

**GOVERNMENT OF INDIA
MINISTRY OF ENVIRONMENT, FOREST AND CLIMATE CHANGE
(IMPACT ASSESSMENT DIVISION)
(COAL MINING SECTOR)**

**SUMMARY RECORD OF 53rd MEETING OF THE EXPERT APPRAISAL COMMITTEE
FOR ENVIRONMENTAL APPRAISAL OF COAL MINING PROJECTS CONSTITUTED
UNDER THE EIA NOTIFICATION, 2006, HELD ON 20th February, 2020.**

The 53rd meeting of the Expert Appraisal Committee (EAC) for Coal mining projects was held on 20 February, 2020 in the Ministry of Environment, Forest and Climate Change at Teesta Meeting Hall, Vayu Wing, First Floor, Indira Paryavaran Bhawan, Jor Bagh Road, New Delhi to consider the proposals relating to coal mining sector. The following members were present:

1.	Dr. Navin Chandra	-	Chairman
2.	Dr. N. P. Shukla	-	Member
3.	Shri. S. D. Vora	-	Member
4.	Dr. J.K. Pandey	-	Member
5.	Shri G.P. Kundargi	-	Member
6.	Dr. R K. Giri	-	Member
7.	Dr. R.B. Lal, Scientist 'E', MoEFCC	-	Member Secretary
MoEF&CC			
8.	Shri Munna Kumar Shah, Scientist 'D'	-	MoEFCC

Confirmation of Minutes of 52nd meeting of EAC

There being no comments from any of the members of the Committee, minutes of the 52nd meeting of the EAC held on during 24th January, 2020 were confirmed in the presence of the members who had been present in the 53rd meeting of EAC.

Discussions on the Reports of Basundhara (West) Extension OCP of 8.75 MTPA (Agenda No- 52.1, EAC Meeting held on 24.01.2020) as well as Batura OCP of 2.00 MTPA Normative and 3.00 MTPA Peak (Agenda No- 52.3, EAC Meeting held on 24.01.2020), being prepared by CMPDI:

The EAC was informed that CMD, CMPDI vide email dated 19.02.2020 has taken the issues at utmost seriousness and sincerity for improvement of the EIA/EMP Report for the Coal Mining Projects. CMPDI has reported that they have initiated root cause analysis for better preparation of the EIA/EMP Report for the Coal Mining Projects. The EAC deliberated the issues and is of the view that CMPDI shall prepare good quality of the reports and its mitigation measures for sustainable coal mining in the Country.

After welcoming the Committee Members, discussion on each of the agenda items was taken up ad-seriatim.

Details of the proposals considered during the meeting, deliberations made and the recommendations of the Committee are explained in the respective agenda items as under:-

Agenda No. 53.1

Expansion of Dudhichua Opencast Coal Mining Project (expansion in production from 15.50 MTPA to 25 MTPA in an ML area 2390.722 ha of M/s Northern Coalfields Ltd located in village Chilkatand District Sonebhadra (Madhya Pradesh) - For Environmental Clearance – reg

[Proposal No.IA/MP/CMIN/8814/2008; F.No. IA-J-11015/381/2008-IA.II(M)]

53.1.1 The proposal is for environmental clearance for Expansion of Dudhichua Opencast Coal Mining Project (expansion in production from 15.50 MTPA to 25 MTPA in an ML area 2390.722 ha of M/s Northern Coalfields Ltd located in village Chilkatand District Sonebhadra (Madhya Pradesh)

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

- (i) The project area is covered under Survey of India Topo Sheet No G44W12 and is bounded by the geographical coordinates ranging from 24°9'12.23"N to 24°9'20.28"N and Longitude: 82°41'3.27"E to 82°40'2.3"E.
- (ii) Coal linkage of the project is proposed for Basket linkage mine for pit head power station of NTPC, UPRVUNL in Singrauli Coalfields and Power station in Western/ Northern India through their own MGR system and other consumers by Public Railway.
- (iii) Joint venture cartel has been formed- NIL.
- (iv) Project does not fall in the Critically Polluted Area (CPA).
- (v) Employment generation 3350 nos (as per EPR)
- (vi) The project is reported to be beneficial in terms of: The project will be able to supply planned quantity of coal to pit head power stations of NTPC, UPRVUNL in Singrauli Coalfields and power stations in western/ Northern India through their own MGR system and other consumers by public railway system thus meeting the energy needs of the country.
- (vii) Earlier, the environment clearance to the project was obtained under EIA Notification, vide Ministry's letter No J-11015/381/2008-IA.II(M) dated:26/12/2019 for 17.5 MTPA in mine lease area of 1752 Ha.
- (viii) Total mining lease area as per block allotment is 2390.722 Ha. Mining Plan (Including Progressive Mine Closure Plan) has been approved by the NCL board on 25.11.2017.
- (ix) The land usage pattern of the project is as follows:

Pre-mining land use details

(Area in Ha)

S. No.	Land Use	Within ML Area	Outside ML Area	Total
1	Agricultural Land	806.913	-	806.913
2	Forest Land	1217.589	-	1217.589
3	Wasteland	-	-	-
4	Grazing Land	-	-	-

5	Surface Water Bodies	-	-	-
6	Settlements	-	-	-
7	Others (Government Land)	366.22	-	366.22
	Total Project Area =	2390.722	-	2390.722

Post Mining:

S. No.	Land use	Land use (ha)				
		Plantation	Water Body	Public Use	Undisturbed	Total
1	External OB Dump	152	-	-	-	152
2	Top Soil Dump	Top Soil has been used immediately in reclamation of dumps.				
3	Excavation	1316	324	-	-	1640
4	Roads	-	-	174	-	174
5	Built-up Area	-	-		-	
6	Green Belt	62.722	-	-	-	62.722
7	Undisturbed Area	164	-	-	-	164
8	Safety Zone / Rationalization Area					
9	Diversion Nala / Canal	-	-	-	-	-
10	Water Body	-	-	-	-	-
11	Staff Colony	-	-	198	-	198
	Total Area =	1694.722	324.00	372.00	-	2390.722

- (x) Total geological reserve reported in the mine lease area is 361.34 MT with 320.01 MT mineable reserves. Out of total mineable reserve of 320.01 MT, 288.009 MT are available for extraction. Percent of extraction is 90 %.
- (xi) 03 seams with thickness ranging from 1.95m – 25.75m are workable. Grade of coal is G-8 to G-12, stripping ratio 4.61 m³/t, while gradient is 2° to 3°.
- (xii) Method of mining operations envisages by Combination of Dragline and Shovel-Dumper method.
- (xiii) Life of mine is 17 years.
- (xiv) The project has two external OB dumps in an area of 152 Ha with 90 m height and 134 Mm³ of OB. Two Internal OB dumps in an area of 1316 Ha with 1483.33Mm³ of OB are envisaged in the project.
- (xv) Total quarry area is 1640 Ha out of which backfilling done in 1316 Ha while final mine void will be created in an area of 324 Ha with a depth of 30m to 40m. Backfilled quarry area of 1316 Ha shall be reclaimed with plantation. Final mine void will be converted into water body.

- (xvi) Transportation of coal has been proposed by Rear Dumpers in mine pit head, from surface to siding by Coal Handling Plant (CHP) and at sidings to loading by Silo.
- (xvii) Reclamation Plan in an area of 1694.722 Ha, comprising of 152 Ha of external dump, 1316 Ha of internal dump and 62.722 Ha of green belt. In addition to this, an area of 164 Ha, included in the safety zone/rationalization area, has also been proposed for green belt development.
- (xviii) 1217.589 Ha of forest land has been reported to be involved in the project. Approval under the Forest (Conservation) Act, 1980 for diversion of forest land for non-forestry purposes has been obtained as follows:-

Area (Ha)	Stage-1 FC issued vide letter no & date	Validity period of FC
555.00 (UP State)	8-298/87-FC dated 30.07.1990	Valid Upto 30.07.2020
194.78 (MP State)	Letter No. 8-13/93-FC (Vol-III) dated 17.11.2005	Valid Upto 17.11.2035
The remaining forestland of 467.809Ha has Stage I clearance and Stage-II clearance of forest land is under process.		

- (xix) No National Parks, Wildlife Sanctuaries and Eco-Sensitive Zones have been reported with 10 km boundary of the project.
- (xx) The ground water level has been reported to be varying between 1.18m (2017) to 21.50m (2019) during pre-monsoon and between 0.55m (2019) to 18.70m (2018) during post-monsoon. Total water requirement for the project is 8183m³/d.
- (xxi) Application for obtaining the approval of the Central Ground Water Authority:- NOC granted vide NOC No. CHWA/NOC/MIN/ORIG/2019/6993 by CGWA.
- (xxii) Public hearing for the project of 25 MTPA capacity in an area of 2390.722 Ha was conducted on 08.02.2019 at Virendra Community Hall, Dudhichua Sector-A Colony, Singrauli. Major issues raised in the public hearing and Appropriate action to address the issues raised in the Public Hearing have already been taken/proposed to be taken.
- (xxiii) Consent to Operate for the existing capacity was obtained from the State PCB on 29.01.2020 and is valid till 31.12.2020.
- (xxiv) Regular monitoring of ambient air quality is being carried out on fortnightly basis. The documented report is submitted to SPCB and also to MoEF&CC along with half yearly EC compliance report. In general, the results of ambient air quality monitoring data were found within prescribed limits except few aberrations which can be attributed to the specific local conditions during the day of sampling.
- (xxv) No court cases, violation cases are pending against the project of the PP.
- (xxvi) 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 1987 onwards. The coal production, realized from the project, from 1987-88 onwards and the production details of last ten financial years are as under:

Year	EC sanctioned capacity (MTPA)	Actual production (MTPA)	Excess production beyond the EC sanctioned capacity
2008-09	15.50	13.27	NIL

2009-10	15.50	13.31	NIL
2010-11	15.50	10.50	NIL
2011-12	15.50	11.73	NIL
2012-13	15.50	12.23	NIL
2013-14	15.50	11.17	NIL
2014-15	15.50	10.82	NIL
2015-16	15.50	13.08	NIL
2016-17	15.50	14.01	NIL
2017-18	15.50	15.50	NIL
2018-19	15.50	15.50	NIL
2019-20 (Upto Dec-19)	15.50	13.674	NIL

(xxvii) The project involves 580 nos. project affected families. R&R of the PAPs will be done as per R&R policy of Coal India Ltd.

(xxviii) Total cost of the project is Rs.271837 lakhs. Cost of production is Rs. 850.27/- per tonne(2018-19), CSR cost is 2% of the avg. net profit of the company for three immediate proceeding financial year or Rs.2 per tonne whichever is higher, R&R cost is Rs.29.09 crores. Environment Management Cost is Rs.16152.78 Lakhs (As per EPR).

(xxix) Consent to operate (CTO) was obtained from the State Pollution Control Board on 29.01.2020 and is valid till 31.12.2020.

53.1.3 During deliberations on the proposal, the Committee noted the following: -

The proposal is for environmental clearance for Expansion of Dudhichua Opencast Coal Mining Project (expansion in production from 15.50 MTPA to 25 MTPA in an ML area 2390.722 ha of M/s Northern Coalfields Ltd located in village Chilkatand District Sonebhadra (Madhya Pradesh).

Earlier environmental clearance for 12.5 MTPA in an area of 1752 ha was granted on 28th February, 2008 , from 12.5 to 15.5 MTPA on 10th December, 2008. Further environmental clearance for 15.5 to 17.5 MTPA in an area of 1752 ha has been granted on 26th December, 2019.

ToR was granted by Ministry on 1st February, 2018. Public hearing for the project of 25 MTPA capacity in an ML area of 2390.722 ha was conducted on 8th February, 2019 at Virendra Community Hall, Dudhichua Sector A Colony, P.O. Jayant, Singrauli, Madhya Pradesh. Issues related to pollution due to stored mine water, higher fluoride concentration, R & R Compensation, water pollution, air pollution due to transportation of coal, desilting of ballia nallah, blasting during mining etc were raised during Public Hearing.

A Study of IRR in its ecological dimension to know the pollution load bearing capacity of the surrounding ecosystem has been carried out by Department of Environmental Science & Environment (ESE), IIT (ISM), Dhanbad, Jharkhand.

The most important stream in around is Ballia Nalla. The drainage of the area is controlled by seasonal streams which discharge into Ballia Nalla, which ultimately drains

into Govind Ballabh Pant Sagar in the south. Similarly, towards north, the drainage is through seasonal streams which ultimately join Bijul Nalla.

In the Dudhichua Project area 4 villages are directly affected by mining operations namely Dudhichua, Chilkatand, Karwari and Madhuali, which constitute the core zone. Out of these villages Dudhichua & Karwari villages are fully affected & balance two villages are partially affected.

The base line ambient air quality data were recorded for three months period (From March to June'2016) by selecting core zone & Buffer zone stations.

2390.722 Ha of land already acquired including the forest land of 467.809 Ha. For 467.809 Ha Stage-II is under process and the same proposal has been linked to this EC application.

Mine plan (including Mine Closure Plan) has been approved for 20 MTPA (Normative) and 25 MTPA (Peak) approved by CIL on 25th November, 2017.

Compliance of EC conditions are certified by Regional Office, Bhopal vide its Letter dated 24th October, 2018. The Committee deliberated the compliance stratus.

The EAC, constituted under the provision of the EIA Notification, 2006 and comprising of Experts Members/domain experts in various fields, have examined the proposal submitted by the Project Proponent in desired form along with report prepared and submitted by the Consultant accredited by the QCI/ NABET on behalf of the Project Proponent.

The EAC noted that the Project Proponent has given undertaking that the data and information given in the application and enclosures are true to the best of his knowledge and belief and no information has been suppressed in the report. If any part of data/information submitted is found to be false/misleading at any stage, the project will be rejected and Environmental Clearance given, if any, will be revoked at the risk and cost of the project proponent. 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 Experts Members of the EAC have found the proposal in order and have recommended for grant of Environmental Clearance (EC).

53.1.4 The EAC, after detailed deliberation, **recommended** the proposal for grant of environmental clearance to Expansion of Dudhichua Opencast Coal Mining Project (expansion in production from 15.50 MTPA to 25 MTPA in an ML area 2390.722 ha of M/s Northern Coalfields Ltd located in village Chilkatand District Sonebhadra (Madhya Pradesh), under the provisions of the Environment Impact Assessment Notification, 2006 and subsequent amendments/circulars thereto subject to the compliance of the following terms & conditions / specific conditions:-

- (i) Validity of EC is life of the mine or 30 years whichever is earlier as per EIA Notification, 2006
- (ii) The project proponent shall obtain Consent to establish from the State Pollution Control Boards for the proposed peak capacity of 20 MTPA (Normative)/ 25

MTPA(Peak) prior to commencement of the increased production.

- (iii) Third party monitoring (by NEERI/CIMFR/IIT) for air quality shall be carried out at identified locations, both ambient and the process area, to arrive at impact of the proposed expansion. The results along with the recommendation shall be presented before the EAC to assess the efficacy and adequacy of pollution control measures.
- (iv) Transportation of coal from Coal Handling Plant shall be through covered trucks.
- (v) To control the production of dust at source, the crusher and in-pit belt conveyors shall be provided with mist type sprinklers.
- (vi) 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.
- (vii) Continuous monitoring of occupational safety and other health hazards, and the corrective actions need to be ensured.
- (viii) Persons of nearby villages shall be given training on livelihood and skill development to make them employable.
- (ix) Thick green belt of adequate width at the final boundary in the down wind direction of the project site shall be developed to mitigate/check the dust pollution.
- (x) Mechanism for treating stored mine water shall be developed to avoid any ground and surface water contamination
- (xi) Mining shall be carried out only by surface miners for the expansion project and silo loading through in-pit conveyor should be installed to avoid road transportation in 2 years.
- (xii) Ballia, Bijul and other Nallahs linked with this project shall be cleaned quarterly to avoid deposition of silts.
- (xiii) 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.
- (xiv) The company shall obtain approval of CGWA for use of groundwater for mining operations at its enhanced capacity of 20 MTPA(Normative)/ 25 MTPA(Peak).
- (xv) Continuous monitoring of occupational safety and other health hazards, and the corrective actions need to be ensured.
- (xvi) A third party assessment of EC compliance shall be undertaken once in three years through agency like ICFRI /NEERI/IIT or any other expert agency identified by the Ministry.
- (xvii) Active OB Dump should not be kept barren/open and should be covered by temporary grass to avoid air born of particles
- (xviii) Permission of diversion of nallah from concerned statutory authority (if any)
- (xix) Compliance of the non-compliance/partial compliance conditions certified by Regional Office, Bhopal vide its Letter No. 3-22/2009(ENV)/807 dated 24th October, 2018. The PP shall take all the mitigation measures and the Action taken report shall be submit the Regional Office of the MoEFCC.
- (xx) Project proponent to plant 150,000 nos. of native trees with broad leaves along the villages namely Dudhichua, Chilkatand, Karwari and Madhuali in three years and along transportation route to prevent the effect of air pollution. After completion of tree plantation, number of trees shall be duly endorsed from District Forest Officer.

- (xxi) The activities and fund provisions for CER shall be made as per the guidelines issued by the ministry regarding CER on 1st May, 2018.
- (xxii) 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.
- (xxiii) 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.
- (xxiv) Project Proponent shall obtain the necessary prior permission from the Central Ground Water Authority (CGWA) in case of intersecting the Ground water table. The intersecting ground water table can only be commenced after conducting detailed hydrogeological study and necessary permission from the CGWA. The Report on six monthly basis on changes in Ground water level and quality shall be submitted to the Regional Office of the Ministry, CGWA and State Pollution Control Board.
- (xxv) 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 antsnake venom including all other paramedical safeguards may be ensured before initiating the mining activities.
- (xxvi) 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".
- (xxvii) 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.
- (xxviii) 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 prepared and 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.
- (xxix) 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.

Additional Specific as the area falls under Severely Polluted Areas (SPAs)

- (xxx) CTE/CTO for the project shall be obtained from the SPCB as required under the Air (Prevention and Control of Pollution) Act, 1981 and the Water (Prevention and Control of Pollution) Act, 1974, and the SPCB shall follow the mechanism/protocol issued by the Ministry vide letter no. Q-16017/38/2018-CPA dated 24th October, 2019 while issuing the CTE/CTO for the project, for improvement of environmental quality in the area.
- (xxxi) The green belt of at least 5-10 m width shall be developed in more than 40% (*in place of EAC recommended 33%*) of the total project area, mainly along the plant periphery, in downward wind direction, and along road sides etc. Selection of plant species shall be as per the CPCB guidelines in consultation with the State Forest Department.
- (xxxii) In addition, the project proponent shall develop greenbelt outside the plant premises such as avenue plantation, plantation in vacant areas, social forestry etc.
- (xxxiii) Monitoring of compliance of EC conditions may be submitted with third party audit every year.
- (xxxiv) The percentage the CER may be atleast 1.5 times the amount given in the OM dated 1st May, 2018 recommended by the EAC and item-wise details along with time bound action plan shall be prepared and submitted to the Ministry's Regional Office.

Agenda No. 53.2

New Kathara Coking coal washery of 3 MTPA capacity in an area of 11.30 ha of M/s Central Coalfields Limited located in village Bandh Tehsil Gomia District Bokaro (Jharkhand) - For Environmental Clearance – reg

[Proposal No. IA/JH/CMIN/77799/2018; F.No. IA-J-11015/98/2018-IA-II(M)]

53.2.1 The proposal is for environmental clearance for New Kathara Coking coal washery of 3 MTPA capacity in an area of 11.30 ha of M/s Central Coalfields Limited located in village Bandh Tehsil Gomia District Bokaro (Jharkhand).

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

- (i) The project area is covered under Survey of India Topo Sheet No. 73E/13 and is bounded by the geographical coordinates ranging from 23.75108 to 23.75527 N and longitudes 85.86821 To 85.87401 E
- (ii) Coal linkage of the project is proposed for Washed Coal(Power) Clean Coal, Reject

use for various destination.

- (iii) Proposed linkage for washed coal – SAIL, RINL- BSCS(Bokaro), DSP (Durga), RSP(Rourkela steel plant), Bhilia steel plant, V.S.P.S(Visakhapatnam steel plant) etc. Proposed linkage for washed Coal Power DVC, SAIL, NTPC- C.T.P.S (chandrapura), K.P.S.h(Koderma), BPSCL (SAIL-DVC), TANDA(NTPC), UCR (Uchahar-NTPC), DADRI(NTPC), DSP(DURGAPUR), Bhilai Steel plant, R.S.P etc.
- (iv) Joint venture cartel has been formed- No.
- (v) 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.
- (vi) Employment generation: to 1320 persons will be provided from the project.
- (vii) The project is reported to be beneficial in terms of Social, Environment, and Financial
- (viii) This is new project for which fresh Environment Clearance has been applied with proposal no. IA/JH/CMIN/77799/2018
- (ix) The plan for washery has been approved by CCL board 469th (No. 1 of 2019) meeting held on 01&02/02/2019. And communicated vide no. CS/BM/469/2019/151 dtd. 05/03/2019.
- (x) The land usage pattern of the project is as follows:

Pre-mining (Washery) land use details

(Area in Ha)

S. No.	Land Use	Within ML Area	Outside ML Area	Total
1	Agricultural Land	2.97	0.00	2.97
2	Forest Land	0.00	0.00	0.00
3	Wasteland	8.36	0.00	8.36
4	Grazing Land	0.00	0.00	0.00
5	Surface Water Bodies	0.00	0.00	0.00
6	Settlements	0.00	0.00	0.00
7	Others (Specify)	0.00	0.00	0.00
	Old Excavation Area (East Quarry)	0.00	0.00	0.00
	Old Excavation Area (West Quarry)	0.00	0.00	0.00
	Old OB Dumps	0.00	0.00	0.00
	Roads & Mine Infrastructure	0.00	0.00	0.00
	R & R Colony	0.00	0.00	0.00
	Staff Colony	0.00	0.00	0.00
	Green Belt	0.00	0.00	0.00
	Balance Area	0.00	0.00	0.00
	Total Project Area =	11.33	0.00	11.33

- (xi) Life of mine (Washery) is 18 years.
- (xii) Transportation of coal for raw coal has been proposed from Kathara OCP, Govindpurph-II proposed washery.
- (xiii) Land use of New Kathara Coking Coal Washery Contains 0.66 Ha of green belt a part from 4.99 Ha of main plant, 5.68 Ha of stock Pile, loading bunker , dumping

reject site, slurry pond etc. Block Plantation will be developed around the Washery area of a strip of 3 m. Plantation will be done in consultation with State Forest Department.

S. No.	Total Area	Total No. of saplings required	Average rate of 1 to 2 year old saplings (Rs.)	Total cost of saplings @ Rs. 2200 per sapling including maintenance for 4 years
Green Belt Development				
Roadside Plantation upto 3 kms from the proposed washery:				
1	3 Kms	2X300=600	2150	12,90,000
Block Plantation around washery:				
2	0.66 Ha	1650	110	1,81,500
Total				14,71,500 say 15 Lakhs

- (xiv) The amount Rs.15 Lakh has been allocated as green belt development in Air pollution control measure head. Time line: green belt is proposed to be developed within 4 years.
- (xv) No forest land is involved
- (xvi) No National Parks, Wildlife Sanctuaries and Eco-Sensitive Zones have been reported with 10 km boundary of the project.
- (xvii) The ground water level has been reported to be varying between 5.6 m to 11.54 m during pre-monsoon and between 1.48 m to 6.9 m during post-monsoon. Total water requirement for the project is 1869 KLD.
- (xviii) Application for obtaining the approval of the Central Ground Water Authority for New Kathara Coking Coal Washery has been submitted on 11th February, 2020.
- (xix) Public hearing for the project of 3 MTPA capacity in an area of 11.33 ha was conducted on 16/10/2019 at Officer Club Kathara Area, CCL, PO-Kathara District Bokoro. Major issues raised in the public hearing include employment, Electricity, Pollution control, drinking water, health etc.
- (xx) This is a new project. Consent to operate will be applied after issuance of Environment Clearance.
- (xxi) No River/nalla is flowing within boundary of lease.
- (xxii) Regular monitoring of ambient air quality is being carried out on fortnightly basis.
- (xxiii) No court cases, violation cases are pending against the project of the PP.
- (xxiv) The project does not involve violation of the EIA Notification, 2006 and amendment issued thereunder. The coal production from the washer is yet to start.
- (xxv) The project involves no project affected families. No R&R of the PAPs will be required.
- (xxvi) Total cost of the project is ₹ 26950 lakhs. Cost of production is ₹ 2978/- per tonne., CSR cost is ₹ 2 per tonne, R & R cost is Rs Nil. Environment Management Cost is Rs. 1.7 crores (Capital); Rs. 0.5 Crores (Recurring) and Corporate Environment Responsibility (CER) is Rs. 4.04 Crores.

53.2.3 The EAC during deliberation noted the following: -

The proposal is for environmental clearance for New Kathara Coking coal washery of 3 MTPA capacity in an area of 11.30 ha of M/s Central Coalfields Limited located in village Bandh Tehsil Gomia District Bokaro (Jharkhand).

Public hearing for the project of 3 MTPA capacity in an area of 11.33 ha was conducted on 16/10/2019 at Officer Club Kathara Area, CCL, PO-Kathara District Bokaro. The PH was chaired by Director, District Village Development Board, Bokaro.

There is no forest land involved in the project area. PP committed to plant 1 lakh trees in next 10 years and submitted the undertaking for the same.

The proposed site of washery is in the mining lease of Kathara Opencast Mining Project of the same project proponent and the linkage of coal (input coal) is from Kathara OCP and Govindpur Ph II OCP.

Values of PM10 are reported to be high. PP has presented mitigation measures to reduce PM10 in details. The Committee deliberated the issues.

53.2.4 The EAC, after deliberation observed that there are various lacunae in the proposal in submission of project proponent and details in Form#2 on parivesh portal is not being filled properly. The EAC, after detailed deliberations **decided to return the proposal in its present form** and have asked for clarification/inputs, in respect of the following:-

- (i). Either PP shall either revise the Mine Plan of Kathara OCP and shall be valid environmental clearance as the proposed site is in OCP itself or area proposed for washery shall be kept outside Mine Plan of Kathara OCP and demarcated properly.
- (ii). Brief Compliance of each ToR conditions and further referencing for details of compliance shall be provided correctly.
- (iii). Form#2 on Parivesh should be filled with all details and correct information. For example, total wastewater generation is 70000 KLD and recycling is also 7000 KLD. Manpower requirement is 1 Lakh which seems to be incorrect as this project is only a washery. Correct figure should be incorporated in Form#2.
- (iv). Provide fresh /latest characteristics of raw coal sample analysis (% of ash/moisture etc) as data of 2015 is enclosed in EIA/EMP Report.
- (v). Traffic Assessment study with photographs of road and air pollution modelling due to increase traffic along with present of habitation shall be produced before EAC. High tonnage trucks should be considered to reduce the number of trucks.
- (vi). Values of PM10 are reported to be high. PP shall be present mitigation measures to reduce PM10 in details accordingly.
- (vii). Explore the possibility of conveyor belt for transportation of coal from mine pit to washery.
- (viii). Ground Water Recharge Estimation of buffer zone shall be done as per guidelines of GEC 2015 instead of 1997 guidelines.
- (ix). Air Quality modelling of pollutant PM2.5, SOx and NOx shall be submitted vis-à-vis its impacts/mitigation measures.
- (x). Permission of extraction of ground water intersection/extraction from Central Ground Water Authority shall be taken.

- (xi). Details of hazardous waste generation (if any) during washery operations and further handling/disposal shall be provided in details.
- (xii). Proposed plan for development of green belt shall be provided with fund allocated and year wise plantation plan.
- (xiii). Utilization of washery rejects in power plant shall be proposed accordingly plan for utilisation should be provided. EAC insisted that PP must follow up Ministry of Coal for finalisation of coal washery rejects policy.
- (xiv). Surface water quality of stored mine water shall be analysed and to be presented.
- (xv). Water balance considering usage of only stored mine water shall be presented. No other surface or ground water shall be used.
- (xvi). The activities and fund provisions for CER shall be made as per the guidelines issued by the ministry regarding CER on 1st May, 2018.

The proposal was accordingly **returned** in its present form.

Agenda No.53.3

Ramagundam Opencast-III Expansion-II Coal Mine Project from 6.30 (Peak 6.80) MTPA to 8.82 (Peak 9.52) MTPA in mine lease area of 2070.10 ha M/s Singareni Collieries Company Limited located near Jallaram Village Mandal Kamanpur District Peddapalli (Telangana) - Environmental clearance under the provision of clause 7(ii) of EIA Notification, 2006 - reg.

[Proposal No. IA/TG/CMIN/120211/2019;F.No.J-11015/43/2014-IA.II (M)]

53.3.1 The proposal is for grant of Environmental Clearance Ramagundam Opencast-III Expansion-II Coal Mine Project from 6.30 (Peak 6.80) MTPA to 8.82 (Peak 9.52) MTPA in an ML area of 2070.10 ha M/s Singareni Collieries Company Limited located near Jallaram Village Mandal Kamanpur District Peddapalli (Telangana), under the provision of clause 7(ii) of EIA Notification, 2006

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

- (i) The project area is covered under Survey of India Topo Sheet No. 56N/10 and is bounded by the geographical co-ordinates ranging from North latitude 18°40'57" to 18°42'46" and East Longitude 79°29' 58" to 79°34'15".
- (ii) Coal linkage of the mine is proposed as per Basket Linkage.
- (iii) Joint venture cartel has been formed - Not Applicable.
- (iv) Project does not fall in the Critically Polluted Area (CPA), where the MoEF&CC's vide its OM dated 13th January, 2010 has imposed moratorium on grant of environment clearance.
- (v) Employment generation, Permanent / Contractual employment to about 2330 persons out of which about 1780 permanent and 550 contractual (men on roll) will be provided from the project
- (vi) The project is reported to be beneficial in terms of socio-economic and improving living standards.
- (vii) Earlier, Environment clearance to the Mine: Environmental Clearance was obtained from MoEF&CC vide Lr. No J-11015/43/2013-1A.II(M), dated 11th May,2015 for a rated capacity of 6.30 MT(6.8 MT peak) in mine lease area of 2070.10 ha.

(viii) Ramagundam Opencast-III Expansion Phase-II Project is covered under two mining leases.

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

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

Pre-mining land use details (Area in ha)

Land owner hip	Land use	Extent ha)
Tenancy/Private Land	Agricultural	1532.43
	Grazing	54.05
	Roads	4.17
	Village	64.58
	Sub Total	1655.23
Government Land (Non- Forest)	Agriculture Land (Govt Assigned) - 55.38	
	Agriculture land (Govt Land) - 54.21	
	Township	24.37
	Grazing /other	54.11
	Barren	85.68
	Water bodies	141.12
	Sub Total	414.87
Forest		0.00
Grand Total		2070.10

Post Closure Land Use Details (Area in ha)

Sl. No.	Type	Plantation	Water Body	Public/ Company Use	Agricultural land	Total
1	Excavation/Quarry Area: ha	--				--
	a. Backfilled Area	558.41				558.41
	b. Excavated Void		671.00			671.00
	Sub-Total	558.41	671.00			1229.41
2	External Dump	474.50				474.50
	Sub-Total	474.50				474.50
3	Safety Zone /Rationalisation Area					
	a. Safe barrier & drain along the quarry	72.44	13.11	23.85	49.84	159.24
	Roads			14.10		
	Garland drains & Settling ponds		13.11			
	Berm			8.01		
	Railway Track			1.74		
	b. Safe barrier & drain along the external dump	31.16	4.05	10.49	31.50	77.20

	Roads			5.63		
	Garland drains& Settling ponds		4.05			
	Toe-wall			4.05		
	Railway Track			0.81		
4	Sub-Total	103.60	17.16	34.34	81.34	236.44
5	Diversion of nallah		33.71			33.71
6	Road & Infrastructure area (Service Buildings and CHP)			8.62	62.57	71.19
7	Embankment	24.85				24.85
	Total	1161.36	721.87	42.96	143.91	2070.10

- (x) Total geological reserves reported in the mine lease area are 317.96 Mt with 235.14 Mt mineable reserves. Out of this total mineable reserves 223.94 Mt are extractable, out of which 117.36 Mt were already extracted by UG and OC mining till the base date and 106.58 Mt are available for extraction by OC Mining. Percent of extraction is 70.43 %.
- (xi) 9 seams viz., 1A1, 1A3, 1, 2Top, 2Bot, 3B, 3A, 3, 4 are workable. Grade of coal ranges from G-9 to G-11 and Stripping ratio is 7.89 m³ of OB per 1 tonne of coal, while gradient is varying from 1 in 5.5 to 1 in 12.
- (xii) Method of mining operations envisages is by opencast method.
- (xiii) Life of mine is 13 years from 2018-19 (as per approved Mining plan).
- (xiv) The Project has one external OB dump in an area of 474.50 ha with 120m height and 449.03 Mm³. One internal dump in an area of 558.41 ha with 899.03 Mm³ with 120m height is envisaged in the project.
- (xv) Total quarry area is 1229.41 ha out of which backfilling will be done in 558.41 ha and 671 ha will be left as water body with a depth of 280 m. Backfilled quarry area of 558.41 ha shall be reclaimed with plantation.
- (xvi) Transportation of coal has been proposed by belt conveyors up to pit head, from surface to railway siding (RG OC –III CHP) by belt conveyors and from there by railway siding to end use by rail.
- (xvii) Reclamation Plan in an area of 2070.10 ha, comprising of 474.50 ha on external dump, 558.41 ha of internal dump, 236.44 ha of the safety zone/rationalization/others area. In addition to this, an area of 24.85 ha of the embankment area has also been proposed for green belt development will be reclaimed during the post closure stage. So, the cumulative plantation at Post closure stage is 1161.36 ha.
- (xviii) No forest land is involved in the project.
- (xix) No Ecologically sensitive area is in the buffer zone of the project boundary.
- (xx) The ground water level is reported to be varying between 1.97 m to 10.80 m during pre-monsoon and between 1.50 m to 9.96 m during post-monsoon. Total water requirement for the mine is about 5740 KLD.
- (xxi) Ground Water Clearance was issued by the State Government vide Memo Lr. No.3050/T/2014 dt.20.11.2014.
- (xxii) Public hearing was conducted on 06.08.2014 in the premises of GDK-8 Incline (Opposite to mines Rescue station) Jallaram village, Kamanpur mandal of karimnagar distict, Telangana state.
- (xxiii) Consent to Operate was obtained vide order No. 16052196979 dt. 01/10/2016 by TSPCB, Telangana state and is valid up to 31th March, 2021.

- (xxiv) No River/ major Nallahs/Streams are flowing across the boundary of the mining lease. However, a seasonal Jallaram Nallah is flowing along the south West to South East of the Mine which will be diverted as per the approved Mining plan.
- (xxv) Regular monitoring of ambient air quality is being carried out on fortnightly basis. The documented report is submitted to State Pollution Control Board and also to MoEF&CC along with half yearly EC compliance report. In general, the results of ambient air quality monitoring data were found within prescribed limits except few aberrations which can be attributed 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.
- (xxviii) The coal production from the mine was started from the year 2015-16 onwards. No excess production of coal from the sanctioned capacity has been realized since the commencement of mining operations.
- (xxix) The coal production, realized from the project, from 2015 onwards, is as furnished here under:

Year of Production	Sanctioned EC Capacity "Mt"	Actual Coal Production "Mt"
2015-16	6.80	5.00
2016-17		6.01
2017-18		6.80
2018-19		6.35

- (xxx) No additional PDFs are involved in present proposal and further R&R is not required.
- (xxxi) The additional capital cost for expansion is about 91.64 Cr, the cost of production as on Feb' 2019 is Rs.3592 per tonne. CSR cost is 2% of average net profits of the company during last three years which will be allocated for CSR at company level. An amount of Rs.21.53 Crores has been provided towards Environmental related cost.
- (xxxii) Consent to Operate was obtained vide order No. 16052196979 dt. 01/10/2016 by TSPCB, Telangana state and is valid up to 31th March, 2021.

52.3.6 During deliberations on the proposal, the EAC took note

The proposal is for grant of Environmental Clearance to Ramagundam Opencast-III Expansion-II Coal Mine Project from 6.30 (Peak 6.80) MTPA to 8.82 (Peak 9.52) MTPA in mine lease area of 2070.10 ha M/s Singareni Collieries Company Limited located near Jallaram Village Mandal Kamanpur District Peddapalli (Telangana) under clause 7(ii) of EIA Notification, 2006

Public hearing was conducted on 06.08.2014 in the premises of GDK-8 Incline (Opposite to mines Rescue station) Jallaram village, Kamanpur mandal of karimnagar distict, Telangana state.

Earlier, Environment clearance to the Mine: Environmental Clearance was obtained from MoEF&CC vide Lr. No J-11015/43/2013-1A.II(M), dated 11th May,2015 for a rated capacity of 6.30 MT(6.8 MT peak) in mine lease area of 2070.10 ha

Mining Plan (II Revision) including Mine Closure Plan for the project (8.82 MTPA (N) / 9.52 MTPA (P) in mine area of 2070.10 ha has been approved by Ministry of Coal vide its letter dated 17th June, 2019.

Compliance of EC conditions are certified by Regional Office, Chennai vide its Letter dated 23rd August, 2019. The Committee deliberated the compliance stratus and observed various non-compliance of EC conditions as identified by Regional Office, Chennai.

Further, PP submitted vide its letter dated 20th February, 2020 in pursuant to the OM dated 15th September, 2017. With respect to the clause 3 of para 3 of the said OM, it is to submit that deployment of Surface Miner is not technically feasible due to the following reasons given under:

Surface miner is an equipment which move on the coal face and cuts with the cutter drum provided at the bottom of the machine. The coal seam is required to be continuous, flat and easily cuttable for effective deployment of the machine. It is designed for thick seams to cut the coal layer by layer.

1. RG OC-III project is extraction of the coal in remnant pillars of the erst while underground mine. The coal seams are developed as 'board and pillar' where galleries are driven in the solid coal and the pillars formed are under extraction by opencast mining in the project. As such there will not be continuity of coal on the working bench. Hence surface miner, which require continuity for its movement cannot be deployed. There is danger of bogging of the surface miner in the developed galleries. The photograph showing the exposed coal bench with intermittent galleries of an underground mine converted to opencast is enclosed.

2. Surface miner require a large operating space for movement of the machine. The project is proposed for extraction of multiple seams numbering 9. Hence the area available for extraction of coal in each seam will be less at any one point of time. Hence there will not be sufficient working space for deployment of surface miner as the coal extraction is carried at multiple locations spread over in different parts of the mine.

3. The gradient of the coal seams is high i.e around 1:5.5 in most of the quarry. Surface miner is suitable for deployment in seams of mild gradient of 1:8.

4. Further six of the 9 seams are less than 1.5 m thickness. This coupled with steep gradient is not suitable for deployment of surface miner as it will result in huge contamination of coal.

5. For excavation of OB in the lower benches of the mine , dragline is deployed in this project, which is environmentally friendly (transportation of the material is avoided) where the OB on the immediate bench of the coal is directly dumped in the de-coaled area. However, this technology limits the available coal exposure at a time to a minimal extent, which is not suitable for deployment of surface miner. It is to submit that the advantage may gain by the deployment of surface miner will now be achieved through the dragline.

The appropriate technology for extraction of coal, considering all the aspects is critically

examined at the time of the preparation of the mining plan. The mining plan of RGOC-III is approved by the MoC, GoI with extraction of coal by shovel dumper combination after examining all technical matters thoroughly by the Technical committee and Standing committee constituted for approvals of the mining plans.

Further PP submitted the Compliance to Office Memorandum J11015/224/2015.-IA.II dated 15.09.2017

Condition	Status of Compliance
Compliance status of EC conditions monitored by the concerned Regional Office of this Ministry is found to be satisfactory.	<p>Compliance status of EC conditions was monitored by the Regional Office Chennai on 16.07.2019, the report was issued vide F.No.EP/12.1/52/A.P/1458 dated 23.08.2019.</p> <p>The compliance of the observations was sent to RO, Chennai, which in turn was forwarded to MoEF&CC vide e-mail dated 9th Dec, 2019 by RO. The Committee noted that there are non-compliances of earlier EC.</p>
Other statutory requirements like Consent to Establish/ Operate, Clearance from CGWA, approval of Mining Plan and the Mine Closure Plan, Mine Closure Status Report as applicable, Forest Clearance, etc are satisfactorily fulfilled.	<p>Consent to establishment: Consent Order for Establishment was granted vide order No.78/TSPCB/CFE /RORGM/HO/2015, dt. 09.11.2015 by TSPCB, Telangana state.</p> <p>Consent to operate: Consent Order for Operation was ranted vide order No.16052196979, dated 01st October, 2016 by TSPCB, Telangana state valid up to 31.03.2021.</p>
Other statutory requirements like Consent to Establish/ Operate, Clearance from CGWA, approval of Mining Plan and the Mine Closure Plan, Mine Closure Status Report as applicable, Forest Clearance, etc are satisfactorily fulfilled.	<p>Ground water clearance: Issued by the State Government vide Memo Lr. No. 3050/T/ 2014 dt.20.11.2014.</p> <p>Mining plan including mine closure plan: The Mining Plan (Including Mine Closure Plan) (2nd Revision/Modification) for RG OC-III Expn Mine was approved by MoC, GoI Vide. O.M.No.38011/12/2017-PCA, dated 17th June, 2019.</p> <p>Forest clearance: No Forest Land is involved in this project.</p>

The proposal is for one time capacity expansion of up to 40% in the existing coal mining operation.	This proposal is for one time capacity expansion from 6.3 (Peak 6.8) MTPA to 8.82 (Peak 9.52) MTPA in the existing coal mining operations.
There is no additional mine lease area involved	No additional mine lease area is involved.
There is no change in the mining method (underground to opencast).	There is no change in the mining method.
Details of the court cases, if any, pending in any court of Law against the project as well as directions passed by any court relating to the project shall be furnished by the proponent directly to the Environment Appraisal Committee (EAC). The EAC will deliberate upon the same and the gist of the discussion will be reflected in the minutes of the EAC meetings.	There is no court case pending in any Court of Law against the project.

Two public roads are proposed for diversion i.e. from the mine boundary at west side of the mine (connecting Peddapalli and Manthini and Godavarikhani Town – 1.4 km) and 8 incline colony to Godavrikhani via Vakilpally mine and GDK 11 Incline. – 3.2 km

53.2.4 The EAC, after detailed deliberation agreed the proposal @ 20% expansion, however while deliberating the compliance of EC which is very poor and as mentioned in Certified Compliance of RO, MoEFCC Chennai, there are 10 number of non-compliances reported during visit.

The EAC noted that PP has not yet obtained the permission for diversion of nalla (Jallaram nallah at two different places and road (Two public roads are proposed for diversion) involved in the proposal. Alternate access should be provided accordingly for public use before diversion of the road. Effect of diversion of jallaramvagu on river Godavari at siripuram village needs to be studied. Also height of OB dump is proposed to be about 120 above ground level, necessary permission is desired from DGMS for this. The Committee also noted that there are schedule –I species present in the study area. PP shall take the approval of the Wildlife conservation plan. The PP is operating the mine without the said approval.

The Committee deliberated the issues and **deferred** the proposal. The proposal may be considered after submission of the above necessary compliances.

Agenda No.53.4

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) - For Environmental Clearance – reg.

[Proposal No. IA/CG/CMIN/9723/2008; F.No. J-11015/958/2007-IA.II(M)]

53.4.1 The proposal is for Environmental Clearance of proposed 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).

53.4.2 The EAC during deliberations noted the following:-

The proponent was unable to present the proposal in absence of consultant who has prepared the EIA/EMP Report. Project proponent has requested the EAC to present the proposal with new consultant. Further, earlier Consultant of PP in its letter dated 20th February, 2020 has submitted NOC to present the proposal by other Accredited Consultant.

In view of above, the **proposal was returned** as it is for the needful by the project proponent and submission of revised report.

Agenda No. 53.5

Niljai Expansion (Deep) OC, with Expansion in Production Capacity from 3.50 MTPA to 4.90 MTPA in ML area of 1761.22 ha of M/s Western Coalfields Limited, located in Village Niljai & Ukni, Tehsil Wani District Yavatmal (Maharashtra) - For consideration of Environmental clearance under the provision of clause 7(ii) of EIA Notification, 2006 – reg.

[Proposal No IA/MH/CMIN/135418/2020; F.No. J-11015/261/2011-IA-II(M)]

53.5.1 The proposal is for obtaining Environmental Clearance for Niljai Expansion (Deep) OC involving expansion in capacity from 3.50 MTPA to 4.90 MTPA in area of 1761.22 ha of M/s Western Coalfields Limited located in Wani Tehsil of Yavatmal district (Maharashtra), under the provision of clause 7(ii) of EIA Notification, 2006

53.5.2 Details of the proposal, as ascertained from the proposal documents and also as informed during the meeting, are given as under:

- (i) The existing Niljai (Deep) OC has been granted environmental clearance vide ref no. J-11015/261/2011-IA.II (M) dated 12.10.2015 for Production capacity of 3.50 MTPA within existing EC area of 1761.22 ha.
- (ii) The project area is covered under Survey of India Topo Sheet No 56M/1 and is bounded by the geographical coordinates ranging from Latitudes: N 190, 57' 48" to N 200, 01' 41" Longitudes: E 790 03' 21" to 790 06' 33" (WGS – 84)
- (iii) Coal linkage of the project is from Thermal power plants of MAHAGENCO & Miscellaneous consumers. There is no Joint venture involved.
- (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: existing Manpower for the project is 1186 Nos as direct employment. And approx 300 contractual employment will be generate through outsourcing agency

- (vi) This project will bridge the gap (to the extent of the peak production capacity of the project) between demand & supply of non – coking coal for power plants & other bulk consumers from Western as well as Southern part of the country.
- (vii) Further CSR fund will be utilized in the 15 Km radius of the project which will add to the overall socio-economic development of the area. The commissioning of the project will create direct & indirect employment.
- (viii) The Mining Plan along with Mine closure Plan for Niljai Expansion (Deep) OC was approved by the WCL Board vide its letter ref no WCL/BD/SECTT/BM-315/2019/953 dated 12.10.2019.
- (ix) The certified compliance report for existing Environmental Clearance of Niljai (Deep) OC has been obtained from Regional Office, MoEF&CC, Nagpur. Field visit for ascertaining status of compliance of EC conditions was made from RO, MoEF&CC, Nagpur on 24.09.2019. Thereafter, the Certified Compliance Report was issued by the Regional Office of MoEF&CC, Nagpur vide letter no. File No.3-31/2009/(ENV)/5923 dated 27.11.2019.
- (x) The land usage pattern of the project is as follows:

Details of changes in land use is provided below:

Pre-mining land use details

	Land already acquired	Land to be acquired	Total
Tenancy Land	1457.63	198.89	1656.52
Government Land	95.53	9.17	104.70
Total	1553.16	208.06	1761.22

Land Use during Mining

SI No.	Particulars	Land Details (ha)
1	Quarry area	404.00
2	External OB Dump	315.47
3	Infrastructure including Road and Colony	2.00
4	Colony Area	60.00
5	Bellora Village Rehabilitation	43.00
6	Niljai Village Rehabilitation	26.00
7	Balance Excavation Area	184.64
8	Balance External OB Dump Area	370.73
9	Balance Rationalization / Blasting Area	257.38
10	Balance land for Infrastructure	18.00
11	Balance land for Approach Road / Embankment	80.00
	Total	1761.22

Post-mining land use details

Sl. No.	Land use during mining	Land use (ha)				
		Plantation	Water Body	Public use	Un-disturbed	Total
1	External OB Dump	587.80	0	0	0	587.80
2	Top soil dump	98.40	0	0	0	98.40

3	Excavation	120.11	468.53	0	0	588.64
4	Roads	0.62	0	0.98	0	1.60
5	Built up area	40.00	0	109.00	0	149.00
6	Green Belt	13.50	0	0	0	13.50
7	Undisturbed Area	217.38	0	0	73.10	290.48
8	Embankment around quarry	10.00	0	15.9	5.90	31.80
	Total	1087.81	468.53	125.88	79.00	1761.22

- (xi) Total extractable reserves has been considered in the project report of Niljai Deep OC (upto 01.04.2016) are 51.37 Mt, out of which 10.05 Mt has been extracted in 2016-17, 2017-18 & 2018-19. Total extractable reserves are 41.32 Mt. percentage of extraction is 95 %. The seam to be worked on is one composite seam. Thickness of Seams to be worked on are given below:-

Coal seam/Parting	Thickness range (m)	
	Minimum	Maximum
Composite Top Section (upper split)	0.20 m (NL-26)	1.99 m (CMWNJ-6)
Parting	0.30 m (NL-26)	1.27 m (MWNJ-8)
Composite Top Section (Middle split)	0.26 m (MWNJ-11)	1.05 m (MWNJ-10)
Parting	1.16 m (MWNJ-15)	3.02m (MWNJ-5)
Composite Top-Section (Lower split/merged)	5.98m (CMWNJ-3)	12.00 m (NL-21)
Parting	2.42m (NL-26)	5.77m (MWNJ-11)
Composite Bottom Section	6.45m (CMWNJ-3)	10.93 m (MWNJ-16)

- (xii) Grade of Coal GCV – 4790 Kcal/kg, G-9, stripping ratio 7.93 m³/t/.
- (xiii) Mining operations are undertaken by opencast method with shovel dumper Combination, it will continue during the expansion also
- (xiv) Life of mine: 09 years
- (xv) The total volume of additional OB proposed to be excavated as on 01.04.2019 is 357.97 Mm³. Simultaneous backfilling is in process. 13.74 Mm³ OB has been internally dumped. Internal dump is yet to achieve planned height for biological reclamation. Internal dump will be merged with external dump and will reach height of 90 m.
- (xvi) 587.80 ha land will be utilized for external dumping. External dump will be merged with internal dump, External dump of neighbouring Bellora – Naigaon OC and Ukni OC which would result in saving of 462 ha land from degradation.
- (xvii) Total quarry area is 588.64 ha. Out of total quarry area 120.11 ha has been proposed as internal dumping. Final mine void will be created in an area of 468.53 ha with a maximum depth of 200 m. Final mine void will be converted into water body.
- (xviii) Transportation of coal in pits by dumpers, from surface to Railway sidings by tippers. Coal will be transported in tarpaulin covered trucks to Ghughus Railway siding. The coal will be transported to Thermal power plants of MAHAGENCO and to Miscellaneous Consumers.
- (xix) Reclamation Plan/afforestation plan is for 1087.81 ha. It includes 587.80 ha of external OB dump, 98.40 ha of top soil dump, 120.11 ha on internal dump, 217.38

ha on undisturbed land, 13.50 ha green belt and 50.62 ha along embankment & infrastructure including along the road.

- (xx) No forest land has been reported to be involved in the project.
- (xxi) No National Parks, Wildlife Sanctuaries and Eco-Sensitive Zones have been reported with 10 km boundary of the project.
- (xxii) The ground water level has been reported to be varying between 4.35 m to 5.90 m during pre-monsoon and between 2.15 m to 3.25 m during post-monsoon (core zone). Total water requirement for the project is 2859 KLD.
- (xxiii) NOC for ground water abstraction has been applied vide 21-4/332/MH/MIN/2016 on 26.05.2016. The said proposal has been recommended by Regional Office (CGWB), Nagpur. The formal NOC letter from CGWA, New Delhi is awaited.
- (xxiv) Public Hearing has been conducted at Project Site on 29.11.2013 for local affected persons. The Public Hearing was conducted for production capacity 3.50 MTPA and EC area 1761.22 ha of Niljai (Deep) OC. The compliance against issues raised during public hearing along with the fund provision and timeline are provided in Chapter-7 of the EIA-EMP report.
- (xxv) Consent to Operate: Renewal of consent to operate for 3.50 MTPA has been approved by MPCB with a validity upto 31.03.2021 in its 19th CAC meeting held on 07.01.2020 against consent renewal application no. MPCB -CONSENT - 0000046121. However, formal issuance of consent letter is awaited.
- (xxvi) A water channel flows partly within the mine lease hold boundary (at the south eastern side) and drains into Wardha River and another water channel (garland drain) flows across the mine lease hold boundary
- (xxvii) Regular Monitoring Data has been documented. Which is found within permissible limits mostly.
- (xxviii) No court cases, violation cases are pending against the project of the PP pertaining to environment
- (xxix) The project does not involve violation of the EIA Notification, 2006 and amendment issued thereunder. No excess production of coal from the sanctioned capacity has been realized since inception.

Year	EC sanctioned capacity (MTPA)	Actual production (MTPA)	Excess production beyond the EC sanctioned capacity
2012-13	3.50	3.50	Nil
2013-14	3.50	3.30	Nil
2014-15	3.50	2.65	Nil
2015-16	3.50	3.50	Nil
2016-17	3.50	3.50	Nil
2017-18	3.50	3.50	Nil
2018-19	3.50	3.05	Nil
2019-20 (till 31.11.19)	3.50	1.51	Nil

- (xxx) Total cost- Rs 414.1063 Crores.
- (xxxi) Provision of Rs 8125.22 Lakhs has been made for the rehabilitation and resettlement for Ukni Village comprising of 1000 PAFs. Baseline Socio-economic survey report (including impact prediction and Rehabilitation action plan) of project affected area of Ukni village, tehsil-Wani District Yavatmal for Niljai expansion deep opencast mine of Wani Area is being carried through a reputed NGO. At present,

baseline survey completed. TILR survey is under progress. After completion of TILR survey & receipt, Rehabilitation Action Plan will be prepared.

53.6.6 During deliberations on the proposal, the EAC took note

The proposal is for grant of Environmental Clearance , under clause 7(ii) of EIA Notification, 2006 Niljai Expansion (Deep) OC, with Expansion in Production Capacity from 3.50 MTPA to 4.90 MTPA in ML area of 1761.22 ha of M/s Western Coalfields Limited, located in Village Niljai & Ukni, Tehsil Wani District Yavatmal (Maharashtra)

Public Hearing has been conducted at Project Site on 29.11.2013 for production capacity 3.50 MTPA and EC area 1761.22 ha of Niljai (Deep) OC

The Mining Plan along with Mine closure Plan for Niljai Expansion (Deep) OC was approved by the WCL Board vide its letter ref no WCL/BD/SECTT/BM-315/2019/953 dated 12.10.2019.

The certified compliance report for existing Environmental Clearance of Niljai (Deep) OC has been obtained from Regional Office, MoEF&CC, Nagpur. Field visit for ascertaining status of compliance of EC conditions was made from RO, MoEF&CC, Nagpur on 24.09.2019. Thereafter, the Certified Compliance Report was issued by the Regional Office of MoEF&CC, Nagpur vide letter no. File No.3-31/2009/(ENV)/5923 dated 27.11.2019.

Earlier, Environment clearance to the Mine: Environmental clearance vide ref no. J-11015/261/2011-IA.II (M) dated 12.10.2015 for Production capacity of 3.50 MTPA within existing EC area of 1761.22 ha.

The proposal for phase 2 i.e. from 4.5 to 4.9 MTPA will be only be considered if PP will use Surface miner for mining activity and inpit conveyor through silo loading for evacuation of coal from pit.

Further PP submitted the Compliance to Office Memorandum J11015/224/2015.-IA.II dated 15.09.2017

Sl.No	Particulars	Present Status	Proposal
1.	Predicted air quality parameters.	Presently air quality parameters are within limits.	An exercise for predicting the air quality level due to the proposed expansion has been carried out through AERMOD which shows that the predicted air quality levels may be marginally higher than the prescribed norms. Additional and Specific control measures have been proposed to maintain the air quality parameters within the prescribed norms.

2.	Coal transportation.	Coal Transportation upto Ghughus Railway Siding is through 9.73 Km Road out of which 7.98 Km of Road is Black Topped and remaining 1.75 Km road is concretized. Coal is transported through tarpaulin covered trucks.	Same will be continued.
3.	Coal mining methodology	Presently mine is operated through Shovel Dumper Combination.	Same will be continued.
4.	Public Hearing	Public Hearing has been conducted on 29.11.2013 at project site based on which EC was secured for 3.50 MTPA for EC area of 1761.22 ha under EIA Notification 2006.	No more area is required for the proposed expansion.
5	Compliance status of EC conditions monitored by the concerned regional office.	Compliance status of existing EC conditions (EC- Oct, 2015) has been monitored by the Regional Office of MOEF&CC, Nagpur vide its letter dated 27.11.2019. Out of total 70 EC conditions there was No Non-Compliance recorded. Seven partially complied conditions against the stipulated EC conditions have been recorded and ATR has been submitted vide letter dated 03.12.2019 against partially complied conditions.	

6.	Other statutory requirements like Consent to Establish/Operate, Clearance from CGWA, approval of Mining Plan & the Mine Closure Plan, mine closure status as applicable, Forest Clearance etc.	<u>Consent to Operate:</u> CTO valid upto 31-03-2021. <u>Clearance from CGWA:</u> Application for grant of NOC for dewatering of Groundwater has been applied vide 21-4/332/MH/MIN/2016 on 26.05.2016. Recommended for grant of NoC. Formal NoC wait from CGWA <u>Approval of mining plan & the mine closure plan:</u> A mining plan has been prepared for the enhancement of production capacity from 3.50 to 4.90 MTPA within the existing EC area of 1761.22 ha and it has been approved by WCL board in its 315 th meeting held on 27/28.09.2019 vide letter dated 12.10.2019. The aforesaid mining plan has in-built mine closure plan also. <u>Forestry Clearance:</u> Project does not involves forest land.
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It is noted that Maharashtra State Pollution Control Board has approved renewal of Consent to operate upto 31st March, 2021. However, CTO letter has not been issued to project proponent.

The EAC, constituted under the provision of the EIA Notification, 2006 and comprising of Experts Members/domain experts in various fields, have examined the proposal submitted by the Project Proponent in desired form along with report prepared and submitted by the Consultant on behalf of the Project Proponent.

The EAC noted that the Project Proponent has given undertaking that the data and information given in the application and enclosures are true to the best of his knowledge and belief and no information has been suppressed in the report. If any part of data/information submitted is found to be false/ misleading at any stage, the project will be rejected and Environmental Clearance given, if any, will be revoked at the risk and cost of the project proponent.

The Committee noted that the report is in compliance for the project, reflecting the present environmental concerns and the projected scenario for all the environmental components. 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 Experts Members of the EAC have found the proposal in order and have recommended for grant of Environmental Clearance (EC).

53.2.4 The EAC, after detailed deliberation, **recommended** the proposal for grant of environmental clearance to Niljai Expansion (Deep) OC, with Expansion in Production Capacity from 3.50 MTPA to 4.50 MTPA in ML area of 1761.22 ha of M/s Western Coalfields Limited, located in Village Niljai & Ukni, Tehsil Wani District Yavatmal (Maharashtra), under the provision of clause 7(ii) of EIA Notification, 2006 and under the provisions of the 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 from the State Pollution

Control Boards for the proposed peak capacity of 4.5 MTPA (Peak) prior to commencement of the increased production.

- (ii) Transportation of coal from Coal Handling Plant shall be through covered trucks.
- (iii) To control the production of dust at source, the crusher and in-pit belt conveyors shall be provided with mist type sprinklers.
- (iv) 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.
- (v) Continuous monitoring of occupational safety and other health hazards, and the corrective actions need to be ensured.
- (vi) Persons of nearby villages shall be given training on livelihood and skill development to make them employable.
- (vii) Thick green belt of adequate width at the final boundary in the down wind direction of the project site shall be developed to mitigate/check the dust pollution.
- (viii) 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.
- (ix) Distance from the mine and OB Dump shall be 150 m away from Wardha river all along the bank of river.
- (x) The company shall obtain approval of CGWA for use of groundwater for mining operations at its enhanced capacity of 4.5 MTPA (Peak).
- (xi) Continuous monitoring of occupational safety and other health hazards, and the corrective actions need to be ensured.
- (xii) A third party assessment of EC compliance shall be undertaken once in three years through agency like ICFRI /NEERI/IIT or any other expert agency identified by the Ministry.
- (xiii) Active OB Dump should not be kept barren/open and should be covered by temporary grass to avoid air born of particles
- (xiv) Compliance of the non-compliance/partial compliance conditions certified by Regional Office, Nagpur vide its Letter dated 27th November, 2019. The PP shall complete all non-compliance/partial compliance conditions in one year and the Action taken report shall be submitted to the Regional Office of the MoEFCC.
- (xv) Project proponent to plant 100,000 nos. of native trees with broad leaves along the villages and 50,000 nos of native trees along transportation route to prevent the effect of air pollution in 2 years. After completion of tree plantation, number of trees shall be duly endorsed from District Forest Officer.
- (xvi) The activities and fund provisions for CER shall be made as per the guidelines issued by the ministry regarding CER on 1st May, 2018.
- (xvii) 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.
- (xviii) The Project Proponent shall complies with all the statutory requirements and judgment of Hon'ble Supreme Court dated the 2nd August 2017 in Writ Petition (Civil) No. 114 of 2014 in the matter of Common Cause versus Union of India and Ors. State Government shall ensure that the entire compensation levied, if any, for

illegal mining paid by the Project Proponent through their respective Department in strict compliance of judgment of Hon'ble Supreme Court dated the 2nd August 2017 in Writ Petition (Civil) No. 114 of 2014 in the matter of Common Cause versus Union of India and Ors.

- (xix) Project Proponent shall obtain the necessary prior permission from the Central Ground Water Authority (CGWA) in case of intersecting the Ground water table. The intersecting ground water table can only be commence after conducting detailed hydrogeological study and necessary permission from the CGWA. The Report on six monthly basis on changes in Ground water level and quality shall be submitted to the Regional Office of the Ministry, CGWA and State Pollution Control Board.
- (xx) 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 antsnake venom including all other paramedical safeguards may be ensured before initiating the mining activities.
- (xxi) 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".
- (xxii) 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.
- (xxiii) 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 prepared and 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.
- (xxiv) Hon'ble Supreme Court in an Writ Petition(s) Civil No. 114/2014, Common Cause vs Union of India & Ors vide its judgement dated 8th January, 2020 has directed the Union of India to impose a condition in the mining lease and a similar condition in the environmental clearance and the mining plan to the effect that the mining lease holders shall, after ceasing mining operations, undertake re-grassing the mining area and any other area which may have been disturbed due to their mining activities and restore the land to a condition which is fit for growth of fodder, flora, fauna etc. Compliance of this condition after the mining activity is over at the cost of the mining lease holders/Project Proponent". The implementation report of the above said condition shall be sent to the Regional Office of the MoEFCC.

Agenda No.53.6

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

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

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

53.6.2 Details of the proposal, as ascertained from the proposal documents and also as informed during the meeting, are given as under:

- (i) The existing Yekona-I OC and Yekona-II OC mines have been granted environmental clearance vide letter EC sanctioned vide letter J-11015/175/ 2006-IA.II(M) Dated-17 October, 2006(production capacity- 0.40 MTPA within ML area of 265.50 ha) and letter J-11015/182/2006-IA.II(M) Dated-17 October, 2006 (production capacity- 0.60 MTPA within ML area of 414.56ha) respectively.
- (ii) The existing mines are proposed to be amalgamated with increasing in Capacity from 1.0 MTPA to 2.75 MTPA (Normative) and 3.44 MTPA (Peak) & Expansion in Land Area from 680.06 ha to 1679.39 ha in Phase-I
- (iii) The proposal was granted ToR vide MoEF&CC vide letter no J-11015/381/2015.IA-II (M) dated 06.06.2016 for Amalgamated Yekona I & II OC involving increase in production capacity from 1.00 MTPA to 3.44 MTPA (peak) and increase in ML area from 680.06 ha to 1701.32 ha based on the approved Project Report. MoEF&CC accorded approval for extension of validity of ToR dated 6th June, 2016 for Amalgamated Yekona I & II OC for a period of 1 year i.e. up to 6th June, 2020 vide MoEF&CC letter no J-11015/381/2015.IA-II (M) dated 21.06.2019.
- (iv) The project area is covered under Survey of India Topo Sheet No55L/15 & 55L/16 and is bounded by the geographical coordinates ranging from Latitudes N 20° 13' 39" to 21° 16' 14" N and longitudes E 78° 55'25" to 78° 58' 24" E
- (v) Coal linkage of the project was for Thermal power plants of MAHAGENCO & Miscellaneous consumers. There is no Joint venture involved
- (vi) 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
- (vii) Employment generation: Required Manpower for the project is 257 Nos(Departmental)
- (viii) This project will thus bridge the gap (to the extent of the peak production capacity of the project) between demand & supply of non – coking coal for power plants & other bulk consumer.
- (ix) The Project Report (including Mining Plan) of Amalgamated Yekona I & II OC was duly approved by CIL Board for normative capacity of 2.75 MTPA and peak capacity of 3.44 MTPA within area of 1701.32 ha in its 319th meeting held on 12.08.2015 as

communicated by Company Secretary, CIL vide its letter no. CIL: XI(D):04112:2015:10875 dated 26.08.2015.

- (x) Total mining lease area is increased from 680.06 ha to 1679.39 ha. The Mining Plan (including Mine Closure plan) of Amalgamated Yekona I & II OC Mine Phase-I of Majri Area was duly approved by WCL Board for Phase-I in its 315th meeting held on 27th & 28th September, 2019 vide its letter no. WCL/BD/SECTT/BM-315/2019/958 dated 12.10.2019

S.N	LAND USE	Within ML Area (ha)	Outside ML Area (ha)	Total
1	Agricultural land	1570.31	50.49	1620.80
2	Forest land	--	--	--
3	Waste land/Govt. land	58.59	-	58.59
4	Grazing land	--	--	--
5	Surface water bodies	--	--	--
6	Settlements	--	--	--
7	Others (specify)	--	--	--
	Total	1628.90	50.49	1679.39

- (xi) RO, MoEF&CC, Nagpur made field visit of Yekona I & II OC mine for ascertaining status of compliance of EC conditions on 26.06.2019. The Certified Compliance Report was issued by the Regional Office of MoEF&CC, Nagpur vide letter no. EC-1016/RON/2019-NGP/5622 dated 19.08.2019. Subsequently, Action Taken Report on the partial compliances has been submitted to RO, MoEF&CC vide letter no. 150 dated 23.08.2019.
- (xii) The Phase-I of Project is only an interim arrangement for working without inclusion of forest land. However, as the forestry clearance is obtained, the mine will continue as per the approved Project Report with total ML Area of 1701.32 ha. Fresh EC will be secured dovetailing the land area of 21.93 ha (total remaining 1701.32 ha as per TOR) as Phase-II. Accordingly, the breakup of land use during mining, post mining land use, Stage-wise land use reclamation and Stage-wise plantation programme are detailed below for total ML area of 1701.32 ha.
- (xiii) Pre-mining land use for Amalgamated Yekona I & II OC (Phase-I)

For Amalgamated Yekona I & II OC

Sr No.	LAND USE	Within ML Area (ha)	Outside ML Area (ha)	Total
1	Agricultural land	1590.62	50.49	1641.11
2	Forest land	0.62	--	0.62
3	Waste land/Govt. land	59.59	-	59.59
4	Grazing land	--	--	--
5	Surface water bodies	--	--	--
6	Settlements	--	--	--
7	Others (specify)	--	--	--
	Total	1650.83	50.49	1701.32

Land Use During Mine:

Sl. No	Particulars	Area (ha)
1.	Quarry/ excavated Area (including existing quarry)	689.20
2.	External OB dump	320.02
3.	Nalla Diversion and existing Nalla& Irrigation Canal	58.35
4.	Residential Colony (Approximately)	10.00
5.	Roads, Road diversion and Barriers due to roads (Approximately)	30.00
6.	Infrastructure and service roads (Approx.)	100.00
7.	Flood protection embankment	44.37
8.	Land for relocation of Marda village	8.00
9.	Railway siding and its Approach road	30.00
10.	Blasting / Safety zone along quarries and external dump	270.00
11.	Rationalization of boundary	141.38
	Total	1701.32

Post Mining Land Use details:

S.N.	Land use during mining	Land use (ha)				
		Plantation	Water Body	Public use	Undisturbed	Total
1	External OB Dump	320.02	--	--	--	320.02
2	Top soil dump	--	--	--	--	--
3	Excavation	352.00	337.20	--	--	689.20
4	Roads	5.00	--	25.00	--	30.00
5	Built up area	70.00	--	122.37	--	250.72
5a	Nalla and Canal Diversion	--	58.35	--	--	58.35
6	Green Belt	Included in S. No. 4, 5 & 7				
7	Undisturbed Area	100.00	--	--	311.38	411.38
	Total	847.02	395.55	147.37	311.38	1701.32

(xiv) Total geological reserve reported in the mine lease area is 78.62 MT with 67.65 Mt mineable reserve. Extractable reserves are 57.85 Mt. Percent of extraction is 73.58 %.

(xv) There is one composite seam with multiple sub sections Sequence of Coal Seams in the Yekona-I OC and Yekona-II OC blocks are given below. Sequence of Coal Seams in Yekona-I Block:

(xvi) Grade of Coal GCV – 4920 Kcal/kg, G8, stripping ratio 1: 7.82 m³/t

(xvii) Mining operations undertaken by opencast method with shovel dumper Combination and Surface Miner.

(xviii) Life of mine: 25 years

(xix) The project will have two nos. internal dumps in an area of 352.00 ha with Maximum height of 90 m above ground level and quantity of 322.53 Mm³ of OB. A total seven nos of external OB dumps are envisaged including 4 temporary dumps to be rehandled within total area of 320.02 ha and upto the height of 90 m above ground level and quantity of 133.50 Mm³ of OB (including embankment). 2.42 Mm³ OB will be utilized in construction of Embankment.

- (xx) Total quarry area is 689.20 ha. Backfilled quarry area of 352.00 ha shall be reclaimed with plantation. Final mine void will be created in an area of 337.20ha with a maximum depth of 150 m. Final mine void will be converted into water body.
- (xxi) Transportation of coal in pits by dumpers, from surface to Railway sidings by tippers. The coal will be transported to Thermal power plants of MAHAGENCO and to Miscellaneous Consumers. Railway Siding is proposed for the project.
- (xxii) Reclamation Plan/afforestation plan is for 847.02 ha. It includes 320.02 ha of external OB dump, 352.00 ha of internal dump, 100 ha on undisturbed land and 5 ha along roads & infrastructure.
- (xxiii) No forest land has been reported in the Phase-I of the project.
- (xxiv) No National Parks, Wildlife Sanctuaries and Eco-Sensitive Zones have been reported with 10 km boundary of the project. The presence of Schedule-I species Great Indian Bustard has been reported within the study area.
- (xxv) The ground water level has been reported to be varying between 7.75 to 10.64 m during pre-monsoon and between 4.65 to 8.10 m during post-monsoon (core zone). Total water requirement for the project is 810 KLD.
- (xxvi) CGWA NOC: NOC from CGWA has been secured for abstraction of ground water vide its letter CGWA/ NOC/ MIN/ ORIG/ 2019/ 6689 dated 19.11.2019.
- (xxvii) Public Hearing has been conducted on 14.06.2019 for proposed conversion of Amalgamated Yekona I & II OCP at Mine Manager Office Premises, Yekona OC, WCL, Tal. Warora, Dist. Chandrapur. The minutes of meeting was received from Maharashtra Pollution Control Board vide letter MPCB/SROC-3929/2019 dated 23.07.2019. The ATR against issues raised during public hearing along with the fund provision and timeline are provided in Chapter-7 of the EIA-EMP report.
- (xxviii) The CTE for the Yekona-I OC has been granted by Maharashtra Pollution Control Board vide consent no BO/RO(P&P)/CC-330 dated 13.03.2006. However, mining activities could not be started due to delay in physical possession of land. The application for CTO of Yekona-I OC has been made by Project Proponent on 18.02.2019 for the period of 01.04.2019 to 31.03.2020 (Application no - UAN No. 67296). The application under consideration at Maharashtra Pollution Control Board. The mining operations in Yekona-I OC are likely to be commenced before March'20.
- (xxix) The mining operations has been started by 26th October 2017 within the Yekona – II OC in accordance with the EC dated 06.10.2006. The Yekona – II OC mine has been granted CTE by Maharashtra Pollution Control Board vide consent no BO/RO(P&P)/CC-328 dated 13.03.2006 for production capacity of 0.60 MTPA. CTO for Yekona-II OC mine for production capacity of 0.60 MTPA within ML area of 414.56 ha was granted by MPCB vide consent order no:-BO/JD(APC)/EIC No: CH-1781-15/O/CC-6269 dated 12.05.2016 with validity till 31.08.2020.
- (xxx) A seasonal nallah flowing in the eastern boundary of the mine will be diverted along the mine boundary. An irrigation canal passing through the project area will also be diverted along the southern boundary of OCP.
- (xxxi) NOC from CGWA has been secured for abstraction of ground water vide its letter CGWA/NOC/MIN/ORIG/2019/6689 dated 19.11.2019.
- (xxxii) Baseline for Ambient Air Quality has been generated from Oct' 2016 to Dec' 2016 in the Post monsoon season. The results were found to be within prescribed limits. The regular environment monitoring is being done continuously in the core and buffer zone of the project. In continuation with regular environmental monitoring, monitoring at five locations at baseline frequency i.e twice a week has been started

from Jan'2020 and will be continued for twelve weeks. Additional three stations have also been added from Feb'2020

(xxxiii) No court cases, violation cases are pending against the project of the PP pertaining to environment.

(xxxiv) The project does not involve violation of the EIA Notification, 2006 and amendment issued thereunder. No excess production of coal from the sanctioned capacity has been realized in Yekona-I and Yekona-II OC mines since grant of EC in 2006

(xxxv) Details of actual coal production vis-à-vis sanctioned capacity since the inception of mines Yekona-I OC

Financial Year	Sanctioned Capacity as per EC (MTPA)	Sanctioned capacity as per CTO	Sanctioned capacity as per approved Mining Plan	Actual Production	Excess Production Beyond the EC / CTO / Mining Plan Sanctioned Capacity (MTPA)
2006-07 to 2018-19	0.40	Nil	0.40	Nil	Nil

Yekona-II OC

Financial Year	Sanctioned Capacity as per EC (MTPA)	Sanctioned capacity as per CTO	Sanctioned capacity as per approved Mining Plan	Actual Production	Excess Production Beyond the EC / CTO / Mining Plan Sanctioned Capacity (MTPA)
2006-07 to 2017-18	0.60	0.60	0.60	Nil	Nil
2018-19	0.60	0.60	0.60	0.11	Nil

(xxxvi) The project involved 797 project affected families. A Capital provision of Rs. 41.1908 crores has been made in approved Project Report for resettlement of Marda Village.

(xxxvii) Total capital cost of the project is Rs. 745.8313 Crores. Capital cost on Environment management plan is Rs 97.09 Lakhs. Revenue cost on EMP will be 6 Rs/tonne. CSR fund will be utilized in the 15 Km radius of the project which will add to the overall socio-economic development of the area. The commissioning of the project will create direct & indirect employment.

53.6.3 The EAC during deliberations noted the following: -

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

No forest land is involved this proposal.

The existing Yekona-I OC and Yekona-II OC mines have been granted environmental clearance vide letter J-11015/175/ 2006-IA.II (M) for 0.40 MTPA within ML area of 265.50 ha and letter J-11015/182/2006-IA.II(M) for 0.60 MTPA within ML area of 414.56 ha respectively on 17th October, 2006.

The proposal was granted ToR vide Ministry's letter no J-11015/381/2015.IA-II (M) dated 6th June, 2016 for Amalgamated Yekona I & II OC involving increase in production capacity from 1.00 MTPA to 3.44 MTPA (peak) and increase in ML area from 680.06 ha to 1701.32 ha based on the approved Project Report. Ministry accorded approval for extension of validity of ToR dated 6th June, 2016 for Amalgamated Yekona I & II OC for a period of 1 year i.e. up to 6th June, 2020 vide MoEF&CC letter no J-11015/381/2015.IA-II (M) dated 21.06.2019.

Public Hearing has been conducted on 14.06.2019 under the chairmanship of Additional District Magistrate for proposed project at Mine Manager Office Premises, Yekona OC, WCL, Tal. Warora, Dist. Chandrapur. The minutes of meeting was received from Maharashtra Pollution Control Board vide letter MPCB/SROC-3929/2019 dated 23.07.2019.

A seasonal nallah flowing in the eastern boundary of the mine will be diverted along the mine boundary. An irrigation canal passing through the project area will also be diverted along the southern boundary of OCP.

Baseline for Ambient Air Quality has been generated from October-2016 to December - 2016 in the Post monsoon season which is not as per Ministry's guidelines

The Project Report (including Mining Plan) of Amalgamated Yekona I & II OC was duly approved by CIL Board for normative capacity of 2.75 MTPA and peak capacity of 3.44 MTPA within area of 1701.32 ha in its 319th meeting held on 12.08.2015 as communicated by Company Secretary, CIL vide its letter no. CIL: XI(D):04112:2015:10875 dated 26.08.2015.

RO, MoEF&CC, Nagpur made field visit of Yekona I & II OC mine for ascertaining status of compliance of EC conditions on 26.06.2019. The Certified Compliance Report was issued by the Regional Office of MoEF&CC, Nagpur vide letter no. EC-1016/RON/2019-NGP/5622 dated 19.08.2019. Subsequently, Action Taken Report on the partial compliances has been submitted to RO, MoEF& CC vide letter no. 150 dated 23.08.2019

The EAC, constituted under the provision of the EIA Notification, 2006 and comprising of Experts Members/domain experts in various fields, have examined the proposal submitted by the Project Proponent in desired form along with EIA/EMP report prepared and submitted by the Consultant accredited by the QCI/ NABET on behalf of the Project Proponent.

The EAC noted that the Project Proponent has given undertaking that the data and information given in the application and enclosures are true to the best of his knowledge and belief and no information has been suppressed in the EIA/EMP report and public

hearing process. If any part of data/information submitted is found to be false/misleading at any stage, the project will be rejected and Environmental Clearance given, if any, will be revoked at the risk and cost of the project proponent.

The Committee noted that the EIA/EMP report is in compliance of the ToR issued for the project, reflecting the present environmental concerns and the projected scenario for all the environmental components. 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 Experts Members of the EAC have found the proposal in order and have recommended for grant of Environmental Clearance (EC).

53.6.4 The EAC, therefore, after deliberations observed the following observation and desired that PP should submit the details for further consideration of the project.

- (i). PP shall revise the approved mine plan for including proposed peak capacity calendar program of the Mine Plan (including Mine closure Plan)
- (ii). Air Quality data of PM10, PM2.5 at certain monitoring stations are high. PP must provide extra mitigation measures to reduce the dust pollution viz-a-viz impact on nearby villages.
- (iii). PP shall conduct baseline monitoring for two months on same monitoring station for comparison with the monitoring data (as in EIA)
- (iv). Approved Wildlife Conservation Plan for identified schedule I species should be submitted.
- (v). PP shall carryout Air Quality modelling for SOx and NOx and report on its impact and mitigation should be prepared
- (vi). Permission for disposal of OB dump to create Embankment along with the bank of river shall be taken from concerned authority of state government.
- (vii). Permission for diversion of irrigation canal and its impact on hydrogeology shall also be studied.
- (viii). The company shall obtain approval of CGWA for use of groundwater for mining operations at its enhanced capacity.
- (ix). The activities and fund provisions for CER shall be made as per the guidelines issued by the ministry regarding CER on 1st May, 2018.
- (x). PP shall provide action plan with timeline for partial compliances reported in Certified compliance report by Ministry's Regional Office dated 19th August, 2019.

The Proposal was **deferred**.

Agenda No.53.7

Amrapali Opencast Coal Mine from 12 MTPA to 16.8 MTPA in an ML area of 619.87 ha of M/s Central Coalfields Limited located in District Chatra (Jharkhand) – For Environmental Clearance under Clause 7(ii) of the EIA Notification, 2006.

[Proposal No. IA/JH/CMIN/123390/2019; F.No. J-11015/109/2003-IA. II(M)]

53.7.1 The proposal is for Environmental Clearance for Amrapali Opencast Coal Mine project of Amrapali Opencast Coal Mine from 12 MTPA to 16.8 MTPA in an ML area of 619.87 ha of M/s Central Coalfields Limited located in District Chatra (Jharkhand).

53.7.2 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) The project area is covered under Survey of India Topo Sheet No: 73-A/13 and is bounded by the geographical coordinates ranging from 23°51'31" to 23° 53'38"N latitude 84° 58'35" to 85° 02' 07" E longitude.
- (ii) Coal linkage of the project is proposed for generation of Energy Sector for various customers through Basket linkage. At present coal is being transported through Shivpur railway siding. A new railway siding, Amrapali siding adjacent to the mine boundary is under commissioning. In future, it is proposed to dispatch coal through Amrapali railway siding.
- (iii) Project does not fall in the Critically Polluted Area (CPA), where the MoEF&CC vide its OM dated 13th January 2010 has imposed moratorium on grant of environment clearance.
- (iv) Employment generation: The project has given a boost to the economy of the area by providing primary and secondary employment to local people. Total number of permanent & temporary employment is approximately 650.
- (v) The project is reported to be beneficial in terms of improvements in Physical Infrastructure; Improvements in Social Infrastructure; Increase in Employment Potential; Contribution to the Exchequer; Meet energy and steel sector requirement; Productive utilization of existing manpower of project.
- (vi) Earlier, the environment clearance to the project was obtained under EIA Notification-1994 vide Ministry's letter No J-11015/109/2003-IA.II(M) dated: 03.01.2006 for 12 MTPA in project area of 1426.08 Ha. MoEF&CC through its notification vide no: S.O 1530 (E) dt. 16.04.2018 has directed that "The mining projects which were granted EC under EIA notification 1994 and but not obtained EC for expansion/ modernization/ amendment under the EIA notification 2006 shall make an application in Form I within six months from the date of issue of this notification for grant of EC under the provisions of the EIA notification, 2006". EAC(Coal) has recommended for revalidation of the environmental clearance Dated: 03.01.2006, as mandated under the Ministry's Notification dated 6th April, 2018.
- (vii) Mining Plan (including Progressive Mine Closure Plan) has been approved by the CCL Board meeting held on 04.11.2019.
- (viii) The land usage pattern of the project is as follows:

Pre-mining land use details:

Description	Forest Area in Ha.	Non-Forest Area in Ha.	Total Area in Ha.
Quarry	392.75	32.47	425.22
Dump	60.14	29.02	89.16
Nala	2.85	0.25	3.10
Workshop	14.48	0	14.48
Chp	6.27	0	6.27
Sub Stn./Office	6.00	0	6.00
Haul Road	30.00	4.00	34.00
Safety Zone	4.70	14.22	18.92

Embankment/Garland Drain/ Diversion Of Public Road	14.45	8.27	22.72
Total	531.64	88.23	619.87

Post-mining land use details:

Description	Total Area in Ha	Description	Total Area in Ha
Quarry	425.22	Plantation on backfilled area	271.71
		Void	153.51
Dump	89.16	Plantation on External Dump	89.16
Nala	3.10	Nala	3.10
Workshop	14.48	Industrial Area	26.75
Chp	6.27		
Sub Stn./Office	6.00		
Haul Road	34.00	Haul Road	34.00
Safety Zone	18.92	Plantation on Safety Zone/Green belt	18.92
Embankment/Garland Drain/ Diversion Of Public Road	22.72	Embankment/Garland Drain/ Diversion Of Public Road	22.72
Total	619.87	Total	619.87

- (ix) Total geological reserve is 486.50 MTe in Amrapali Block and 203.31 Mtes in Kishanpur Block. The mineable reserve is 114.59 MT, extractable reserve is 114.59 MT. The percent of extraction would be 100 %.
- (x) 08 seams with thickness ranging from 1 m – 20 m are workable. Grade of coal is Grade-F, stripping ratio 0.99, while gradient is 3° to 7°.
- (xi) The method of mining would be opencast method of mining with Surface miner and shovel-dumper combination.
- (xii) The balance life of mine is 9 years.
- (xiii) The project has 1 external OB dumps in an area of 89.16 Ha with 60 m height and 16.86 Mm³ of OB. 2 internal OB in an area of 271.71 ha with 109.62 Mm³ of OB is envisaged in the project.
- (xiv) Total Quarry area is 425.22 Ha. The final mine void would be in 153.50 Ha with depth an average up to 90 m below GL. Backfilled quarry area of 271.71 Ha shall be reclaimed with plantation. Final mine void will be converted into water body.
- (xv) Transportation of coal has been proposed by dumper from mine pithead, from surface to siding by tipping trucks.
- (xvi) Reclamation Plan in an area of 379.25 Ha, comprising of 89.16Ha of external dump, 271.71 Ha of internal dump and 18.92 ha of green belt & safety zone.
- (xvii) 531.64 ha of forestland has been reported to be involved in the project. Approval under the Forest (Conservation) Act, 1980 for diversion of 531.64 Ha of forestland for non-forestry purposes has been obtained vide MoEF&CC letter No. F.No.8-48/2008-FC Dt.12.10.2010.
- (xviii) No National Parks, Wildlife Sanctuaries and Eco-Sensitive Zones have been reported with 10 km boundary of the project.

- (xix) The ground water level has been reported to be varying between 6.50 m to 10 m during pre-monsoon and between 0.95 m to 6.50 m during post-monsoon. Total water requirement for the project is 3357 KLD.
- (xx) Application for obtaining the approval of the Central Ground Water Authority has been submitted vide no: 21-4/328/JH/MIN/2018 Dated: 29.12.2018.
- (xxi) Public hearing for the project of 12 MTPA capacity in an area of 1426.08 Ha was conducted on 02.03.2003. Major issues raised in the public hearing include mitigation of air & water pollution, compensation, employment opportunity, medical facilities & provision of drinking water etc. Appropriate action to address the issues raised in the Public Hearing have already been taken.
- (xxii) Consent to Operate for the existing capacity was obtained from the Jharkhand State PCB on 30.06.2019 and is valid till 30.06.2020.
- (xxiii) Chundru and Barki rivers flowing west to east and north to south respectively control the drainage of the block. The Barki River marks the eastern boundary of the property with a safe distance of about 100 mtrs.
- (xxiv) Regular monitoring of ambient air quality is being carried out on fortnightly basis. The documented report is submitted to JSPCB and also to MoEF&CC along with half yearly EC compliance report. In general, the results of ambient air quality monitoring data were found within prescribed limits except few aberrations, which can be attributed to the specific local conditions during the day of sampling.
- (xxv) No court cases or violation cases are pending against the project of the PP.
- (xxvi) 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 2013-14 onwards. No excess production of coal from the sanctioned capacity has been realized since the commencement of mining operations. The coal production, realized from the project, from 1993-94 onwards, is as under:

Year	Coal (Million tes)	OBR(Mcum)
2013-14	-	2.54
2014-15	2.55	17.74
2015-16	4.79	6.24
2016-17	6.23	4.19
2017-18	6.5	6.965
2018-19	10.2	12.2

- (xxvii) The project involves 452 project-affected families. R&R of the PAPs will be done as per R&R Policy of CIL.
- (xxviii) Total cost of the project is Rs. 85,811 Lakhs. Environment Management Cost is Approximately Rs. 8,900 lakhs.

53.7.3 During deliberations on the proposal, the EAC took note

The proposal is for grant of Environmental Clearance, under clause 7(ii) of EIA Notification, 2006 to Amrapali Opencast Coal Mine from 12 MTPA to 16.8 MTPA in an ML area of 619.87 ha of M/s Central Coalfields Limited located in District Chatra (Jharkhand).

Public hearing for the project of 12 MTPA capacity in an area of 1426.08 Ha was conducted on 2nd March, 2003. Appropriate action to address the issues raised in the Public Hearing have already been taken. Further during revalidation of EC under

Ministry's Notification dated 6th February, 2018, Public Notice was issued on 07.08.2019 in 3 newspapers in Hindi & English language.

The Mining Plan along with Mine closure Plan for Amrapali OCP was approved by the M/s CCL Board on 4th November, 2019 in the 479th Board meeting. Letter issued on 29th November, 2019

The certified compliance report for existing Environmental Clearance of submitted by Regional Office, Ranchi of MoEF&CC vide no: 103-80/05/EPE/3638 Dated: 04.12.2019. The Committee deliberated the compliance stratus and observed various non-compliance/partial compliances of EC conditions as identified by Regional Office, Chennai.

As per Regional Office Report, Ministry under section 5 of Environment (Protection) Act, 1986 had issued show cause notice dated 12th December, 2018 to the project for non-compliances/partial compliances of the Environmental Conditions contained in the EC

Further PP submitted the Compliance to Office Memorandum J11015/224/2015.-IA.II dated 15.09.2017

Sr. No.	Requirements of Office Memorandum	Compliance
1	Predicted air quality parameters are within the prescribed norms	Complied. 1. Air quality parameters are within prescribed limits of Industry Specific limits and NAAQ Standard 2009.
2	Coal transportation is through conveyor system up to the silo and then loading to railway wagons, involving no transportation through roads.	Complied. 1. A new Amrapali railway siding is under implementation for coal transportation from Amrapali OCP for which the work has been awarded to M/s RITES Ltd. After commissioning of this siding in FY 2022-23, there will be no transportation through road. 2. At present, the coal is being transported through tarpaulin-covered trucks to nearby Shivpur Railway siding on the Tori-Shivpur line, which is at a distance of 07 km from the project boundary. All precautions are being taken for mitigation of dust. 3. The coal to end consumers is being supplied by rail from Shivpur siding.
3	Coal mining is done through deployment of surface miners, replacing three dust generating operations of the conventional mining system namely drilling, blasting and crushing in one go	Complied. 1. Coal mining is done through deployment of surface miners. 2. 5 numbers of Surface miners are deployed for mining operation at Amrapali OCP.
4	Public hearing already	Complied.

	conducted for the total mine lease area involved and no more area is required for the proposed expansion.	<ol style="list-style-type: none"> 1. Public hearing for the project of 12 MTPA in an area of 1426.08 Ha was conducted on 02.04.2003 at Chatra, District: Chatra, Jharkhand. 2. Public Notice for EC Revalidation issued on 07.08.2019 in 3 newspapers in Hindi & English language. 3. No more area is required for the expansion.
5	Compliance status of EC conditions monitored by the concerned Regional Office of this Ministry is found to be satisfactory.	<ol style="list-style-type: none"> 1. Compliance status of EC conditions submitted by Regional Office of MoEF&CC vide no: 103-80/05/EPE/3638 Dated: 04.12.2019.
6	Other statutory requirements like Consent to Establish/Operate, Clearance from CGWA, approval of Mining Plan and the Mine Closure Plan, Mine Closure Status Report as applicable, Forest Clearance etc are satisfactorily fulfilled.	<ol style="list-style-type: none"> 1. Consent to Establish of Amrapali OCP is obtained vide Ref No. 3502 dated 09.06.2003. 2. Consent to Operate of Amrapali OCP is obtained vide: JSPCB/HO/RNC/CTO-5076029/2019/1230 Dated: 30.06.2019 valid till 30.06.2020. 3. Mining Plan & Mine Closure Plan of Amrapali OCP is approved on 04.11.2019 in the 479th Board meeting of CCL. . 4. Total forestland within the project area is 531.64 Ha for which Stage II Forest Clearance has been obtained vide letter no. 8-48/2008-FC on 12.10.2010. 5. The area falls in Safe category as per the categorization available on CGWA website. Online Application for "Permission to Dewater Ground Water for Mining Industry" has been submitted vide application number - 21-4/328/JH/MIN/2018 dated 29.12.2018.
7	The proposed expansion can go up to a maximum of 40 % of capacity, wherein the last public hearing was conducted.	<p>Complied.</p> <p>This proposal is for one time capacity expansion from 12.0 MTPA to 16.8 MTPA (40 %) in the existing coal mining operation.</p>
8	There is no increase in area for the proposed expansion vis-à-vis the area in EC wherein last public hearing was conducted.	<p>Complied.</p> <p>There is no increase in existing project area of the mines wherein the last public hearing was conducted.</p>
9	Coal transportation is through conveyor system up to the silo and loading to the railway wagons, and not by road.	<p>Complied.</p> <ol style="list-style-type: none"> 1. A new Amrapali railway siding is under implementation for coal transportation from Amrapali OCP for which the work has been awarded to M/s RITES Ltd. After commissioning of this siding in FY 2022-23, there will be no transportation through road.

		<p>2. At present, the coal is being transported through tarpaulin-covered trucks to nearby Shivpur Railway siding on the Tori-Shivpur line, which is at a distance of 07 km from the project boundary. All precautions are being taken for mitigation of dust.</p> <p>3. The coal to end consumers is being supplied by rail from Shivpur siding.</p>
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The EAC, constituted under the provision of the EIA Notification, 2006 and comprising of Experts Members/domain experts in various fields, have examined the proposal submitted by the Project Proponent in desired form along with report prepared and submitted by the Consultant on behalf of the Project Proponent.

The EAC noted that the Project Proponent has given undertaking that the data and information given in the application and enclosures are true to the best of his knowledge and belief and no information has been suppressed in the report. If any part of data/information submitted is found to be false/ misleading at any stage, the project will be rejected and Environmental Clearance given, if any, will be revoked at the risk and cost of the project proponent.

The Committee noted that the report is in compliance for the project, reflecting the present environmental concerns and the projected scenario for all the environmental components. 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 Experts Members of the EAC have found the proposal in order and have recommended for grant of Environmental Clearance (EC).

53.7.4 The EAC, after detailed deliberation observed PP must focus on compliance of EC conditions and further **recommended** the proposal for grant of environmental clearance to Amrapali Opencast Coal Mine from 12 MTPA to 14.4 MTPA (Peak) in an ML area of 619.87 ha of M/s Central Coalfields Limited located in District Chatra (Jharkhand), under the provision of clause 7(ii) of EIA Notification, 2006 and under the provisions of the Environment Impact Assessment Notification, 2006 and subsequent amendments/circulars thereto subject to the compliance of the following terms & conditions / specific conditions:-

- (i) EAC desired that the MoC may direct CIL subsidiaries to comply the EC/FC/CTO conditions strictly within certain time bound manner so that the mining operations will be environmentally sustainable/viable etc.
- (ii) The project proponent shall obtain Consent to establish from the State Pollution Control Boards for the proposed peak capacity of 14.4 MTPA (Peak) prior to commencement of the increased production.
- (iii) Transportation of coal from Coal Handling Plant shall be through covered trucks.
- (iv) To control the production of dust at source, the crusher and in-pit belt conveyors shall be provided with mist type sprinklers.
- (v) PP shall implement inpit conveyor to railway siding through silo loading in three years.
- (vi) 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.

- (vii) Continuous monitoring of occupational safety and other health hazards, and the corrective actions need to be ensured.
- (viii) Persons of nearby villages shall be given training on livelihood and skill development to make them employable.
- (ix) Thick green belt of adequate width at the final boundary in the down wind direction of the project site shall be developed to mitigate/check the dust pollution.
- (x) 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.
- (xi) The company shall obtain approval of CGWA for use of groundwater for mining operations at its enhanced capacity of 14.4 MTPA (Peak).
- (xii) Continuous monitoring of occupational safety and other health hazards, and the corrective actions need to be ensured.
- (xiii) A third party assessment of EC compliance shall be undertaken once in three years through agency like ICFRI /NEERI/IIT or any other expert agency identified by the Ministry.
- (xiv) Active OB Dump should not be kept barren/open and should be covered by temporary grass to avoid air born of particles
- (xv) Compliance of the non-compliance/partial compliance conditions certified by Regional Office, Nagpur vide its Letter dated 4th December, 2019. The PP shall complete all non-compliance/partial compliance conditions in one year and the Action taken report shall be submitted to the Regional Office of the MoEF&CC.
- (xvi) Project proponent to plant 100,000 nos. of native trees with broad leaves along the villages and 50,000 nos of native trees along transportation route to prevent the effect of air pollution in 2 years. After completion of tree plantation, number of trees shall be duly endorsed from District Forest Officer.
- (xvii) The activities and fund provisions for CER shall be made as per the guidelines issued by the ministry regarding CER on 1st May, 2018.
- (xviii) 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.
- (xix) The Project Proponent shall complies with all the statutory requirements and judgment of Hon'ble Supreme Court dated the 2nd August 2017 in Writ Petition (Civil) No. 114 of 2014 in the matter of Common Cause versus Union of India and Ors. State Government shall ensure that the entire compensation levied, if any, for illegal mining paid by the Project Proponent through their respective Department in strict compliance of judgment of Hon'ble Supreme Court dated the 2nd August 2017 in Writ Petition (Civil) No. 114 of 2014 in the matter of Common Cause versus Union of India and Ors.
- (xx) Project Proponent shall obtain the necessary prior permission from the Central Ground Water Authority (CGWA) in case of intersecting the Ground water table. The intersecting ground water table can only be commence after conducting detailed hydrogeological study and necessary permission from the CGWA. The Report on six monthly basis on changes in Ground water level and quality shall be

submitted to the Regional Office of the Ministry, CGWA and State Pollution Control Board.

- (xxi) 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 antsnake venom including all other paramedical safeguards may be ensured before initiating the mining activities.
- (xxii) 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".
- (xxiii) 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.
- (xxiv) 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 prepared and 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.
- (xxv) Hon'ble Supreme Court in an Writ Petition(s) Civil No. 114/2014, Common Cause vs Union of India & Ors vide its judgement dated 8th January, 2020 has directed the Union of India to impose a condition in the mining lease and a similar condition in the environmental clearance and the mining plan to the effect that the mining lease holders shall, after ceasing mining operations, undertake re-grassing the mining area and any other area which may have been disturbed due to their mining activities and restore the land to a condition which is fit for growth of fodder, flora, fauna etc. Compliance of this condition after the mining activity is over at the cost of the mining lease holders/Project Proponent". The implementation report of the above said condition shall be sent to the Regional Office of the MoEFCC.

Agenda No.53.8

Lohari Opencast Coal Project of 0.2 MTPA in a total lease area of 405 ha of M/s Araanya Mines Private Limited located in villages Lohanara, Kathautia Gareyadih, Tehsil Patan, District Palamau (Jharkhand) - For Amendment in Environment Clearance

[Online Proposal No. IA/JH/CMIN/118659/2019; F.No. J-11015/756/2007-IA.II(M)]

53.8.1 The proposal is for amendment in environmental clearance from 405 ha to 126.90 ha (removing forest out of the 405 ha project area) for Lohari Opencast Coal Project of 0.2 MTPA capacity in total project area of 405 ha of M/s Araanya Mines Pvt. Ltd. (AMPL) located in village Lohanra, Kathautia, Gareyadih and Garikhas, Tehsil Pandwa, District Palamu (Jharkhand).

53.8.2 The details of the project as submitted by the project proponent is given below:

- (i) The project area is covered under Survey of India Topo Sheet No 72D/4 (SOI Open Series Map no. G45S4) and is bound by the geographical coordinates ranging from 24°08'31.4" to 24°09'30.751" N and longitudes 84°03'28.75" N and 84°05'11.7" E.
- (ii) Coal linkage of the project is proposed for end use sponge iron plants of JV companies
- (iii) Joint venture has been formed of M/s Alope Steels Industries Private Limited and M/s Maa Chinnmastika Cement and Ispat Private Limited, located in Distt. Ramgarh, Jharkhand.
- (iv) Project does not fall in the Critically Polluted Area (CPA), where the MoEF&CC's vide its OM dated 13.01.2010 has imposed moratorium on grant of environmental clearance.
- (v) Employment generation- permanent employment to 185 persons will be provided in the project.
- (vi) The project is reported to be beneficial in terms of employment opportunities under various cadres viz. management, supervisory, highly skilled, skilled, semi-skilled and unskilled workmen etc.
- (vii) Earlier, the environment clearance to the project was obtained under EIA Notification, 2006 vide Ministry's letter No J-11015/756/2007-IA.II(M) dated 13.03.2008 for 0.2 MTPA of coal production in project area of 405 ha to previous Lessee M/s Usha Martin Ltd. The EC was transferred to M/s Aaranya Mines Ltd. on 10.06.2015.
- (viii) The total mining lease area for working in non-forest area will be 126.90 ha. Block area is 335 ha. A mining plan (Modification/ Revision-I) (including mine closure plan) has been approved for non-forest area of 126.90 ha with a production of 0.2 MTPA by Ministry of Coal vide letter dated 10.07.2019.
- (ix) The land usage pattern of the project is as follows:

Pre-mining land use details (Area in Ha)

S. No.	Land Use	Within ML Area	Outside ML Area	Total
1	Agricultural Land	31.64	0.0	31.64
2	Forest Land	0.0	0.0	0.0
3	Wasteland	0.0	0.0	0.0
4	Grazing Land	0.0	0.0	0.0
5	Surface Water Bodies	3.6	0.0	3.6
6	Settlements	0.0	0.0	0.0
7	Township	2.78	0.0	2.78
8	Road	1.4	0.0	1.4
9	Others (Barren & community	87.48	0.0	87.48

	land)			
	Total Project Area =	126.90	0.0	126.90

Post Mining (Area in Ha)

	Land Use	Post Closure						
		Agricultural land	Plantation	Water Body	Public Use/ Company use	Forest Land (Returned)	Undisturbed	Total
1	Excavation Area [#]							0
1.a.	Backfilled Area	4.34	64.02					68.36
1.b.	Excavated Void			30.19				30.19
1.c.	Top Soil Dump *							0
1.d.	External dump **							0
2	Safety zone/ rationalisation area							0
3	Road diversion				0.36			0.36
4	Diversion/ below river/ nala/ canal			1.0				1.0
5	Road and Infrastructure area	2.50			1.50			4.0
6	Embankment				3.21			3.21
7	Green belt		9.96					9.96
8	Water reservoir near pit/ water body	1.00						1.0
9	Undisturbed / Mining right for UG						8.82	8.82
	Total	7.84	73.98	31.19	5.07	0	8.82	126.90

Out of total excavated area of 98.55 ha, 68.36 ha shall be backfilled & 30.19 ha shall remain as mine void which will be converted into water body.

* Temporary topsoil dump (over coal bearing area) to be removed

** Temporary surface OB dump (over coal bearing area) to be removed

- (x) Total geological reserve reported in the mine lease area (126.90 ha) is 3.18 MT with 2.68 MT mineable reserve. Out of total mineable reserves, entire reserve is available for extraction. Percent of extraction is 84.28%.
- (xi) Three seams with thickness ranging from 0.15 m to 2.90 m are workable. Grade of coal is Insitu G5 & ROM G6, stripping ratio 8.15, while gradient is 3 to 7°.
- (xii) Method of mining operation envisages opencast method with shovel/ dumper in OB and FE loader/ dumper in coal shovel & dumper combination.
- (xiii) Life of mine have been reduced to 14 years from 45 year as previously approved.
- (xiv) The project has one external OB dump, which will be initially outside the working quarry area but within ultimate pit limit and ML boundary. Initially, the overburden will be dumped on 10.50 ha with maximum height 30 m. After creation of sufficient void within the pit, internal dumping will commence (during 5th year itself and continue till the end). Total pure OB generated from the mine will be 21.34 Mcum out of which only 2.07 mcum will be required to be accommodated in the external dump, the rest 19.27 mcum will be backfilled in the de-coaled area. A crown dump

- of 30 m over an area of 21.1 ha over the backfilled area will also be created. The external dump will also be rehandled and backfilled from 11th to 14th year. There will be one temporary top soil dump of 4.5 ha with 0.51 McumB, which will be completely reutilized within the life of mine
- (xv) Total quarry area is 98.55 ha out of which backfilling will be done in 68.36 ha while final mine void will be created in an area of 30.19 ha with a depth of 35 m. Backfilled quarry area of 68.36 ha shall be reclaimed with plantation (64.02 ha) & Agricultural land (4.34 ha). Final mine void will be converted into water body.
 - (xvi) Transportation of coal has been proposed by RD trucks from mine pit to the end use plant, initially. Later on, the coal will be transported by trucks to proposed captive spur (siding) along Kajri railway station, after its construction, at a distance of 3 km and from siding it will be transport through Railway.
 - (xvii) Reclamation Plan in an area of 118.08 ha comprising of 68.36 ha of backfilled area. In addition to this, an area of 9.96 ha included in safety zone/ rationalisation area, has also been proposed for greenbelt development.
 - (xviii) Zero hectare of forest land is reported to be involved in the 126.90 ha project.
 - (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 be varying between 5.55 m to 16.2 m during pre-monsoon and between 1.8 m to 14.6 m during post-monsoon. Total water requirement for the project is 154 KLD.
 - (xxi) Application for obtaining the approval of the Central Ground Water Authority for mine dewatering has been submitted on 07.01.2020.
 - (xxii) Public hearing for the project of 0.2 MTPA capacity in an area of 405 ha was conducted on 04.05.2007 at Lohara Middle School, Lohara when the mine was allotted to M/s Usha martin Ltd. Major issues raised in the public hearing include employment, compensation and R&R, pollution control, impact on ground water etc. The then Mine Authorities had taken/proposed take actions as under and the same will be followed by present allottee.
 - (xxiii) Consent to Establish for the project was obtained by prior allottee (Usha Martin Ltd.) from JSPCB on 20.09.2007 (expired) for an area of 405 ha. The project is yet to be implemented by new allottee i.e. Araanya Mines Pvt. Ltd. CTE will be obtained after suitable amendment in EC for project area in non forest land of 126.90 ha and several other statutory clearances.
 - (xxiv) Hathikhar nala is flowing through the ML from NE to SW. The nala will be diverted in consultation with the Water Resource Department of the State Government. Diversion will be required after 5 years of operation.
 - (xxv) Regular monitoring of ambient air quality shall being carried out on fortnightly basis after commencement of operation. The documented report shall be submitted to RO, JSPCB and also to MoEF&CC along with half yearly EC compliance report.
 - (xxvi) No court cases-violation cases are pending against the project (126.9 ha ML) or the PP.
 - (xxvii) The project does not involve violation of the EIA Notification, 2006 and amendment issued thereunder.
 - (xxviii) The coal production from the mine has not been started.
 - (xxix) The project involves R&R for 100 houses in proposed ML area of 126.90 ha. It is a part of the total R&R project proposed for the whole Lohari Block. R&R of the PAPs will be done as per R&R plan.
 - (xxx) Total cost of the project is about Rs. 70 Crores. Cost of production is Rs. 700/- per tonne., CSR cost will be 2% of the average profit of three years as per

Companies Act, R&R cost will be Rs 23 crores, will be updated as per the Jharkhand R&R Policy & LARR. Capital Environment Management Cost is Rs.1 crores and recurring cost approximately Rs. 20 lakhs per annum. Apart from this, Rs. 6.6 crores have been provisioned in progressive mine closure plan for garland drains, dams, toe walls, greenbelt developments, Reclamation/ Rehabilitation of mined out area etc.

53.8.3 The EAC during deliberations noted the following: -

Lohari opencast coal project was granted environmental clearance to the previous allottee M/s Usha Martin Ltd. vide EC letter dated 13.03.2008. However, the coal block was de-allocated subsequent to the Hon'ble Supreme Court order on 25.08.2014.

M/s Araanya Mines Pvt. Ltd. (AMPL) became the "successful bidder" and allocated the coal block vide the vesting order from Ministry of Coal dated 22.04.2015. MoEF&CC thereafter transferred the EC to AMPL on 10.06.2015. Thereafter, certain typographical rectification was requested by AMPL in mine lease area and the same were granted by MoEF&CC vide amendment letter dated 16.02.2016.

The project was proposed over a project area of 405 ha with the production of 0.2 MTPA coal. The block is virgin till date.

The previous allottee had identified that 405 ha did not have any forest land and recorded the same in the Approved Mining Plan. Subsequently, during the process of obtaining the lease, discrepancies emerged and forest area (i.e. GMJJ) was noticed by previous allottee as 85.30 ha, for which they obtained first stage Forest Clearance vide letter no. 8-05/2013-FC dt. 03.04.2013. The same was transferred to AMPL vide no. 8-05/2013-FC dated 04.06.2015.

During the course of completing various land related formalities, AMPL found that the 85.30 ha GMJJ land details, when compared with the actual ground realities, were found in complete variance. Most of the GMJJ lands were found settled by Raiyats of village for agricultural and residential purposes, their names recorded in Register II of revenue records and they were depositing lagan for the settled lands. Their land were devoid of Jungle-Jhar. AMPL brought on record the actual situation before the concerned authorities of the State Government. The Govt. of Jharkhand decided to finalize the "Revisional Survey" of the four villages of Lohari Coal Mine and Director, Land Records published the final land records. These records do not show any Jungle-Jhar land in the mine area.

However, Jharkhand Government maintains that considerable area of the proposed mine lease has come under deemed forest in old land records. It is still not clear whether there is an involvement of forest land and whether the forest clearance will be required. However, the decision as well as any FC (if required) will take considerable time before starting any mining activity. Mining has not yet been started due to above reason.

After deliberation in 3rd Meeting (dt. 19.04.2018) & 8th Meeting (dt. 11.01.2019) of the Monitoring Committee under the Chairmanship of Secretary (Coal). Due to lack clarity with respect to the status of Forest Land, AMPL will proceed with modification of mining plan and obtain a mine lease for non-forest area of 126.90 ha to commence mining.

Accordingly, Mining plan (Modification/ Revision-I) (including mine closure plan) for non-forest area of 126.90 ha with a production of 0.2 MTPA has been approved by MoC on 10th July, 2019 till resolution of the land related matters.

An undertaking has been submitted by project proponent to MoC to the effect that as soon as the forestry clearance (if required) and other clearances for mining is obtained, a Mining plan (Modification/Revision-II) (including Mine Closure Plan) will be prepared within 5 years for entire area (including forest land).

In view of the above, the current proposal for amendment is for seeking permission for grant of operation in a non-forest area of 126.90 ha out of the 405 ha project area, for the first 14 years with the same production of 0.2 MTPA as sanctioned in EC dt.13.03.2008.

53.8.3 The EAC after deliberations observed that though the project proponent has revised the mine plan however EC was transferred based on vesting order from Ministry of Coal for 405 ha. EAC suggested to PP that either to surrender the said remaining land for amendment in EC or may ask Ministry of Coal to revise the vesting order allotted to the project proponent.

The proposal was **deferred** on the above lines.

Agenda No.53.9

Expansion of Krishnashila Opencast Project from (6.25 MTPA to 7 MTPA) in an ML area of 851.78 ha of M/s Northern Coalfields Limited located in Tehsil Dudhi District Sonebhadra (Uttar Pradesh) - For Amendment in Environment Clearance

[Online Proposal No. IA/UP/CMIN/135659/2020; F.No. J-11015/243/2011-IA-II(M)]

53.9.1 The proposal is for continuation of Environmental Clearance for Expansion of Krishnashila Opencast Project from 6.25 MTPA to 7 MTPA in an ML area of 851.78 ha of M/s Northern Coalfields Limited located in Tehsil Dudhi District Sonebhadra (Uttar Pradesh).

53.9.2 During deliberations, the EAC noted the following:

The project was granted environmental Clearance for a capacity of 7.00 MTPA vide letter no. J11015/243/2011-IA.II (M) dated 12th March, 2018 for one year and further extended for one year vide letter no. J- 11015/243/2011-IA.II (M) dated 5th April, 2019.

The mining Plan (including Mine Closure Plan) was approved by NCL Board in 219th meeting on 26th November, 2017.

In compliance of MoEF & CC directives, Certified Copy of Compliance for Expansion of Krishnashila Opencast Project from (6.25 MTPA to 7 MTPA) in an ML area of 851.78 ha

of M/s Northern Coalfields Limited located in Tehsil Dudhi District Sonbhadra (Uttar Pradesh) was issued by Ministry's Regional Office, Lucknow dated 6th January, 2020. Site visit was conducted on 8th October, 2019 by Regional Office. The action taken report on Partial Non-compliance has not been submitted to Regional Office, however it was presented during the EAC appraisal. The Committee deliberated the same.

The EAC, constituted under the provision of the EIA Notification, 2006 and comprising of Experts Members/domain experts in various fields, have examined the proposal submitted by the Project Proponent in desired form prepared and submitted by the Consultant accredited by the QCI/ NABET on behalf of the Project Proponent.

The EAC noted that the Project Proponent has given undertaking that the data and information given in the application and enclosures are true to the best of his knowledge and belief and no information has been suppressed in the report. If any part of data/information submitted is found to be false/ misleading at any stage, the project will be rejected and Environmental Clearance given, if any, will be revoked at the risk and cost of the project proponent.

The Committee noted that the report is in compliance, reflecting the present environmental concerns and the projected scenario for all the environmental components. 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 Experts Members of the EAC have found the proposal in order and have recommended the proposal.

53.9.3 The EAC, after detailed deliberations and duly considering compliance of EC dated 12th March, 2018 and 5th April, 2019 as certified by Ministry's Regional Office, **recommended for continuance of the environmental clearance dated 28th March, 2019 for life of the mine or 30 years whichever is earlier**, as per provisions of EIA Notification, 2006 with the conditions remaining the same in earlier EC and in addition to the conditions as mentioned below:-

- (i). EAC desired that the MoC may direct CIL subsidiaries to comply the EC/FC/CTO conditions strictly within certain time bound manner so that the mining operations will be environmentally sustainable/viable etc
- (ii). All the partially complied condition observed by Ministry's Regional Office in certified compliance report of RO, Lucknow dated 6th January, 2020 shall be completed in 3 years. An action plan with timeline for compliance should be submitted to RO, Lucknow in two months from the date of issue of the letter.
- (iii). PP shall submit action plan for controlling/mitigating air pollution to RO, Lucknow in two months from the date of issue of the letter.
- (iv). Project proponent to plant 100,000 nos. of native trees with broad leaves along the periphery of the mine to prevent the effect of air pollution in 3 years of the issue of this letter. After completion of tree plantation, number of trees shall be duly endorsed from District Forest Officer
- (v). Active OB Dump should not be kept barren/open and should be covered by temporary grass to avoid air born of particles
- (vi). 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
- (vii). 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.
 - (viii). Project Proponent shall obtain the necessary prior permission from the Central Ground Water Authority (CGWA) in case of intersecting the Ground water table. The intersecting ground water table can only be commencing after conducting detailed hydrogeological study and necessary permission from the CGWA. The Report on six monthly bases on changes in Ground water level and quality shall be submitted to the Regional Office of the Ministry, CGWA and State Pollution Control Board.
 - (ix). 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 antsnake venom including all other paramedical safeguards may be ensured before initiating the mining activities.
 - (x). 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".
 - (xi). 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.
 - (xii). 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 prepared and 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.
 - (xiii). 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 Ministry.

Additional Specific as the area falls under Severely Polluted Areas (SPAs)

- (xxxv) CTE/CTO for the project shall be obtained from the SPCB as required under the Air (Prevention and Control of Pollution) Act, 1981 and the Water (Prevention and Control of Pollution) Act, 1974, and the SPCB shall follow the mechanism/protocol issued by the Ministry vide letter no. Q-16017/38/2018-CPA dated 24th October, 2019 while issuing the CTE/CTO for the project, for improvement of environmental quality in the area.
- (xxxvi) The green belt of at least 5-10 m width shall be developed in more than 40% (*in place of EAC recommended 33%*) of the total project area, mainly along the plant periphery, in downward wind direction, and along road sides etc. Selection of plant species shall be as per the CPCB guidelines in consultation with the State Forest Department.
- (xxxvii) In addition, the project proponent shall develop greenbelt outside the plant premises such as avenue plantation, plantation in vacant areas, social forestry etc.
- (xxxviii) Monitoring of compliance of EC conditions may be submitted with third party audit every year.
- (xxxix) The percentage the CER may be atleast 1.5 times the amount given in the OM dated 1st May, 2018 recommended by the EAC and item-wise details along with time bound action plan shall be prepared and submitted to the Ministry's Regional Office.

Agenda No.53.10

Expansion of Gevra Opencast Coal Mine from 45 MTPA to 49 MTPA and continuance of EC for 45 MTPA in ML area of 4184.486 ha of M/s South Eastern Coalfields Limited at district Korba (Chhattisgarh) – Continuance and Expansion of Environmental Clearance – reg.

[Online Proposal No. IA/CG/CMIN/19281/2013; F.No. J-11015/85/2010-IA.II (M)]

53.10.1 The proposal is for continuance of EC validity of 45 MTPA and amendment in EC capacity for expansion from 45 MTPA to 49 MTPA in respect of Gevra Opencast coal mine in mining lease area of 4184.486 ha of M/s South Eastern Coalfields Limited in District Korba (Chhattishgarh).

53.10.2 During deliberations, the EAC noted the following:-

The proposal is for continuance of EC validity of 45 MTPA and amendment in EC capacity for expansion from 45 MTPA to 49 MTPA in respect of Gevra Opencast coal mine in mining lease area of 4184.486 ha of M/s South Eastern Coalfields Limited in District Korba (Chhattishgarh). Stage-1 Forest Clearance has been obtained for entire forest land (1016.412 Ha) involved in the project.

The proposal was earlier considered by EAC in its meeting held on 25th June, 2019 wherein EAC's observation are mentioned as below: -

Gevra Opencast Coal Mining Project was earlier granted environmental clearance on 3rd June, 2009 for its expansion from 25 to 35 MTPA involving an area of 4184.486 ha, based on public hearing conducted on 22nd August, 2008. The said EC was subsequently amended in stages (from 35-40 MTPA on 31st January, 2014, 40-41 MTPA on 6th February, 2015, 41-45 MTPA on 21st February, 2018 & 28th March, 2019) exempting from fresh public hearings in terms of the dispensation provided vide Ministry's OMs dated 19th December, 2012, 2nd September, 2014 & 15th September, 2017.

The Committee further observed that in view of the last public hearing more than 10 years old, the Ministry's OM dated 15th September, 2017 may not be relied upon by the project proponent as a right to seek further exemption from public hearing even if there is no increase in project area.

The last communication dated 28th March, 2019 stipulates continuance of the project from 41 to 45 MTPA in mine lease area of 4184.486 ha for a further period of one year, subject to review of compliance status of the conditions by the EAC to consider continuance of the project after one year. As such, the Committee found no rationale for the present proposal involving further expansion of the project from 45 to 49 MTPA, and insisted for compliance status of the conditions stipulated in the letter dated 28th March, 2019 duly endorsed by the Ministry's Regional Office.

In view of the above and to consider the present proposal, the Committee desired for issuing a public notice through the State Pollution Control Board for information of the stakeholders about the proposed expansion inviting comments and their redressal, and also site visit of the area by a sub-committee of its members. The proposal was accordingly deferred.

Also, The project was granted environmental clearance by the Ministry vide letter dated 20th March, 2019, subject to compliance of certain terms and conditions, inter-alia including the following:-

"subject to review of compliance status of the conditions by the EAC to consider continuance of the project after one year".

53.10.3 Following details submitted by the project proponent on the earlier observations of EAC:-

Sr. No.	Details desired by EAC committee	Status of compliance
1	The last communication dated 28 th March, 2019 stipulates continuance of the project from 41 to 45 MTPA in mine lease area of 4184.486 ha for a further period of one year, subject to review of compliance status of the	Details of Inspection conducted by RO, MoEF&CC, Nagpur at Gevra OCP and subsequent reports submitted on status of 45 MTPA EC Compliance: <ul style="list-style-type: none">• RO MoEF&CC, Nagpur inspection held on 25.12.2019 for compliance status of Environmental Clearance of 45 MTPA

	conditions by the EAC to consider continuance of the project after one year. As such, the Committee found no rationale for the present proposal involving further expansion of the project from 45 to 49 MTPA, and insisted for compliance status of the conditions stipulated in the letter dated 28th March, 2019 duly endorsed by the Ministry's Regional Office.	<p>Dtd:28.03.2019.</p> <ul style="list-style-type: none">• Compliance status report submitted by RO to MoEF&CC, New Delhi vide letter No:3-28/2014(ENV)Pt/6080 Dtd: 14.01.2020.• Action Taken Report over Certified Compliance Report submitted to RO MoEF&CC (Nagpur) on 21.01.2020.• Action Taken Report over Certified Compliance Report forwarded by RO to MoEF&CC, New Delhi vide letter No:3-28/2014(ENV)Pt/6174 Dtd: 04.02.2020. <p>SUMMARY:</p> <table><tr><td>Total no. of EC conditions –</td><td>62 no.</td></tr><tr><td>No. of conditions complied-</td><td>57 no.</td></tr><tr><td>No. of conditions partially complied-</td><td>05 no.</td></tr><tr><td>No. of conditions not complied-</td><td>Nil</td></tr></table>	Total no. of EC conditions –	62 no.	No. of conditions complied-	57 no.	No. of conditions partially complied-	05 no.	No. of conditions not complied-	Nil
Total no. of EC conditions –	62 no.									
No. of conditions complied-	57 no.									
No. of conditions partially complied-	05 no.									
No. of conditions not complied-	Nil									
2	Committee desired for issuing a public notice through the State Pollution Control Board for information of the stakeholders about the proposed expansion inviting comments and their redressal.	<p>Paper publication done on 05.12.2019 through state pollution control board in following newspapers Navabharath, Dainik Bhaskar and Times of India (Delhi).</p> <p>RO CECB informed vide letter No :1576 Dtd:13.01.2020 that no comments /objections/remarks has been received from public in writings even after 30 days of paper publication regarding expansion of Gevra Open Cast from 45 MTPA to 49 MTPA.</p>								
3	Site visit of the area by a sub-committee of its members.	<p>Site visit made by EAC sub-committee on 10th & 11th Sept 2019.</p> <p>Action taken report on the observation of EAC Sub-committee is enclosed.</p>								

Earlier, the Environmental Clearance of Gevra opencast was accorded by the Ministry on 03.06.2009 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.

The project was accorded EC vide letter no. J-11015/85/2010-IA.II (M) dated 31.01.2014 for the 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.

The project was accorded amendment in the EC vide letter No. J-11015/85/2010-IA.II (M) dated 06.02.2015 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.

Meanwhile MoEF&CC issued OM no. J-11015/224/2015-IA.II (M) dated 15.09.2017 for

environmental clearance for expansion of coal mining projects upto 40% with exemption of public hearing.

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/Envvt/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 up to 31.03.2019.

Further based on Ministry's OM dated 15th September, 2017 following compliance was noted by EAC

Sl. No.	O.M Conditions	Compliance
1	Predicted air quality parameters are within the prescribed norms	Complied. Air quality impact prediction for incremental coal production (8 MTPA incremental for expansion from 41 to 49 MTPA) has been done along with EIA/EMP report
2.	Coal transportation is through conveyor system up to the silo and then loading to railway wagons, involving no transportation through roads.	Complied. The incremental coal production will be transported through conveyor system up to the silo and then loading into the railway wagons.
3.	Coal mining is done through deployment of surface miners, replacing three dust generating operations of the conventional mining system namely drilling, blasting and crushing in one go.	Complied. <ul style="list-style-type: none"> • Coal production is by deployment of surface miners. • Incremental production will also be done through deployment of surface miner.
4.	Public hearing already conducted for the total mine lease area involved and no more area is required for the proposed expansion.	Complied. <ul style="list-style-type: none"> • Public hearing has been conducted for the entire land area of 4184.486 Ha. on 22-08-2008. • No additional land is required for proposed expansion. • The major concerns raised in public hearing were regarding employment, supply of drinking water to affected villages, education and healthcare services to affected people. • All concerns have been addressed.
5.	Compliance status of EC conditions monitored by the concerned Regional Office of this ministry is found to be satisfactory.	Complied. <ul style="list-style-type: none"> • Compliance status of EC conditions monitored by the concerned Regional Office of Ministry has been found satisfactory.
6.	Other statutory requirements	Complied.

	like Consent to Establish/Operate, Clearance from CGWA, approval of Mining Plan and the Mine Closure Plan, Mine Closure Status Report as applicable, Forest Clearance, etc are satisfactorily fulfilled.	<p>Details of the statutory requirements such as Consent to Operate, Forest Clearance, CGWA Clearance, approved Mining Plan and Mine Closure Plan for 49 MTPA etc are as below:</p> <ul style="list-style-type: none"> • Consents to operate issued by Chhattisgarh Environment Conservation Board, Raipur for 45 MTPA, which is valid upto 28.02.21. • Hazardous waste authorization has been received on 17.04.18 valid up to 21.11.20 • Clearance of ground water from CGWA has been obtained on 22.01.19 which is valid up to 03.12.20 • Mine plan and Mine closure plan has been approved by the SECL Board on 10/11.10.2017. • Forest Clearances- Stage-1 Forest Clearance have been obtained for the entire forest land of 1016.412 ha involved in the project.
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Further PP submitted status of studies being carried out for the current project.

No.	Description of Study	Status
1	Specific Condition No. 4 (ix): Study on Eco system carrying capacity	Study on Eco system carrying capacity has been awarded to IIT BHU on 09.02.2019 and the study commenced on 20 th May 2019. Also Interim report submitted by IIT BHU to PP on 28.11.2019 Action has already been initiated on the measures suggested in the interim report. Status as below Final report is expected by April, 2020.
	<i>Addl. Recommendation suggested</i>	<i>Present Status / ATR</i>
a	Long range fogging Machine	One Long range fogging machine with horizontal throw of 40 mtrs has been procured and put into operation for effective dust suppression in Railway siding and mine premises.
b	Mechanical road sweeping Machine	Mechanical road sweeping machine has been procured & in operation for regular cleaning of Project premises.
c	Wind barrier system	Temporary green netting arrangement has been provided in the proposed site for reducing dust propagation. The erection of permanent structure along the railway siding is in progress The frame work with installation of GI sheets costing about 183 lakhs will be completed by May 2020.

d	Spray system at exit point of coal	Mist spray sprinklers are in operation in all crusher feeder breaker installations, Ground bunker of all conveyor system, In-pit belt conveyors, CHP etc. Total 48 Nos of Mist Spray Sprinklers and 10 Nos of Water Spray System are in operation in the entire Coal Handling Plant.
e	Tyre washing arrangement at exit point of coal.	Regular washing of HEMM and Trucks is being done in Workshop. Separate Tyre washing unit will be provided under the modernization of mine capital budget head of Rs 25 crore provisioned in approved mine plan (Page 60).Timeline: By Dec, 2020
2	Generic Condition No 4.1 b(ii): Catchment area treatment plan study within 5 KM from Mine Lease Boundary.	Study was awarded to Chhattisgarh Council of Science & Technology, Govt. of CG. Interim Report of field study submitted by CCOST on 13.01.2019. Action has already been initiated on the measures suggested in the interim report. Status as below Final report is under finalization and expected by May, 2020.
SN	<i>Recommendations suggested by CCOST</i>	<i>Present Status / ATR; Details already given in the Certified RO, MoEFCC report</i>
1.	EROSION CONTROL MEASURES (PROPOSED LANDUSE)	
	Area Proposed for Phase Wise Plantation, Gap Plantation, Intensive Plantation, Steep Slope Stability Measures/Carpeting	More than 43.01 lakhs saplings over an area of 1139.32 Ha. have been planted since 1986 in Gevra OCP including downwind direction In the year 2019-20, 62750 nos. of saplings planted through CGRVVN (Chhattisgarh Rajya van vikas Nigam Limited) including SAL PLANTATION Plantation target for the year 2020-21 is 55950 Nos over Dump Area of 17.00 Ha and 17000 Nos of grass bedding over Dump Slope. Safety Zone plantation in downwind direction is under progress. About 28000 saplings have been planted covering length of 14 kms
2.	EROSION CONTROL MEASURES (PROPOSED STRUCTURES)	
	Check Dam, Nala Bunds/Boulder Checks, Vegetative Bunds	2018-19 Plantation dump area has been provided with Contour trench with 300 plants per trench, check dams of total dimension 20 m ³ and bunds with stone boulders of total dimension 20 m Gabion wall (3m X 3m for 0.5 Km) has been constructed along the toe wall of approach road / ramp (newly constructed Inpit conveyor of Gevra Project). A toe wall is constructed at External Dump no. 6 & 7 of dimensions: Length 650 meters, height above ground 1.00 meters and top width of wall 200 mm

		in the year 2018-19
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There are court cases pending with the project proponent as per the following details:-

1. Appeal no. 78 of 2018 filed by the Shri. Laxmi Chauhan against the Project Proponent of Gevra Opencast Expansion Coal Mine (Respondent no. 4) for capacity expansion of 41-45 MTPA before the National Green Tribunal, Principal Bench, New Delhi.

2. Details of Court Cases

S N	Year of Violation	Production	Case No	Court	Parties	Brief	Present Status
1	2001-02 to 2004-05	More than 10 MTPA	1217 / 2007	JMC Class I Korba. Case transferred to High Court Bilaspur in 2010	CECB, Korba. Vs. CGM Dipka Extension Gevra area SECL	Regarding Cri. Complaint filed under Sec.15 & 17 of EP Act.	Pending at High Court Bilaspur
2	31.7.2000	Consent not renewed and capacity expanded from 10 MTPA	613/ 2007	HC of CG, BSP	CECB, Korba. Vs. SECL Gevra Project	Regarding Cri. Complaint filed under Sec.15 & 17 of EP, 1986. Criminal revision.	Pending at High Court Bilaspur

The EAC, constituted under the provision of the EIA Notification, 2006 and comprising of Experts Members/domain experts in various fields, have examined the proposal submitted by the Project Proponent in desired form prepared and submitted by the Consultant accredited by the QCI/ NABET on behalf of the Project Proponent.

The EAC noted that the Project Proponent has given undertaking that the data and information given in the application and enclosures are true to the best of his knowledge and belief and no information has been suppressed in the report. If any part of data/information submitted is found to be false/ misleading at any stage, the project will be rejected and Environmental Clearance given, if any, will be revoked at the risk and cost of the project proponent.

The Committee noted that the report is in compliance, reflecting the present environmental concerns and the projected scenario for all the environmental

components. 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 Experts Members of the EAC have found the proposal in order and have recommended for grant of Environmental Clearance (EC).

The EAC, after detailed deliberations duly considering observations of the Ministry's Regional Office in their letter dated 14th January, 2020 and 4th February, 2020, **recommended for continuance of the environmental clearance dated 28th March, 2019 for a period of 30 years or life of the mine**, whichever is earlier, subject to the terms and conditions stipulated therein remaining the same. Further regarding proposal of expansion from 45 MTPA to 49 MTPA, EAC observed decision on expansion may be taken based on final outcome of the proposed studies as mentioned above. Also, PP need to focus more on compliance of partial compliance of EC conditions. The Committee also recommended the additional conditions for continuance of EC

- (i). EAC desired that the MoC may direct CIL subsidiaries to comply the EC/FC/CTO conditions strictly within certain time bound manner so that the mining operations will be environmentally sustainable/viable etc.
- (ii). Also, EAC asked project proponent to plant 50,000 nos. of native trees (excluding other conditions of plantation given by this Ministry) with broad leaves along the villages and transportation route to prevent the effect of air pollution in three years. After completion of tree plantation, number of trees shall be duly endorsed from District Forest Office.
- (iii). All Partially and non-complied conditions (if any) reported by Ministry's Regional Office in its certified compliance report dated 14th January, 2020 shall be completed in 2 years from the date of issue of this letter.
- (iv). Final recommendation/outcome of the study on Ecosystem carrying capacity by IIT-BHU and Catchment area treatment plan study within 5 KM from Mine Lease Boundary by CCOST shall be implemented in certain timeframe. PP shall submit action plan with timeline to Ministry's Regional Office for implementation of recommendation.
- (v). Fixed water sprinklers shall be installed on haul roads for suppression of dust.
- (vi). The activities and fund provisions for CER shall be made as per the guidelines issued by the ministry regarding CER on 1st May, 2018
- (vii). Active OB Dump should not be kept barren/open and should be covered by temporary grass to avoid air born of particles
- (viii). The Project Proponent shall complies with all the statutory requirements and judgment of Hon'ble Supreme Court dated the 2nd August 2017 in Writ Petition (Civil) No. 114 of 2014 in the matter of Common Cause versus Union of India and Ors. State Government shall ensure that the entire compensation levied, if any, for illegal mining paid by the Project Proponent through their respective Department in strict compliance of judgment of Hon'ble Supreme Court dated the 2nd August 2017 in Writ Petition (Civil) No. 114 of 2014 in the matter of Common Cause versus Union of India and Ors.
- (ix). Project Proponent shall obtain the necessary prior permission from the Central Ground Water Authority (CGWA) in case of intersecting the Ground water table. The intersecting ground water table can only be commencing after conducting detailed hydrogeological study and necessary permission from the CGWA. The

Report on six monthly bases on changes in Ground water level and quality shall be submitted to the Regional Office of the Ministry, CGWA and State Pollution Control Board.

- (x). 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 antsnake venom including all other paramedical safeguards may be ensured before initiating the mining activities.
- (xi). 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".
- (xii). 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.
- (xiii). 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 prepared and 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.
- (xiv). 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 Regional Office of the Ministry.

Agenda No 53.11

Manoharpur and Dipside Manoharpur Coal Mine Project (Expansion of Manoharpur Coal Mine) in an area of 1848.379 ha of M/s Odisha Coal and Power Limited located in Tehsil Hemgir District Sundargarh (Orissa) - For ToR

[Online Proposal No. IA/OR/CMIN/88081/2018; F. No. J-11015/139/2008. IA. II (M)]

53.11.1 The proposal is for ToR/EC for “Manoharpur and Dip-side Manoharpur Coal Mine Project at a Peak Rated Capacity of 16 MTPA (Expansion of Manoharpur Coal Mine)” in mine lease area of 1781.591 ha. (Total Project area 1848.379 ha) of Odisha Coal and Power Limited located in village Manoharpur, Paramanandpur, Kathafali, Ghumudasan, Dulanga, Durubaga, Katarbaga, Laikera and Sarbahal, Tehsil Hemgir, District Sundargarh (Odisha).

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

- (i) The project area is covered under Survey of India Topo Sheet No 64 O/13 and 64 O/9 (Open Series TOP Map No. F44 R13 F44 R9) and is bounded by the geographical coordinates ranging from Latitude 21° 55' 52.168" to 21° 58' 16.871" N and longitudes 83° 44' 41.287" to 83° 47' 42.750" E.
- (ii) Coal linkage of the project is proposed for 2640 MW (4 X 660 MW) power generation to Thermal power plant of Orissa Power Generation Corporation Ltd (OPGC), the EUP. Currently, OPGC has constructed 2x660 MW power plant, which have been made operational since January 2019. The balance 2x660 MW will be planned in future by OPGC. In case the additional capacity i.e. 2x660 MW does not come up due to any reason whatsoever, 8 MTPA coal becomes excess and can be utilized under the provisions of Allotment Agreement (Clause-8).
- (iii) Joint venture cartel has been formed- Not applicable
- (iv) Project does not fall in the Critically Polluted Area (CPA), where the MoEF&CC's vide its OM dated 13th January, 2010 has imposed moratorium on grant of environment clearance.
- (v) Employment generation- direct employment to 205 persons by OCPL and about 500 persons through MO.
- (vi) The project is reported to be beneficial in terms of existing and proposed expansion of mining establishment which will increase employment opportunities under various cadres viz. management, supervisory, highly skilled, skilled, semi-skilled and unskilled workmen etc. and indirectly, it will also help to sustain the coal production till the end of life of proposed linked thermal power station.
- (vii) Earlier, the environment clearance to the project was obtained under EIA Notification, 2006 vide Ministry's letter No J-11015/139.2008-IA.II (M) dated 21.02.2014 for 8 MTPA in mine lease area of 977.875 ha. The EC was accorded by the prior allottee and the same has been transferred to OCPL.
- (viii) Total mining lease area as per block allotment is 1337.885 Ha (inside the blocks). Mining Plan Including Progressive Mine Closure Plan (Revision- III) has been approved by the Ministry of Coal on 26.09.2019.
- (ix) The land usage pattern of the project is as follows:

Pre-mining land use details			(Area in Ha)	
Sl. No.	Classification of Land	Area Inside the block	Area outside block	Total
1	Forest Land	474.287	134.918	609.205
2	Agricultural Land	339.364	163.446	502.810
4	Homestead land	14.032	4.438	18.47
3	Barren Land	431.723	122.173	553.896
5	Grazing Land	51.401	15.820	67.221

6	Water Body	27.078	2.911	29.989
Total Land within proposed Mining Lease		1337.885	443.706	1781.591
Land for Colony for MO & Owner and other outside mining lease area				
1	Agricultural Land		28.317	28.317
2	Barren Land		29.032	29.032
3	Forest Land		9.439	9.439
Total Land outside proposed Mining Lease			66.788	66.788
Total Project Area		1337.885	510.494	1848.379

POST MINING

Details	Land use (Post Mining (after final closure) in Ha)
Excavation Area	0
Backfilled Area	854.400
Excavated Void	380.040
Top Soil Dump	10.840
External Dump	269.510
Infrastructure & embankment	172.016
Safety / Rationalization Zone	16.000
Agricultural	0
Plantation / Green Zone	50.0
Water body / Diversion of Nala / River / Canal / Garland drain	20.690
Public / Com Use	0
Other Use	66.788
Forest land (return)	0
Undisturbed / MR for UG	8.095
Total	1848.379

- (x) Total geological reserve reported in the mine lease area is 978.470 MT with 664.239 MT mineable reserve. Out of total mineable reserve of 664.239 MT, 636.309 MT are available for extraction. Percent of extraction is 65%.
- (xi) 14 seams ((3 major seams namely Lajkura, Rampur, Parkhani & 11 no. Local seams; Coal section / horizons - 24) with thickness ranging from 4m – 42 m are workable. Grade of coal is G 14 (Major grade varies from G12-G15), stripping ratio 2.75 Cum/t, while gradient is 1 to 10.
- (xii) Method of mining operations envisages by Opencast Mechanized method
- (xiii) Life of mine is 44 years.
- (xiv) The project has 2 Nos. (External dump 1 – Adjacent to Mine Boundary within block and External dump 2 – East and South-east of block) external OB dumps in an area of 269.510 ha with 90 to 120 m height (External dump 1 - 90 m (3 tiers of 30 m each) & External dump 2 – maximum up to 120 m (4 tiers of 30 m each) and 167.92 Mm³ of OB. The OB from the current mining operations shall be backfilled from 2nd year onwards. One internal OB in an area of 854.4 ha with 1579.49 Mcum (Top soil = 2.64 Mcum & OB = 1576.85 Mcum) of OB is envisaged in the project.
- (xv) Total quarry area is 1234.440 ha out of which backfilling will be done in 854.400 ha while final mine void will be created in an area of 380.04 ha with a depth of 180 m to 410 m. However, during Mine Closure period upper tiers of Internal dump will

be rehandled and brought to the unfilled void area. Thus the depth of void will be reduced to 60-90 m. Backfilled quarry area of 854.400 ha shall be reclaimed with plantation. Final mine void will be converted into water body.

- (xvi) Transportation of coal has been proposed by dumper in mine pit head, from surface to siding by belt conveyor and from sidings to OPGC power plants (EUP) by dedicated MGR system. In case, the additional capacity i.e. 2 x 660 MW, does not come up due to any reason whatsoever, 8 MTPA coal becomes excess and can be utilized under the provisions of Allotment Agreement (Clause – 8). In that case, the coal may be transported by road from coal mine to Kanika siding/ ACB siding (Hemgir)/Laikera/ any other Indian Railway sidings in the near vicinity of mine and from there to other consumers by Indian Rail.
- (xvii) Reclamation Plan in an area of 1018.265 ha, comprising of 269.510 ha of external dump, 854.40 ha of internal dump and 50 ha of green belt. In addition to this, an area of 16 ha, has been included towards the safety zone/rationalization area.
- (xviii) 618.644 ha of forest land has been reported to be involved in the project. Approval under the Forest (Conservation) Act, 1980 for diversion of 276.655 ha (including 76.19 Ha area which is to be treated as forest as per dictionary meaning) of forest land for non-forestry purposes has been obtained vide MoEF&CC letter No.8-63/2011-FC dated 20.08.2014 for Manoharpur Coal Mine (8 MTPA) by the prior allottee (OPGC). Since, this 76.19 Ha of land is Govt. non forest land, the same has been acquired through OGLS Act, 1962. However, all the requirement of FC Act has been complied. The FC was transferred to OCPL vide letter no. F.No.8-63/2011-FC dated 30.11.2015.
- (xix) No National Parks, Wildlife Sanctuaries and Eco-Sensitive Zones have been reported with 10 km boundary of the project.
- (xx) The ground water level has been reported to be varying between 2.6 m bgl to 11.1m bgl during pre-monsoon and between 0.9 m bgl to 6.49m bgl during post-monsoon. Total water requirement for the project is 3780 KLD (2830 KLD for industrial purpose and 950 KLD for potable use).
- (xxi) Approval of the Central Ground Water Authority for withdrawal of Ground Water has been obtained vide NOC No:- CGWA/NOC/MIN/ORIG/2018/3818 dated 19.07.2018.
- (xxii) Public hearing for the project of 8 MTPA capacity in an area of 651.24 ha was conducted on 28-02-2012 at the playground in front of N.U.P School, Manoharpur village, Durugaba G.P. Major issues raised in the public hearing includes establishment of an Industrial Training Centre at Hemgir, selection of site of the R&R Colony including the facilities of the R&R Colony, proper valuation of old structures, trees in the village, priority to the PAP for local employment in mines, Appropriate pollution control measures, etc. Appropriate action to address the issues raised in the Public Hearing have already been taken/proposed to be taken.
- (xxiii) Consent to Operate for the existing capacity was obtained from the State PCB on 28.02.2018 and is valid till 31.03.2021.
- (xxiv) Garia Nalla River/nalla is flowing in south eastern side boundary of lease is being diverted. The nalla is being diverted in consultation with the Water Resource Department of the State Government.
- (xxv) Regular monitoring of ambient air quality is being carried out on fortnightly basis. The documented report is being submitted to OSPCB regularly on monthly basis. In general, the results of ambient air quality monitoring data were found within prescribed limits except few aberrations which can be attributed to the specific local conditions during the day of sampling.

- (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 was started from the year October 2019 onwards. No excess production of coal from the sanctioned capacity has been realized since the commencement of mining operations.
- (xxviii) The project involves 615 project affected families. R&R of the PAPs will be done as per R&R policy.
- (xxix) Total cost of the project is Rs. 2143 crores. Cost of production is Rs. 620.74/- @100% production level, CSR cost is around Rs. 7 crores, R&R cost is Rs. 355 crores. Environment Management Cost is Rs. 150 crores.
- (xxx) Consent to operate (CTO) was obtained from the State Pollution Control Board vide letter no. 2208 / IND-I-CON-6454 dated 28.02.2018 and is valid till 31.03.2021.

53.11.3 The EAC during deliberation noted the following: -

Earlier the proposal was considered by EAC in its meeting held on 5th December, 2019. EAC observed the following: - that current proposal of expansion will be coming after 10 years. Committee opined that proposal is very premature. Also PP has not applied for stage-1 Forest clearance. The proposal was deferred accordingly.

EAC noted the following details submitted by Project proponents:

As per the approved Mining Plan (Rev – III), OCPL is required to produce 4.00 MTPA coal in the FY-2020-21, which is not covered in the earlier Environment Clearance issued. The approved Mining Plan (Rev-III) also covers Dipside Manoharpur coal mine (expansion of Manoharpur coal mine). In order to implement the Mining Plan (Rev-III), the EC also needs to be obtained.

The process of Environment Clearance involves a lot of activities like Public Hearing and obtaining other associated clearances, which will take considerable time. Further, the Forest Clearance process requires the updates of EC and there is possibility that the Forest Clearance process may get stuck up in absence of the ongoing process of EC.

The Efficiency Parameters as per the Allotment Agreement specify the milestones, like Environment Clearance, Forest Clearance, Mining Lease execution etc., which are to be achieved within a stipulated timeline. In case of failure or delay in achieving the milestones, there will be appropriation of Performance Security (BG) and may lead to cancellation of coal block as well.

The ToR is having 4 years validity indicating that delays in submission of final EIA/EMP reports do occur due to unforeseen circumstances viz: code of conduct, cancellation of public hearings, etc.

The EC is not granted till Stage-1 forest clearance has been obtained by the project proponent. The minimum time required to obtain Stage-1 FC is 18 months typically under ideal circumstances.

Hence, with the production projected for the FY 22-23 being 8 MTPA (as per present EC), there is only around 3 years left to obtain all the above milestones and statutory clearances for expansion to 16 MTPA.

Mine Plan including Mine Closure Plan (Rev-III) having a capacity of 16 MTPA has been approved by Ministry of Coal on 26th September, 2019 for Manoharpur and Dipside of Manoharpur Coal Blocks

Project involves forest land of 618.644 ha (609.205 ha in ML area & 9.439 ha outside ML area) for diversion for non-forestry activity. Online Application of remaining forest land of 353.53 a was filed on 14th December, 2018. After final assessment of DFO, Sundargarh, final land area comes out 342.87 ha accordingly, application was updated on 31st December, 2019 for Stage-I FC.

53.11.2 The Committee, after deliberations **recommended** for grant of terms of references to Manoharpur and Dipside Manoharpur Coal Mine Project (Expansion of Manoharpur Coal Mine) in an area of 1848.379 ha of M/s Odisha Coal and Power Limited located in Tehsil Hemgir District Sundargarh (Orissa), and specific conditions as below and as defined in the Standard ToR issued by this Ministry for such projects/activities 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). Stage-I clearance for the entire forestland involved the project shall be obtained before making an application for the environmental clearance.
- (iii). Plan showing the safety zone along the nallah passing through the block vis –a-vis DGMS guidelines shall be enclosed as a part of EIA/EMP.
- (iv). Valid Mining Plan and the Progressive Mine Closure Plan duly approved by the competent authority
- (v). Ecological restoration and mine reclamation plan to be prepared with afforestation of local/native species found in the area.
- (vi). To know the effect on ecosystem services available in the said mining area and assessment of carrying capacity of the extant ecology therein, study shall be carried out by any reputed institution
- (vii). Wind rose pattern in the area should be reviewed and accordingly location of AAMSQ will be planned by the collection of air quality data
- (viii). Utilization of fly ash in external overburden dumps and backfilling shall be ensured as per the provisions contained in the Fly Ash Notification, 2009, read with subsequent amendments.
- (ix). Permission for ground water withdrawal shall be obtained from Central Ground Water Authority (CGWA), if applicable
- (x). Fund allocation for Corporate Environment Responsibility (CER) shall be made as per Ministry's O.M. No. 22-65/2017-IA.III dated 1st May, 2018 for various activities therein. The details of fund allocation and activities for CER shall be incorporated in EIA/EMP report
- (xi). PP shall demarcate and explain the exact area and location for storage of top soil in mine plan

- (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). Continuous monitoring of occupational safety and other health hazards, and the corrective actions need to be ensured.
- (xiv). For proper baseline air quality assessment, adequate monitoring stations in the downwind areas based on wind rose pattern of the area, shall be set up for collection of air quality data and air quality modelling.
- (xv). Report of controlled blasting technique and subsequent DGMS approval.
- (xvi). Permission of diversion of nallah/streams/water bodies shall be obtained
- (xvii). A certified report on the updated status of compliance of conditions stipulated in the earlier environmental clearance from the concerned Regional Office of the MoEF&CC.
- (xviii). Details of court cases and the compliance status (if any)

Any other Item deliberated with the permission of the Chairman

Agenda No 53.12

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.

53.12.1 The EAC during deliberations noted the following: -

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). 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.

The project for Tapin South Expansion OCP from 0.06 MTPA to 2 MTPA (Normative)/2.50 MTPA (peak) was accorded TOR vide letter No. J-11015/155/2013-IA.II (M) dated 20th May, 2014 which was further modified vide letters dated 29th May, 2015 and 1st September, 2015.

Also, sub-committee of the EAC conducted site visit on 15th May, 2018 and gave various observation for further compliance.

Ministry vide letter dated 23rd April, 2019 sought clarification from PP regarding diversion/regularization of 24.71 ha forest land. However, till date PP did not provided the required clarification.

Now, 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.

The proposal has to been taken to EAC for consideration after approval of the competent authority.

53.12.2 The EAC after deliberation observed that PP has unnecessarily delayed in providing the clarification sought by the Ministry after recommendation of EAC. EAC further desired that information uploaded on Parivesh portal is incomplete as due the reduced area of the project, the whole land use pattern changes. However, PP has uploaded only request letter along with approve mine plan letter. Casual approach towards process of environmental clearance of PP can be seen by this only. Further, EAC desired that Ministry may keep the earlier recommendation for environmental clearance i.e. on 28th June, 2018 on hold for a while and desired the following from project proponent.

- (i) PP shall be called to EAC in the meeting for presentation for the proposed changes in land use pattern and mining activities.
- (ii) PP shall provide the status of recommendation of sub-committee site visit on 15th May, 2018
- (iii) Status of Consent to Operate vis-à-vis past production details
- (iv) One month baseline data on same monitoring station and comparison with earlier data.
- (v) Permission for approval of extraction of ground water from Central Ground Water Authority.
- (vi) Compliance of issues address during Public Hearing held on 27th February, 2016

The proposal was accordingly **deferred** on the above lines.

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 be addressed in accordance to the Solid Waste Management Rules, 2016/Hazardous & Other Waste Management Rules, 2016.

(b) Air quality monitoring and preservation

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

(e) Mining Plan

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

- (ii) Mining shall be carried out as per the approved mining plan(including Mine Closure Plan) abiding by mining laws related to coal mining and the relevant circulars issued by Directorate General Mines Safety (DGMS).
- (iii) No mining shall be carried out in forest land without obtaining Forestry Clearance as per Forest (Conservation) Act, 1980.
- (iv) 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(MOEFC) from time to time shall be submitted to MOEFCC/Regional Office (RO).
- (ii) The final mine void depth should preferably be as per the approved Mine Closure Plan, and in case it exceeds 40 m, adequate engineering interventions shall be provided for sustenance of aquatic life therein. The remaining area shall be backfilled and covered with thick and alive top soil. Post-mining land be rendered usable for agricultural/forestry purposes and shall be diverted. Further action will be treated as specified in the guidelines for Preparation of Mine Closure Plan issued by the Ministry of Coal dated 27th August, 2009 and subsequent amendments.
- (iii) The entire excavated area, backfilling, external OB dumping (including top soil) and afforestation plan shall be in conformity with the "during mining"/"post mining" land-use pattern, which is an integral part of the approved Mining Plan and the EIA/EMP submitted to this Ministry. Progressive compliance status vis-a-vis the post mining land use pattern shall be submitted to the MOEFCC/RO.
- (iv) Fly ash shall be used for external dump of overburden, backfilling or stowing of mine as per provisions contained in clause (i) and (ii) of subparagraph (8) of fly ash notification issued vide SO 2804 (E) dated 3rd November, 2009 as amended from time to time. Efforts shall be made to utilize gypsum generated from Flue Gas Desulfurization (FGD), if any, along with fly ash for external dump of overburden, backfilling of mines. Compliance report shall be submitted to Regional Office of MoEF&CC, CPCB and SPCB.
- (v) Further, it may be ensured that as per the time schedule specified in mine closure plan it should remain live till the point of utilization. The topsoil shall temporarily be stored at earmarked site(s) only and shall not be kept unutilized. The top soil shall be used for land reclamation and plantation purposes. Active OB dumps shall be stabilised with native grass species to prevent erosion and surface run off. The other overburden dumps shall be vegetated with native flora species. The excavated area shall be backfilled and afforested in line with the approved Mine Closure Plan. Monitoring and management of rehabilitated areas shall continue until the vegetation becomes self-sustaining. Compliance status shall be submitted to the Ministry of Environment, Forest and Climate Change/ Regional Office.
- (vi) The project proponent shall make necessary alternative arrangements, if grazing land is involved in core zone, in consultation with the State government to provide alternate areas for livestock grazing, if any. In this context, the project proponent shall implement the directions of Hon'ble Supreme Court with regard to acquiring grazing land.

(g) Green Belt

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

(h) Public hearing and Human health issues

- (i) Adequate illumination shall be ensured in all mine locations (as per DGMS standards) and monitored weekly. The report on the same shall be submitted to this ministry & it's RO on six-monthly basis.
- (ii) The project proponent shall undertake occupational health survey for initial and periodical medical examination of the personnel engaged in the project and maintain records accordingly as per the provisions of the Mines Rules, 1955 and DGMS circulars. Besides regular periodic health check-up, 20% of the personnel identified from workforce engaged in active mining operations shall be subjected to health check-up for occupational diseases and hearing impairment, if any, as amended time to time.
- (iii) Personnel (including outsourced employees) working in core zone shall wear protective respiratory devices and shall also be provided with adequate training and information on safety and health aspects.
- (iv) Implementation of the action plan on the issues raised during the public hearing shall be ensured. The project proponent shall undertake all the tasks/measures as per the action plan submitted with budgetary provisions during the public hearing. Land oustees shall be compensated as per the norms laid down in the R&R policy of the company/State Government/Central Government, as applicable.
- (v) The project proponent shall follow the mitigation measures provided in this Ministry's OM No.Z-11013/5712014-IA.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 approve by the Board of Directors. The environmental policy should prescribe for standard operating procedures to have proper checks and balances and to bring into focus any infringements/deviation/violation of the environmental/forest/wildlife norms/conditions. The company shall have defined system of reporting infringements/deviation/violation of the environmental/forest/wildlife norms/conditions and/or shareholders/stake holders.
- (iii) A separate Environmental Cell both at the project and company head quarter level, with qualified personnel shall be set up under the control of senior Executive, who will directly to the head of the organization.

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

(j) Miscellaneous

- (i) The project proponent shall make public the environmental clearance granted for their project along with the environmental conditions and safeguards at their cost by prominently advertising it at least in two local newspapers of the District or State, of which one shall be in the vernacular language within seven days and in addition this shall also be displayed in the project proponent's website permanently.
- (ii) The copies of the environmental clearance shall be submitted by the project proponents to the Heads of local bodies, Panchayats and Municipal Bodies in addition to the relevant offices of the Government who in turn has to display the same for 30 days from the date of receipt.
- (iii) The project proponent shall upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and update the same on half-yearly basis.
- (iv) The project proponent shall monitor the criteria pollutants level namely; PM₁₀, SO₂, 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.I1 (M) dated 29th October, 2014, titled 'Impact of mining activities on habitations-issues related to the mining projects wherein habitations and villages are the part of mine lease areas or habitations and villages are surrounded by the mine lease area'.
- (vii) The project proponent shall submit the environmental statement for each financial year in Form-V to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently and put on the website of the company.
- (viii) The project authorities shall inform to the Regional Office of the MOEFCC regarding commencement of mining operations.
- (ix) The project authorities must strictly adhere to the stipulations made by the State Pollution Control Board and the State Government.
- (x) The project proponent shall abide by all the commitments and recommendations made in the EIA/EMP report, commitment made during Public Hearing and also that during their presentation to the Expert Appraisal Committee.
- (xi) No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment, Forests and Climate Change.

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

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.

- xiii. The Ministry reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions.
- xiv. The Regional Office of this Ministry shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the officer (s) of the Regional Office by furnishing the requisite data / information/monitoring reports.
- xv. The above conditions shall be enforced, inter-alia under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986, Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 and the Public Liability Insurance Act, 1991 along with their amendments and Rules and any other orders passed by the Hon'ble Supreme Court of India / High Courts and any other Court of Law relating to the subject matter.
- xvi. Any appeal against this EC shall lie with the National Green Tribunal, if preferred, within 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-II0I3/25/2014-IA.I dated 11th August, 2014 to be followed with regard to CSR activities.
 - xv. Details of Public Hearing, Notice(s) issued in newspapers, proceedings/minutes of Public Hearing, points raised by the general public and response/commitments made by the proponent along with the Action Plan and budgetary provisions be submitted in tabular form. If the Public Hearing is in the regional language, an authenticated English translation of the same should be provided. Status of any litigations/ court cases filed/pending, if any, against the project should be mentioned in EIA.
 - xvi. Analysis of samples indicating the following be submitted:
 - Characteristics of coal prior to washing (this includes grade of coal, other characteristics of ash, S and heavy levels of metals such as Hg, As, Pb, Cr etc).
 - Characteristics and quantum of coal after washing.
 - Characteristics and quantum of coal rejects.
 - xvii. Details of management/disposal/use of coal rejects should be provided. The rejects should be used in TPP located close to the washery as far as possible. If TPP is within a reasonable distance (10 km), transportation should be by conveyor belt. If it is far away, the transportation should be by rail as far as possible.
 - xviii. Copies of MOU/Agreement with linkages (for stand-alone washery) for the capacity for which EC is being sought should be submitted.
 - xix. Corporate Environment Responsibility:
 - a) The Company must have a well laid down Environment Policy approved by the Board of Directors.
 - b) The Environment Policy must prescribe for standard operating process/procedures to bring into focus any infringements/deviation/violation of the environmental or forest norms/conditions.
 - c) The hierarchical system or Administrative Order of the company to deal with environmental issues and for ensuring compliance with the environmental clearance conditions must be furnished.
 - d) To have proper checks and balances, the company should have a well laid down system of reporting of non-compliances/violations of environmental norms to the Board of Directors of the company and/or shareholders or stakeholders at large.
 - xx. A detailed action Plan for Corporate Social Responsibility for the project affected people and people living in and around the project area should be provided.
 - xxi. Permission of drawl of water shall be pre-requisite for consideration of EC.
 - xxii. Wastewater /effluent should 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)									
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*As a representative example

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

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

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

- (xxxii) Flow chart of water balance should be provided. Treatment of effluents from workshop, township, domestic wastewater, mine water discharge, etc. should be provided. Details of STP in colony and ETP in mine should be given. Recycling of water to the max. possible extent should be done.
- (xxxiii) Occupational health issues. Baseline data on the health of the population in the impact zone and measures for occupational health and safety of the personnel and manpower in the mine should be given.
- (xxxiv) Risk Assessment and Disaster Preparedness and Management Plan should be provided.
- (xxxv) Integration of the Env. Management Plan with measures for minimizing use of natural resources - water, land, energy, etc. should be carried out.
- (xxxvi) Cost of EMP (capital and recurring) should be included in the project cost and for progressive and final mine closure plan.
- (xxxvii) Details of R&R. Detailed project specific R&R Plan with data on the existing socio-economic status of the population (including tribals, SC/ST, BPL families) found in the study area and broad plan for resettlement of the displaced population, site for the resettlement colony, alternate livelihood concerns/employment for the displaced people, civic and housing amenities being offered, etc and costs along with the schedule of the implementation of the R&R Plan should be given.
- (xxxviii) CSR Plan along with details of villages and specific budgetary provisions (capital and recurring) for specific activities over the life of the project should be

given.

(xxxix) Corporate Environment Responsibility:

- a) The Company must have a well laid down Environment Policy approved by the Board of Directors.
 - b) The Environment Policy must prescribe for standard operating process/procedures to bring into focus any infringements/deviation/violation of the environmental or forest norms/conditions.
 - c) The hierarchical system or Administrative Order of the company to deal with environmental issues and for ensuring compliance with the environmental clearance conditions must be furnished.
 - d) To have proper checks and balances, the company should have a well laid down system of reporting of non-compliances/violations of environmental norms to the Board of Directors of the company and/or shareholders or stakeholders at large.
- (xl) Details on Public Hearing should cover the information relating to notices issued in the newspaper, proceedings/minutes of Public Hearing, the points raised by the general public and commitments made by the proponent and the action proposed with budgets in suitable time frame. These details should be presented in a tabular form. If the Public Hearing is in the regional language, an authenticated English Translation of the same should be provided.
- (xli) In built mechanism of self-monitoring of compliance of environmental regulations should be indicated.
- (xlii) Status of any litigations/ court cases filed/pending on the project should be provided.
- (xlili) 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 Both (ha)
1.	Agricultural land			

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

Area under Surface Rights

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

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

station should be in the upwind/upstream/non-impact/non-polluting area as a control station. The monitoring should be as per CPCB guidelines and parameters for water testing for both ground water and surface water as per ISI standards and CPCB classification wherever applicable. Observed values should be provided along with the specified standards.

- (xiv) Impact of mining and water abstraction from the mine on the hydrogeology and groundwater regime within the core zone and 10 km buffer zone including long-term monitoring measures should be provided. Details of rainwater harvesting and measures for recharge of groundwater should be reflected in case there is a declining trend of groundwater availability and/or if the area falls within dark/grey zone.
- (xv) Study on subsidence including modeling for prediction, mitigation/prevention of subsidence, continuous monitoring measures, and safety issues should be carried out.
- (xvi) Detailed water balance should be provided. The break up of water requirement as per different activities in the mining operations, including use of water for sand stowing should be given separately. Source of water for use in mine, sanction of the Competent Authority in the State Govt. and impacts vis-à-vis the competing users should be provided.
- (xvii) Impact of choice of mining method, technology, selected use of machinery and impact on air quality, mineral transportation, coal handling & storage/stockyard, etc, Impact of blasting, noise and vibrations should be provided.
- (xviii) Impacts of mineral transportation within the mining area and outside the lease/project along with flow-chart indicating the specific areas generating fugitive emissions should be provided. Impacts of transportation, handling, transfer of mineral and waste on air quality, generation of effluents from workshop etc, management plan for maintenance of HEMM and other machinery/equipment should be given. Details of various facilities such as rest areas and canteen for workers and effluents/pollution load emanating from these activities should also be provided.
- (xix) Effort be made to reduce/eliminate road transport of coal inside and outside mine and for mechanized loading of coal through CHP/ Silo into wagons and trucks/tippers.
- (xx) Details of various facilities to be provided to the workers in terms of parking, rest areas and canteen, and effluents/pollution load resulting from these activities should also be given.
- (xxi) The number and efficiency of mobile/static water sprinkling system along the main mineral transportation road inside the mine, approach roads to the mine/stockyard/siding, and also the frequency of their use in impacting air quality should be provided.
- (xxii) Impacts of CHP, if any on air and water quality should be given. A flow chart showing water balance along with the details of zero discharge should be provided.
- (xxiii) Conceptual Final Mine Closure Plan and post mining land use and restoration of land/habitat to the pre- mining status should be provided. A Plan for the ecological restoration of the mined out area and post mining land use should be prepared with detailed cost provisions. Impact and management of wastes and issues of re-handling (wherever applicable) and backfilling and progressive mine closure and reclamation should be furnished.
- (xxiv) Greenbelt development should be undertaken particularly around the transport

route and CHP. Baseline data on the health of the population in the impact zone and measures for occupational health and safety of the personnel and manpower for the mine should be submitted.

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

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

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

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.

3/5/2020

Email

Email

munna.shah@gov.in

Re: Draft Minutes of 53rd EAC meeting held on 20.02.2020

From : navin chandra <navinchandrarrl@yahoo.com>

Thu, Mar 05, 2020 12:52 PM

Subject : Re: Draft Minutes of 53rd EAC meeting held on 20.02.2020**To :** Additional Director MoEFCC Dr R B LAL
<rb.lal@nic.in>**Cc :** sd vora <sd_vora@yahoo.com>, Dr J K Pandey
<jkpandey@cimfr.nic.in>, N S Mondal
<nsmondalcea@yahoo.com>, shuklanp55@gmail.com, mohankarnat4@gmail.com, manjari srivastava
<manjari.srivastava@nmims.edu>, slele@atree.org, gpkundargi@gmail.com, pdsiwal@yahoo.com, rk giriccs <rk.giriccs@gmail.com>, Sanjeev Paliwal
<sanjeevpaliwal.cpcb@nic.in>, sunil@iitism.ac.in, Munna Kumar Shah <munna.shah@gov.in>**Reply To :** navin chandra <navinchandrarrl@yahoo.com>

05/03/2020

Dear Dr. Lal/Dr. Shah,

Since two of the EAC members have found the minutes to be in order and I have also read. The Minutes are approved and ready for uploading on the website of the Ministry of Environment, Forest and Climate Change.

Thanks,
Regards,

(NAVIN CHANDRA)

Dr. Navin Chandra,
Vice Chancellor, IES University, Bhopal
Chairman, Coal Mining & Thermal Power,
MoEF&CC, GOI, New Delhi.
Ex-Director General MPCST, Bhopal,
(Retd.) Director (Actg.), CSIR-AMPRI, Bhopal
Member, RC, CSIR-AMPRI, Bhopal.
Phone (Res.) 91-755-2454600
navinchandrarrl@yahoo.com, navinchandraampri@gmail.com

On Thursday, 5 March, 2020, 11:37:57 am IST, Additional Director MoEFCC Dr R B LAL <rb.lal@nic.in> wrote:

PARTICIPANTS IN 53rd EXPERT APPRAISAL COMMITTEE (EAC) (THERMAL & COAL MINING) MEETING HELD ON 20th February, 2020. ON COAL SECTOR PROJECTS.

Sl. No.	List of Participants Expert Appraisal Committee (Coal Mining)		Signature
1.	Dr. Navin Chandra	Chairman	
2.	Dr. N. P. Shukla	Member	
3.	Dr. Jai Krishna Pandey	Member	
4.	Dr. Sharachchandra Lele	Member	
5.	Dr. G.P.Kundargi	Member	
6.	Sh. N.S. Mondal	Member	
7.	Dr. R.K.Giri	Member	
8.	Dr. Manjari Srivastava	Member	
9.	Dr S.K.Paliwal	Member	
10.	Dr. S.K.Gupta	Member	
11.	Shri N. Mohan Karnat	Member	
12.	Sh. S.D.Vora	Member	
13.	Dr. R.B. Lal	Member Secretary	
