on it, shall be prepared, submitted to MoEFCC and implemented.
- viii. Waste Water shall be effectively treated and recycled completely either for washery operations or maintenance of green belt around the plant.
- ix. Rainwater harvesting in the washery premises shall be implemented for conservation and augmentation of ground water resources in consultation with Central Ground Water Board.
- x. No ground water shall be used for coal washing unless otherwise permitted in writing by competent authority (CGWA) or MoEFCC. The make-up water requirement of washery should not exceed 1.5 m³/tonne of raw coal.
- xi. Regular monitoring of ground water level and quality shall be carried out in and around the mine lease area by establishing a network of existing wells and constructing new piezometers during the mining operations. The monitoring of ground water levels shall be carried out four times a year i.e. pre-monsoon, monsoon, post-monsoon and winter. The ground water quality shall be monitored once a year, and the data thus collected shall be sent regularly to MOEFCC/RO.
- 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 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.II (M) dated 29th October, 2014, titled 'Impact of mining activities on habitations-issues related to the mining projects wherein habitations and villages are the part of mine lease areas or habitations and villages are surrounded by the mine lease area'.

VIII. Corporate Environment Responsibility

- i. The project proponent shall comply with the provisions contained in this Ministry's OM vide F.No. 22-65/2017-IA.III dated 1st May 2018, as applicable, regarding Corporate Environment Responsibility.
- ii. The company shall have a well laid down environmental policy duly approve by the Board of Directors. The environmental policy should prescribe for standard operating procedures to have proper checks and balances and to bring into focus any infringements/deviation/violation of the environmental / forest / wildlife norms / conditions. The company shall have defined system of reporting infringements / deviation / violation of the environmental / forest / wildlife norms / conditions and / or shareholders / stake holders. The copy of the board resolution in this regard shall be submitted to the MoEF&CC as a part of six-monthly report.
- iii. A separate Environmental Cell both at the project and company head quarter level, with qualified personnel shall be set up under the control of senior Executive, who will directly to the head of the organization.
- iv. Action plan for implementing EMP and environmental conditions along with responsibility matrix of the company shall be prepared and shall be duly approved by competent authority. The year wise funds earmarked for environmental protection measures shall be kept in separate account and not to be diverted for any other purpose. Year wise progress of

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

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

IX. Miscellaneous

- i. The project proponent shall make public the environmental clearance granted for their project along with the environmental conditions and safeguards at their cost by prominently advertising it at least in two local newspapers of the District or State, of which one shall be in the vernacular language within seven days and in addition this shall also be displayed in the project proponent's website permanently.
- ii. The copies of the environmental clearance shall be submitted by the project proponents to the Heads of local bodies, Panchayats and Municipal Bodies in addition to the relevant offices of the Government who in turn has to display the same for 30 days from the date of receipt.
- iii. The project proponent shall upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and update the same on half-yearly basis.
- iv. The project proponent shall monitor the criteria pollutants level namely; PM₁₀, SO₂, NO_x (ambient levels) or critical sectoral parameters, indicated for the projects and display the same at a convenient location for disclosure to the public and put on the website of the company.
- v. The project proponent shall submit six-monthly reports on the status of the compliance of the stipulated environmental conditions on the website of the ministry of Environment, Forest and Climate Change at environment clearance portal.
- vi. The project proponent shall submit the environmental statement for each financial year in Form-V to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently and put on the website of the company.
- vii. The project authorities shall inform to the Regional Office of the MOEFCC regarding commencement of mining operations.
- viii. The project authorities must strictly adhere to the stipulations made by the State Pollution Control Board and the State Government.
- ix. The project proponent shall abide by all the commitments and recommendations made in the EIA/EMP report, commitment made during Public Hearing and also that during their presentation to the Expert Appraisal Committee.
- x. No change in coal beneficiation process and scope of work shall be made without obtaining prior approval of the Ministry of Environment, Forests and Climate Change (MoEFCC) with such conditions mentioned therein. No change in the maximum quantum of raw material feed per annum against the approved washery capacity shall be made
- xi. Concealing factual data or submission of false/fabricated data may result in revocation of this environmental clearance and attract action under the provisions of Environment (Protection) Act, 1986.
- xii. The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.

- 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.

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 EIA in case coal mine, TPP and other washeries are located within 10km radius. The EIA should also include mitigative measures needed to minimize adverse environmental impacts.
- vii. A Study Area Map of the core zone as well as the 10km area of buffer zone showing major industries/mines and other polluting sources should be submitted. These maps shall also indicate the migratory corridors of fauna, if any and areas of endangered fauna; plants of medicinal and economic importance; any ecologically sensitive areas within the 10 km buffer zone; the shortest distance from the National Park/WL Sanctuary Tiger Reserve, etc. 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 (PM₁₀, PM_{2.5}, SO_x and NO_x, noise, water (surface and groundwater), soil be submitted.
- ix. The wet washery should generally utilize mine water only. In case mine water is not available, the option of storage of rain water and its use should be examined. Use of surface water and ground water should be avoided.
- x. Detailed water balance should be provided. The break-up of water requirement as per different activities in the mining operations vis-a-vis washery should be given. If the source of water is from surface water and/or ground water, the same may be justified besides obtaining approval of the Competent Authority for its drawl.
- xi. The entire sequence of mineral production, transportation, handling, transfer and storage of mineral and waste, if any, and their impacts on air quality should be shown in a flow chart with specific points where fugitive emissions can arise and specific pollution control/mitigative measures proposed to be put in place. The washed coal and rejects should be transport by train as far as possible. Road transport of washed coal and rejects should generally be avoided. In case, the TPP is within 10km radius, it should be through conveyer belt. If transport by rail is not feasible because of the topography of the area, the option for transport by road be examined in detail and its impacts along with the mitigation

- measures should be clearly brought out in EIA/EMP report.
- xii. Details of various facilities proposed to be provided in terms of parking, rest areas, canteen etc. to the personnel involved in mineral transportation, workshop and effluents/pollution load from these activities should be provided.
 - xiii. Impacts of CHP, if any, on air and water quality should also be spelt out alongwith Action Plan.
 - xiv. O.M.no.J-11013/25/2014-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.

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 (PM₁₀, PM_{2.5}, SO_x, NO_x and heavy metals such as Hg, Pb, Cr, As, etc), noise, water (surface and groundwater), soil - along with one-season met data coinciding with the same season for AAQ collection period should be provided.
- (xv) Map (1: 50, 000 scale) of the study area (core and buffer zone) showing the location of various sampling stations superimposed with location of habitats, other industries/mines, polluting sources, should be provided. The number and location of the sampling stations in both core and buffer zones should be selected on the basis of size of lease/project area, the proposed impacts in the downwind (air)/downstream (surface water)/groundwater regime (based on flow). One station should be in the upwind/upstream/non-impact/non-polluting area as a control station. The monitoring should be as per CPCB guidelines and parameters for water testing for both ground water and surface water as per ISI standards and CPCB classification wherever applicable. Observed values should be provided along with the specified standards.
- (xvi) Study on the existing flora and fauna in the study area (10km) should be carried out by an institution of relevant discipline. The list of flora and fauna duly authenticated separately for the core and study area and a statement clearly specifying whether the study area forms a part of the migratory corridor of any endangered fauna should be given. If the study area has endangered flora and fauna, or if the area is occasionally visited or used as a habitat by Schedule-I species, or if the project falls within 15 km of an ecologically sensitive area, or used as a migratory corridor then a Comprehensive Conservation Plan along with the appropriate budgetary provision should be prepared and submitted with EIA-EMP Report; and comments/observation from the CWLW of the State Govt. should also be obtained and furnished.

- (xvii) Details of mineral reserves, geological status of the study area and the seams to be worked, ultimate working depth and progressive stage-wise working scheme until the end of mine life should be provided on the basis of the approved rated capacity and calendar plans of production from the approved Mining Plan. Geological maps and sections should be included. The Progressive mine development and Conceptual Final Mine Closure Plan should also be shown in figures. Details of mine plan and mine closure plan approval of Competent Authority should be furnished for green field and expansion projects.
- (xviii) Details of mining methods, technology, equipment to be used, etc., rationale for selection of specified technology and equipment proposed to be used vis-à-vis the potential impacts should be provided.
- (xix) Impact of mining on hydrology, modification of natural drainage, diversion and channeling of the existing rivers/water courses flowing through the ML and adjoining the lease/project and the impact on the existing users and impacts of mining operations thereon.
- (xx) Detailed water balance should be provided. The break-up of water requirement for the various mine operations should be given separately.
- (xxi) Source of water for use in mine, sanction of the Competent Authority in the State Govt. and impacts vis-à-vis the competing users in the upstream and downstream of the project site. should be given.
- (xxii) Impact of mining and water abstraction from the mine on the hydrogeology and groundwater regime within the core zone and 10 km buffer zone including long-term monitoring measures should be provided. Details of rainwater harvesting and measures for recharge of groundwater should be reflected in case there is a declining trend of groundwater availability and/or if the area falls within dark/grey zone.
- (xxiii) Impact of blasting, noise and vibrations should be given.
- (xxiv) Impacts of mining on the AAQ and predictions based on modeling using the ISCST-3 (Revised) or latest model should be provided.
- (xxv) Impacts of mineral transportation within the mining area and outside the lease/project along with flow-chart indicating the specific areas generating fugitive emissions should be provided. Impacts of transportation, handling, transfer of mineral and waste on air quality, generation of effluents from workshop etc, management plan for maintenance of HEMM and other machinery/equipment should be given. Details of various facilities such as rest areas and canteen for workers and effluents/pollution load emanating from these activities should also be provided.
- (xxvi) Effort be made to reduce/eliminate road transport of coal inside and outside mine and for mechanized loading of coal through CHP/ Silo into wagons and trucks/tippers.
- (xxvii) Details of waste OB and topsoil generated as per the approved calendar programme, and their management shown in figures as well explanatory notes tables giving progressive development and mine closure plan, green belt development, backfilling programme and conceptual post mining land use should be given. OB dump heights and terracing based on slope stability studies with a max of 28° angle as the ultimate slope should be given. Sections of final dumps (both longitudinal and cross section) with relation to the adjacent area should be shown.
- (xxviii) Efforts be made for 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 (1 st Year)	5 th Year	10 th Year	20 th Year	24 th Year (end of mine life)*
1.	Backfilled Area(Reclaimed with plantation)					
2.	Excavated Area (not reclaimed)/void					
3.	External OB dump Reclaimed with plantation)					
4.	Reclaimed Top soil dump					
5.	Green Built Area					
6.	Undisturbed area (brought under plantation)					
7.	Roads (avenue plantation)					
8.	Area around buildings and Infrastructure					
	TOTAL					

* As a representative example

Table 2 : Stage Wise Cumulative Plantation

S. No.	YEAR*	Green Belt	External Dump	Backfilled Area	Others(Undisturbed Area/etc)	TOTAL
1.	1 st year					
2.	3 rd year					
3.	5 th year					
4.	10 th year					
5.	15 th year					
6.	20 th year					
7.	25 th year					
8.	30 th year					
9.	34 th year(end of mine life)					
10.	34- 37 th Year (Post-mining)					

* As a representative example

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

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

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

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

(xl) 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.

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

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

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

(xliv) 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.

(xlv) 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.

(xlvi) 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			

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 Rights	Area under Both (ha)
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1.	Agricultural land			
2.	Forest Land			
3.	Grazing Land			
4.	Settlements			
5.	Others (specify)			

Area under Surface Rights

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

- (viii) Study on the existing flora and fauna in the study area (10km) should be carried out by an institution of relevant discipline. The list of flora and fauna duly authenticated separately for the core and study area and a statement clearly specifying whether the study area forms a part of the migratory corridor of any endangered fauna should be given. If the study area has endangered flora and fauna, or if the area is occasionally visited or used as a habitat by Schedule-I species, or if the project falls within 15 km of an ecologically sensitive area, or used as a migratory corridor then a Comprehensive Conservation Plan along with the appropriate budgetary provision should be prepared and submitted with EIA-EMP Report; and comments/observation from the CWLW of the State Govt. should also be obtained and furnished.
- (ix) Details of mineral reserves, geological status of the study area and the seams to be worked, ultimate working depth and progressive stage-wise working scheme until the end of mine life should be provided on the basis of the approved rated capacity and calendar plans of production from the approved Mining Plan. Geological maps and sections should be included. The Progressive mine development and Conceptual Final Mine Closure Plan should also be shown in figures. Details of mine plan and mine closure plan approval of Competent Authority should be furnished for green field and expansion projects.
- (x) Details of mining methods, technology, equipment to be used, etc., rationale for selection of specified technology and equipment proposed to be used vis-à-vis the potential impacts should be provided.
- (xi) Impact of mining on hydrology, modification of natural drainage, diversion and channeling of the existing rivers/water courses flowing through the ML and adjoining the lease/project and the impact on the existing users and impacts of mining operations thereon.
- (xii) One-season (other than monsoon) primary baseline data on environmental quality - air (PM₁₀, PM_{2.5}, SO_x, NO_x and heavy metals such as Hg, Pb, Cr, As, etc), noise, water (surface and groundwater), soil - along with one-season met data coinciding with the same season for AAQ collection period should be provided.
- (xiii) Map (1: 50, 000 scale) of the study area (core and buffer zone) showing the location of various sampling stations superimposed with location of habitats, other industries/mines, polluting sources, should be provided. The number and location of the sampling stations in

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

- (xiv) Impact of mining and water abstraction from the mine on the hydrogeology and groundwater regime within the core zone and 10 km buffer zone including long-term monitoring measures should be provided. Details of rainwater harvesting and measures for recharge of groundwater should be reflected in case there is a declining trend of groundwater availability and/or if the area falls within dark/grey zone.
- (xv) Study on subsidence including modeling for prediction, mitigation/prevention of subsidence, continuous monitoring measures, and safety issues should be carried out.
- (xvi) Detailed water balance should be provided. The 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 /Project (ha)	ML Area	Total Forest Land (ha)	Date of FC	Extent of Forest Land	Balance area for which FC is yet to be obtained	Status of appl. For diversion of forest land

		If more than one provide details of each FC			
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ANNEXURE-VII

GENERIC TORs FOR AN OPENCAST-CUM-UNDERGROUND COALMINE PROJECT

- (i) An EIA-EMP Report would be prepared for a combined peak capacity ofMTPA 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.

10/14/2020

Email

Email

munna.shah@gov.in

Fwd: Minutes of meeting for EAC meeting held during 28-29 September 2020

From : lk.bokolia <lk.bokolia@nic.in> Wed, Oct 14, 2020 02:46 PM
Subject : Fwd: Minutes of meeting for EAC meeting held during
28-29 September 2020
To : Munna Kumar Shah <munna.shah@gov.in>

pl arrange to upload

From: gpkundargi@gmail.com
To: "lk.bokolia" <lk.bokolia@nic.in>
Cc: "Munna Kumar Shah" <munna.shah@gov.in>
Sent: Wednesday, October 14, 2020 1:10:03 PM
Subject: Re: Minutes of meeting for EAC meeting held during 28-29 September 2020

Dear Lalit Ji

I have gone through the final minutes & suggesting following corrections
At 2.6 Sr No 4(iii) & At Sr No 2.11.4 (iii) under TOR proposals it is mentioned that
"Stage I Forest clearance shall be obtained before making application for EC"

This sentence may be restricted as below

Stage I Forest clearance shall be obtained.

The minutes are approved for further needful.

thank you

Gururaj Kundargi

**LIST OF PARTICIPANTS OF EAC (COAL) IN 2nd MEETING OF HELD DURING 28-29
SEPTEMBER, 2020 THROUGH VIDEO CONFERENCING**

1.	Shri G.P Kundargi		DAY-1	DAY-2
		-	Chairman	P
2.	Dr. N. P. Shukla	-	Member	P
3.	Shri Suramya Dolarray Vora, IFS (Retd)	-	Member	P
4.	Dr. Umesh Jagannathrao Kahalekar	-	Member	P
5.	Shri K.B. Biswas	-	Member	P
6.	Dr. Nandini.N	-	Member	P
7.	Dr. Unmesh Patnaik	-	Member	A
8.	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	A
13.	Dr. S.K. Paliwal Representative of Central Pollution Control Board	-	Member	A
14.	Shri Lalit Bokolia, Director, MoEFCC	-	Member Secretary	P