

Minutes of the 48th meeting of the Expert Appraisal Committee held on 3-4 October, 2019 for appraisal of coal mining projects at Indira Paryavaran Bhawan, Ministry of Environment, Forest and Climate Change, New Delhi-3

The 48th meeting of the Expert Appraisal Committee (EAC) for Coal mining projects was held on 3-4 October, 2019 in the Ministry of Environment, Forest & 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.	Shri Surmya D Vora		Member
3.	Shri G.P. Kundargi	-	Member
4.	Dr. S. K. Paliwal		Member (Representative of CPCB)
5.	Dr. Jai Krishna Pandey	-	Member
6.	Shri Sharath Kumar Pallerla	-	Member Secretary

DATE: 3rd October, 2019

Confirmation of minutes

There being no comments from any of the members of the Committee, minutes of the 47th meeting of the EAC held during 22nd August, 2019 were confirmed in the presence of the members who had been present in the 48th meeting.

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:-

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

Agenda No.48.1

Expansion of Nigahi Opencast Coal mine from 18.75 to 21 MTPA of M/s Northern Coalfields Limited in mine lease area of 3018.40 ha located in Village Nigahi, Tehsil & District Singrauli (MP) - Environmental clearance under the provision of clause 7(ii) of EIA Notification, 2006

[IA/MP/CMIN/109926/2019; F. No.J-11015/79/2013-IA.II(M)]

48.1.1 The proposal is for Expansion of Nigahi Opencast Coal mine Project from 18.75 MTPA to 21 MTPA of M/s Northern Coalfields Limited located in the ML area of 3018.40 ha at Village Nigahi, Tehsil & District Singrauli, Madhya Pradesh under the provision of Clause 7 (ii) of EIA Notification, 2006

48.1.2 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) Nigahi Project is an Opencast Mine of M/s Northern Coalfields Limited, which is a subsidiary of M/s Coal India Limited. Nigahi OCP is located in the south- central part of Moher sub-basin of Singrauli Coalfields in the Singrauli district of Madhya Pradesh. Nigahi OCP mainly falls in Nigahi Block and Nigahi North Extension Block.

(ii) This application has been made for environmental clearance for enhanced production of Nigahi OCP from 18.75 MTPA to 21.00 MTPA (40% enhancement over the earlier EC capacity) as per the MoEFCC OM No. J-11015/224/2015-IA.II dated 15.09.2017 under clause 7(ii) of EIANotification-2006.

(iii) The Project is covered under Topo Sheet no. 63-L/12 and bounded by Latitude 24°06'3.29" & 24°11'16.37" North and Longitude 82°35'28.23" & 82°39'50.12" East. Nigahi OCP lies in western side of existing Jayant OCP and eastern side of Amlohri OCP.

(iv) Earlier Environmental clearance was granted by the ministry vide no. J-11015/235/2006-IA.II(M) dated 08.05.2007 for coal production of 15 MTPA in a total lease area of 3036.40 Ha, with consideration of public hearing under section 12 of the Environmental Impact Assessment notification, 2006.

(v) Public hearing was conducted by MPPCB on 18.12.2005, in the Community Hall, Waidhan, Singrauli, MP. The EPR for Nigahi OCP (15 MTPA) had been approved by the Government of India on 8th October, 2007.

(vi) Subsequently, Environmental clearance was obtained vide MoEF&CC's letter No.J-11015/79/2013-IA.II(M) dated 19.03.2015 and subsequent amendment dated 12.10.2018 for the coal production capacity of 18.75 MTPA in a total lease area of 3018.40 Ha.

(vii) Nigahi OCP has got the potential to produce an additional coal of 2.25 MTPA (in addition to the 18.75 MTPA) with addition of one surface miner and capacity utilization of existing plant & machinery.

(viii) Arrangements have already been made for transportation of additional quantity of coal, proposed to be produced from Surface Miner, through railway wagons. A scheme for enhancing the CHP capacity is also under consideration, which will ensure total coal transportation through railway wagon.

(ix) Mine plan for enhanced coal production (21 MTPA) has been prepared, within the sanctioned boundary of Nigahi OCP. As such the mining lease area will not be changed.

(x) Mine lease hold area for coal production of 21 MTPA will remain the same as 3018.40 Ha, out of which 1280.517Ha is Forest Land (including 38.517 Ha Revenue Forest Land), 1528.883 Ha Tenancy Land and 209.00 Ha Government Land. The project has obtained the stage-I clearance for all the forest land, as mentioned above.

(xi) Total mine-able coal reserves has been estimated to be 483.01 MT, out of which 258.94 MT has been mined out and approximately 224.07 MT is left to be mined as on 01.04.2019.

(xii) Total Over-Burden has been estimated to be 1776.65 Mm³, out of which 893.95 Mm³ has been removed and approximately 882.70 Mm³ is left to be removed as on 01.04.2019. As on 01.04.2019, Average Stripping Ratio is 3.94 m³/t and balance life of the mine is 12 years. As on 01.04.2019, 333.42 Ha of OB dump has been reclaimed with a total of 16.96 Lakhs of plants.

(xiii) No change in technology is proposed. It has been proposed that the OB will be removed by Outsourcing, additional coal will be produced by deploying the surface miner in the mine.

(xiv) No change in backfilling & land reclamation plan will take place. Nigahi OCP has got Environmental Clearance and the land reclamation plan has been approved by MOEFCC. There is no change in the land reclamation plan and the same shall continue after including the increased capacity of the mine to 21 MTPA also.

(xv) In addition to the compliance of EC conditions, following pollution control measures have been undertaken, by Nigahi OCP, NCL:

- Arrangements have been made for transportation of additional quantity of coal, proposed to be produced from Surface Miner, through railway wagons. A scheme for enhancing the CHP (Coal Handling Plant) capacity is also under consideration, in order to further strengthen the coal transportation through railway wagon.

- For real time monitoring of ambient air quality, CAAQMS has been installed in the residential premises of Nigahi OCP, which is in operation since 26.04.2019.
- Massive plantation has been undertaken during the monsoon of year 2019. A total of 1.26 lakhs trees have been planted on OB dumps covering an area of 50.58 Ha.
- Apart from above, 1,650 kg seeds of grasses and trees, have been sprayed over the OB dump slopes, during the monsoon of year 2019. About 5000 fruit bearing plants have been distributed among the employees and local villagers during the monsoon of 2019.
- Three numbers of large capacity water tankers of 60 KL, have been procured and commissioned during the year 2018-19, for strengthening of existing haul road dust suppression mechanism of Nigahi OCP.
- For effective bio-reclamation of OB dumps, record top soil utilization has been achieved, during the year 2018-19. A total quantity of 4,59,120 CuM top soil was removed from the freshly handed over forest area and judiciously spread over the dump slopes, before the onset of monsoon period. Since the top soil is found to be very rich in terms of nutrients and seeds/roots of diverse native species, effective plantation growth have been observed during the monsoon of year 2019.
- Procurement of mechanical road sweeping machine and truck mounted mist spray system/ mist gun, is in tendering stage and expected to be commissioned soon.

(xvi) Certificate of compliance of earlier EC was obtained from Regional office, Bhopal vide letter no. 3-17/2015/(ENV)/681 dated 18.06.2019 based on the site visit on 14.05.2019.

(xvii) There are no court cases pending on the project or activity.

48.1.3 The EAC, after deliberations noted the following

- The proposal is for Expansion of Nigahi Opencast Coal mine Project from 18.75 MTPA to 21 MTPA of M/s Northern Coalfields Limited located in the ML area of 3018.40 ha at Village Nigahi, Tehsil & District Singrauli, Madhya Pradesh under the provision of Clause 7 (ii) of EIA Notification, 2006 based on Ministry's OM dated 15th September, 2017 (i.e. 40% expansion)
- Environmental Clearance for Expansion of Nigahi Opencast Coal mine project from 10 MTPA to 15 MTPA was granted on 8th May, 2007.
- Public hearing was conducted by MPPCB on 18th December, 2005, in the Community Hall, Waidhan, Singrauli, MP
- Environmental Clearance for Expansion of Nigahi Opencast Coal mine project from 15 MTPA to 18.75 MTPA was granted on 19th March, 2015 under clause 7(ii) of EIA Notification, 2006 based on Ministry's OM 19th December, 2012 (i.e. for 25 % expansion)
- Subsequently, amendment in environmental clearance was granted by the Ministry for the increase mine lease area of Nigahi OCP from 2650.40 ha to 3018.40 ha i.e. (2650.40+386-18) ha on 12th October, 2018.
- The Comprehensive Environmental Pollution Index (CEPI) as per the assessment of Central Pollution Control Board during 2018 is 62.59, which is categorized as severely polluted area.
- The Hon'ble NGT in OA No. 1038/2018 dated 10th August, 2019 with subsequent order dated 19.08.2019, where in it was directed that '-----the MoEF&CC can forthwith devise an appropriate mechanism to ensure that new legitimate activity or expansion can take place after due precautions are taken in the areas in question by 'red' and 'orange' category of units'.

- It was informed that the Ministry is in the process of devising the mechanism for dealing of the proposals in CPA ad SPA. Pending the finalized mechanism, notified by the ministry, the committee did not forward on the proposal.
- Further the committee also noted that the project proponent did not submit an addendum EIA and propose adequate additional measures in light of additional production proposed and considering Severely Polluted Area.
- There were partial compliances of earlier EC conditions were reported by the Regional officer in its report dated 18th June, 2019.
- Further, the committee observed that the OB dump height has been restricted to 90 m vide EC letter dated 19th March, 2015 for external OB dump (hard and soft). However, the PP has already dumped upto 150 m and claimed it is as per the EC dated 8th May, 2007. The Committee advised to conduct a scientific study on the stability of the dump through an autonomous/expert body.
- CER was not proposed as per the guidelines given dated 1st May, 2018.

48.1.4 *The EAC, therefore, after deliberations, desired the following details for further consideration of the proposal.*

- *An addendum EIA for the additional production proposed i.e. from 18.75 MTPA to 21.00 MTPA inter alia including adequate additional measures.*
- *Fulfillment of requirements as mentioned in Ministry's OM dated 15th September, 2017*
- *Action Taken Report on partial compliances of EC conditions reported by the Ministry's Regional Office.*
- *CER shall be proposed as per the guidelines given dated 1st May, 2018 for an additional capital investment on the instant proposal.*

Therefore, the proposal was deferred on the above lines

Agenda No.48.2

Change in technology from 2.4 MTPA dry type coal washery to 2.4 MTPA wet type with a combined capacity 3.6 MTPA (wet type) of coal washery of M/s Hind Energy & Coal Beneficiation (India)Ltd in an area of 11.09 ha located at Village Hindadih, Tehsil Masturi District Bilaspur (Chhattisgarh) – Environment Clearance – reg.

[IA/CG/CMIN/19226/1900, J-11015/364/2009-IA-II(M)]

48.2.1 The proposal is for Change in technology from 2.4 MTPA dry type coal washery to 2.4 MTPA wet type with a combined capacity 3.6 MTPA (wet type) of coal washery in a total area of 11.09 ha of M/s Hind Energy & Coal Beneficiation (India) Ltd located at Hindadih Village, Masturi Tehsil Bilaspur District, Chhattisgarh.

48.2.2 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 was accorded TOR vide letter no. J-11015/364/2009-IA-II (M) dated 11th February 2016 and subsequently obtained TOR validity extension vide dated 29th March 2019.

(ii) The project are is covered under Survey of India Topo Sheet No. 64 J/8 and is bounded between latitudes(s) 22° 9'25.82" to 22° 9'50.17" North and longitude(s)82°20'21.87" to 82°20'29.95" East respectively. Latitude and Longitude of the project: Corner coordinates of applied Washery area is given below:

Point No.	Latitude	Longitude
1.	22° 9'25.82"N	82°20'29.95"E
2.	22° 9'27.69"N	82°20'31.42"E
3.	22° 9'40.37"N	82°20'26.67"E
4.	22° 9'48.71"N	82°20'27.09"E
5.	22° 9'50.17"N	82°20'21.87"E
6.	22° 9'47.62"N	82°20'19.18"E
7.	22° 9'39.88"N	82°20'16.71"E
8.	22° 9'35.68"N	82°20'22.60"E
9.	22° 9'31.46"N	82°20'26.43"E

- (iii) There are no joint ventures in the proposed project.
- (iv) Details of coal linkage (Source of Raw coal): Coal will be sourced from SECL from Deepka, Gevra, Kusmunda and other mines of South Eastern Coalfield Limited (SECL), located in Korba/Raigarh area.
- (v) Whether the project is in the Critically Polluted Area (CPA): Nearest CEPI area Korba ~ 40 Kms.
- (vi) Employment generated / to be generated: Already 100 no. of man power are employed & with change of technology 15 no. during construction and 10 no. during operation will be generated. Indirect employment- 20 nos.
- (vii) Washed Coal Linkage: MoU has been signed with M/s. Rajasthan Rajya Vidyut Utpadan Nigam Ltd. & M/s. Gujarat State Electricity Corporation Ltd.
- (viii) Benefits of the project: Existing plant is already carrying out various Socio economic activities & spent Rs. 3.07 Crores for last 3 years and same will be continued in consultation with Panchayats of local villages.
- (ix) The land usage of the project will be as follows: This is a coal washery. The following is the breakup of land usage of 27.42 acres (11.09 Ha.) of total land earmarked for the project.

S.No.	Description	Area (in Acres)
1.	Main Plant Area	9.0
2.	Raw Coal Storage Yard	3.3
3.	Washed Coal Storage Yard	1.7
4.	Rejects storage	1.4
5.	Water Storage and Rain Water Harvesting	0.5
6.	Parking & Internal Roads	2.42
7.	Green Belt	9.1
	TOTAL	27.42

- (x) Present proposal is change in Technology from Dry to Wet process of Coal Washery for which EC has been obtained vide no. J-11015/190/2007-IA II (M) dt. 24th June 2008, which was superseded by J-11015/364/2009-IA II (M) dt. 21st May 2014
- (xi) EC compliance report was issued vide F.No.3-34/2008(Env.) dt.19.07.2016, 21.02.218 & 08.02.2019.
- (xii) Project Area for coal washery : 27.42 Acre (Present proposal of change in technology will be taken up in the existing plant only).
- (xiii) Total water requirement for 2.4 MTPA (Dry washery) & 1.2 MTPA (Wet process) for which EC has been accorded is 585 cum/day. Ground water permission for existing has been obtained vide letter no. 21-4(102)/ NCCR/ CGWA/2011-643 dt. 20.06.2019. After conversion of 2.4 MTPA DRY type coal washery to 2.4 MTPA WET type coal washery, an additional water of 475 cum/day will be required. The total water requirement after present proposal will be 1085 cum/day only. Water permission has already been obtained from

CGWA for drawl of 585 cum/day of ground water. Additional water for present proposal will be sourced from Lilagarh river (Bawardih Anicut). Water drawl Permission from Water Resources Department, Govt. of Chhattisgarh has been obtained vide letter no. 1254/F4-299/S-2/31/Ind. Jal/15 Naya Raipur dt. 21.02.2018.

(xiv) Lilagarh River (3.3 Kms.), Kurug left bank canal (5.0 Kms.) are flowing within 10 Kms. radius of the Project site.

(xv) Ambient Air Quality has been collected from March 2016 to May 2016 and results are well within the NAAQS limits.

(xvi) The ROM coal from SECL mines mainly from Deepka, Gevra, Kusmunda and other mines is being transported by Road / Rail and same practice will be followed in the present proposal also. Washed coal and Washery rejects is being transported to parties through Road / Rail and same practiced will be followed in the present proposal also.

(xvii) Rail transportation is being served from own Railway Siding at Ghatora (20.0 Kms. – by road) and same will be used for present proposal also.

(xviii) Transportation of Raw Coal from the SECL mines in the region depends on their rail connectivity, availability of rakes for short distance and permission from SECL to do so. Transportation to the nearby client and those not linked to rail network will be by Road.

(xix) Washed coal from the plant is being transported by Rail / road in covered trucks directly to the customer and same will be continued in the present proposal. The mode of transport of washed coal will depend on the MoU with the customers who may have either road transport or rail transport. All the trucks used for transportation of raw materials is being covered and same practiced will be followed.

(xx) Cost: Total capital cost of the project is Rs. 12.0 Crores. CER Cost (Capital Cost Rs. 45.0 Lakhs Annual Recurring: Rs. 10.0 Lakhs). R&R Cost: Nil. Environmental Management Cost (Capital cost Rs.50.0Lakhs (Direct) and recurring cost Rs. 15 lakhs).

(xxi) Water body: No river / nallah flows near or adjacent to the project site. However, Lilagarh River (3.3 Kms.), Kurug left bank canal (5.0 Kms.) are flowing within 10 Kms. radius of the Project site.

(xxii) Approvals: Water permission has already been obtained from CGWA for drawl of ground water. Additional water for present proposal will be sourced from Lilagarh river (Bawardih Anicut). Water drawl Permission from Water Resources Department, Govt. of Chhattisgarh has been obtained vide letter no. 1254/F4-299/S-2/31/Ind. Jal/15 Naya Raipur dt. 21.02.2018.

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

(xxiv) Forestry issues: There is no forest area involved in the Plant area. However, Bitkuli RF (0.5 Kms) & Dalha PF (6.0 Kms.) are present within 10 Km. radius of the plant site.

(xxv) Green Belt is already developed in an area of 3.68 ha.

(xxvi) There is no court cases/violation pending with the project proponent.

(xxvii) Public Hearing was held on 5th April 2017 at Middle School Premises, Khanda Village, Masturi Tehsil, Bilaspur District, Chhattisgarh.

(xxviii) The issues raised in the PH include Employment to the local villagers, Pollution, Drinking water supply and other CSR activities etc.

(xxix) Renewal of Consent to Operate under Water (Prevention and Control of Pollution) Act, 1974 and Air (Prevention and Control of Pollution) Act, 1981 was granted by Chhattisgarh Environment Conservation Board dated 20th August, 2018

48.2.3 The EAC, after detailed deliberations, noted the following:-

- The proposal is for Change in technology from 2.4 MTPA dry type coal washery to 2.4 MTPA wet type with a combined capacity 3.6 MTPA (wet type) of coal washery in

a total area of 11.09 ha of M/s Hind Energy & Coal Beneficiation (India) Ltd located at Hindadih Village, Masturi Tehsil Bilaspur District, Chhattisgarh

- The project was accorded TOR vide letter no. J-11015/364/2009-IA-II (M) dated 11th February 2016 and subsequently obtained TOR validity extension vide dated 29th March 2019
- Public Hearing was held on 5th April 2017 at Middle School Premises, Khanda Village, Masturi Tehsil, Bilaspur District, Chhattisgarh
- The project proponent has established 2.4 MTPA (dry-type) coal washery with prior environmental clearance dated 24th June 2008. Subsequently, established 1.2 MTPA (wet-type) washery having EC dated 21st May, 2014.
- Now, it is proposed to change the technology in the 2.4 MTPA washery from dry type to wet type. Therefore, the combined capacity will be 3.6 MTPA wet type coal washery.
- The committee was informed that the change in the technology from dry type to wet type has been proposed due to market conditions as the better grade of washed coal will be achieved by wet type and desired moisture can be maintained as per the supply requirements.
- It was also informed that the filter cake from belt press shall either be mixed with washed coal or rejects depending on the ash content. The effluent from the belt press shall be pumped back to the Thickener. Thus, the process shall be close circuit water system and adhered to the Zero Liquid Discharge.
- The certificate of compliance/Closure report on the status of compliance of conditions of EC dated 21st May, 2014 was obtained vide Ministry's Regional office, Nagpur report dated 8th February, 2019.
- Maximum average baseline concentration in the study area for PM10 is 64.5 ug/m³, SO₂ is 19.8 ug/m³, NO_x is 21.5 ug/m³ and CO is 675 ug/m³.

48.2.4 *The Committee, after deliberations, recommended grant of environment clearance to Change in technology from 2.4 MTPA dry type coal washery to 2.4 MTPA wet type with a combined capacity 3.6 MTPA (wet type) of coal washery of M/s Hind Energy & Coal Beneficiation (India)Ltd in an area of 11.09 ha located at Village Hindadih, Tehsil Masturi District Bilaspur (Chhattisgarh) 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 in addition to the standard environmental conditions notified by the ministry mentioned below:*

- The maximum production from the coal washery at any given time shall not exceed the limit as prescribed in the EC.*
- The washing technology so chosen for the washery should conform to 'Zero Liquid Discharge'.*
- Total water requirement after proposed change in technology should not exceed 1085 cum/day.*
- All the terms and conditions stipulated by the Central Ground Water Authority (CGWA) and Water Resources Department, Govt. of Chhattisgarh while permitting Renewal of NOC for withdrawal of 1,93,050 cum/year (528.9 cum/day) of ground water vide letter dated 30th June, 2019 and for allocation of 0.17 cum/year from Lilagarh river (Bhawradih Anicut) vide letter dated 21st February, 2018 respectively shall be strictly adhered to.*
- Maximum transportation of raw coal, clean coal, middling and rejects shall be through rail with wagon loading through silo.*
- Disposal of washery rejects shall be in accordance with the extant policy and guidelines, and environment friendly.*
- Thick green belt of 30-45 m width to be provided around the washery to mitigate/check the dust pollution. A 3-tier avenue plantation should also be developed along*

vacant areas, storage yards, loading/transfer points, and also along internal roads/main approach roads.

(viii) Ash content below 34% should be maintained in washed coal to be transported beyond 500 km for use in thermal power plants.

(ix) The State Pollution Control Board, while considering consent to operate for the project, may stipulate stringent conditions to ensure that with the proposed transportation of washery rejects by road, air quality would remain within the national ambient air quality standards.

(x) The washery shall be as per project report submitted and presented to EAC.

(xi) Mitigating measures to be undertaken to control dust and other fugitive emissions all along the roads by providing sufficient numbers of water sprinklers.

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

(xiii) The project proponent shall take up the rejuvenation / deepening of village ponds as a compensatory to the groundwater extraction as a part of CER.

(xiv) The project proponent shall conduct periodical training for the truck drivers for imparting safety training. The safety audit shall be conducted through a third party once in every two years.

Agenda No.48.3

Hingula Washery of 10 MTPA in an area of 27 ha of M/s Mahanadi Coalfields Limited located in District Angul (Odisha) - Amendment in Environment Clearance

[IA/OR/CMIN/18276/2013; F.No. J-11015/67/2013-IA.II(M)]

48.3.1 The proposal is for amendment in environmental clearance dated 28th October, 2015 granted by the Ministry in favour of M/s Mahanadi Coalfields Limited to the Coal Washery of 10 MTPA in an area of 27 ha in District Angul (Odisha).

Details of amendments sought are as under: -

S. No.	Point No. of EC granted	Existing Point	Modification proposed
1.	Pt. No. 3(ii)	Equipment will be imported from South Africa	No overseas equipment to be imported as per present offer of the L-1 Bidder.
2.	Pt. No. 3(iii)	"Hingula Washery has been proposed to be set up on BOM basis for beneficiation of raw coal (non-coking coal of grade-G-11 & Ash content ranging between (34.5 – 42.5 %)) of Hingula – II Expansion OCP (Phase-III).	Hingula Washery has been proposed to be set up on BOM basis for beneficiation of raw coal (non-coking coal of grade-G-13 & Ash content ranging between (38.3 – 46.3 %)) of Hingula – II Expansion OCP (Phase-III) (15 MTPA).
3.	Pt. No. 3 (viii) – Employment Generated/ to be generated	Washery will be constructed on BOM concept; hence employment will be generated by BOM Operator. Around-173 (for operation of washery).	Washery will be constructed on BOM concept; hence employment will be generated by BOM Operator. Around 254 (for operation of washery).
4.	Pt. No. 3 (x)	17 Ha land is required for	17.65 Ha land is required for

	Land usage of the project	proposed Hingula Washery. 10 Ha land is required for temporary storage for rejects. 17 + 10 = 27 Ha land required for washery & rejects storage has already been acquired and is in possession of MCL. All the 27 Ha land is non-coal bearing.	proposed Hingula Washery site. 10 Ha land is required for temporary storage for rejects. 17.65 + 10 = 27.65 Ha of land required for washery construction & rejects storage has already been acquired and is in possession of MCL. All the 27.65 Ha land is non-forest, non-agricultural, undeveloped and non-coal bearing. Variation in land area (0.65 Ha) is due to error in measurement done earlier. After fresh measurement and calculation of land area 17.65 Ha is for washery site.
5.	Pt. No. 3(xi)	The coal grade is G-11.	The coal grade is G-13.
6.	Pt. No. 3 (xii)	The total estimated water requirement is 1273 m ³ /hr. at 0.09 m ³ / tonne of raw Coal.	The total estimated water requirement is 0.12 m ³ /tonne of raw Coal (on dry basis) as per the Lol issued to L-I bidder.
7.	Pt. No. 3 (xviii) – Cost	Total capital cost of the project is 321.96 Crores.	Total capital cost of the project is Rs. 424.42 Crores as per the Lol issued to L-I bidder.
8.	Pt. No. 3 (A) (iii)	Detailed note to be provided on utilization of rejects if it is more than 80 % ash content.	The ash content in reject shall be 75.2% on air dried basis with monthly average ash % of 42.3% of raw coal on ADB. Policy for Disposal and Utilization of Rejects produced from CIL Washeries (Existing & Future)” communicated by CIL vide CIL letter no. CIL/PMD/Ws/41/350 dated 24.07.2018

48.3.2 The proposal was earlier considered by the EAC in its meeting held on 27th May, 2019. During the meeting, the Committee desired for additional information in respect of the following:-

- Whether the proposed washery covering an area of 17.65 ha and temporary storage site for rejects (10 ha) in mine lease hold of Balram OCP is in conformity with its approved Mining Plan. Also, the proposal, if any, for amendment in the environment clearance for Balram OCP.
- Justification for change in raw coal specifications (G11 to G13, ash content from 34.5- 42.4% to 38.3-46.3%) from the same coal linkage i.e. Hingula-II Expansion OCP (Phase III) of capacity 15 MTPA. Whether the same is in line with environmental clearance issued for the project. What about operational status of the project?
- In view of the project within the mine lease hold of Balram OCP, compliance status of the conditions stipulated in its environmental clearance is essentially required.
- Status of pipe conveyor (3.76 km) for raw coal transportation to washery and preparedness of washed/clean coal transportation by rail with loading arrangement through silo.

- In view of major deviations from the earlier scope of work, fresh assessment of environment impacts and the EMP proposed accordingly

48.3.3 The project proponent has submitted the point-wise reply to the observations made above, which are reported to be as follows:-

S. No.	EAC Observation	Compliance Status
1.	Whether the proposed washery covering an area of 17.65 ha and temporary storage site for rejects (10 ha) in mine lease hold of Balram OCP is in conformity with its approved Mining Plan. Also, the proposal, if any, for amendment in the environment clearance for Balram OCP.	<ul style="list-style-type: none"> • The EIA-EMP of Hingula washery was prepared on the basis of the conceptual report approved by MCL Board in its 126th meeting held on 13.01.2011. • As per the conceptual report, the proposed washery shall be situated in the leasehold area of Balram OC Project(8 MTY). • The Environmental clearance(EC) to Hingula Washery was granted vide letter no. J-11015/67/2013-IA-II(M) dt: 28-10-2015. • It is to be further noted that Balram OCP is an old mine started in 1991-92. Mining plan for expansion of Balram OCP (8.0-15.0 MTY) with additional area is in advance stage of preparation. EC of Balram OCP will be amended accordingly. • In view of the above it is requested not to link the amendment in EC of Hingula Washery with the approval of mining plan & amendment in EC of Balram OCP.
2.	Justification for change in raw coal specifications (G11 to G13, ash content from 34.5-42.4% to 38.3-46.3%) from the same coal linkage i.e. Hingula-II Expansion OCP (Phase-III) of capacity 15 MTPA. Whether the same is in line with environmental clearance issued for the project. What about operational status of the project.	<ul style="list-style-type: none"> • As mentioned in EC for Hingula-II expansion OCP (Phase-III) of capacity 15 MTPA grade of coal ranges from 'D' to 'G' (in UHV) which corresponds to G-7 to G-14 (in GCV) respectively. • Coal grade as "G-13" in the amendment for EC for Hingula washery is in line with the EC for Hingula – II expansion OCP (Phase-III) of capacity 15 MTPA. • Hingula–II expansion OCP (Phase-III) is a working mine. The grade of the coal is declared yearly for mines based on the working seams and declared coal grade is G-13 for the last 3 years
3.	In view of the project within the mine lease hold of Balram OCP, compliance status of the conditions stipulated in its environmental clearance is essentially required.	<ul style="list-style-type: none"> • Certified Compliance Report dated 28.08.2019 in respect 'Kalinga Opencast Project (8 MTY) (Balram OCP) has been received from Eastern Regional Office of MoEF&CC, Bhubaneswar has been submitted. • Reply to the observations of Eastern Regional Office of MoEF&CC, Bhubaneswar was submitted by the Project Officer vide letter dt:16-09-2019.
4.	Status of pipe conveyor (3.76 km) for raw coal transportation to washery and preparedness of	<p>The status of Pipe Conveyor & Silo is given below :</p> <ul style="list-style-type: none"> • Tender floated on dtd. 15.12.2015 • Letter of acceptance received from MEL RVM Projects Joint Venture on 11-08-2016.

	washed/clean coal transportation by rail with loading arrangement through silo.	<ul style="list-style-type: none"> • But Due to delay in receipt of stage II forest clearance and frequent obstruction by local villagers the work of pipe conveyor and SILO has been delayed. • Forest clearance obtained vide letter Dtd. 19-01-2018. • The progress of work of construction of Pipe conveyor and SILO is 32% . • The execution of the above work was suspended on Dt.21.06.2019 till the final verdict of Hon'ble Court of Orissa against the W.P(C) no.18912 of 2018 filed by the contractor, M/s MEL RVM Project JV as the case involves the issue of SILO work experience of the contractor. • Construction of the plant is expected to be completed by Oct'2021 considering the final verdict of Hon'ble High Court Orissa by Oct'2019.
5.	In view of major deviations from the earlier scope of work, fresh assessment of environment impacts and the EMP proposed accordingly.	<ul style="list-style-type: none"> • Amendment in EC has been sought for Hingula Washery, 10 MTY MCL on account of finalization of the fresh L-1 bidder. Following modifications/deviations, from the EC conditions, requires fresh impact assessment. • Fresh impact assessment due to change in water demand and reject quantity has been carried out. The revised water demand is well within the limits of 1.5 m³/tonne as prescribed in the code of practice for coal washery in the Environment (Protection) rules, 1986 and the source of water is the mine sump. Mitigation measures have been provided. • For the increased quantity of rejects, the 10 Ha area of temporary reject storage site is sufficient enough for storage of rejects for more than 03 months. Rejects shall be disposed off e-auction of MOU route as per CIL policy. • The environmental impact assessment and its management plan/ mitigation measures due to the above are have been prepared and submitted.

The environmental impact assessment and its management plan/ mitigation measures due to the changes proposed have been prepared and is given below:

Sl.	Impact	Mitigation Measures
	Total estimated water requirement has changed from 0.09 m ³ / tonne to 0.12 m ³ / tonne of raw coal.	<ul style="list-style-type: none"> • The source of water is mine water. The capacity of Gandhisagar Sump is 30.68 lakh cum, and capacity of Mitti quarry is 19.63 lakh cum. The mine sump sources have sufficient capacity to cater to the additional water demand. • The process of the proposed washery is based on closed water circuit system with zero liquid discharge. All the water fed into the system will be collected after use and re-circulated, after treatment,

		<p>in various units and no effluent will be allowed to escape into the natural drainage system. Thus, the operation of the washery will not cause any pollution to the local source of water.</p> <ul style="list-style-type: none"> • Drainage for surface run-off through garland drain(s) shall be incorporated at all the required places within the washery and along the washery boundary. These garland drain(s) shall collect and carry the run off to settling pond. Overflow water from the settling pond shall be utilized for plant operation and for maintenance of green belt development around the plant etc. Hence, there will be no impact on groundwater and surface streams.
	<p>The grade of coal has changed from G-11 (Ash 34.5% - 42.5%) to G-13 (Ash 38.3%-46.3%).</p> <p>The increase in ash% has resulted in increase in the quantity of rejects from 1.09 MTY to 2.15 MTY. 10 Hectares of land has been earmarked for temporary storage of rejects.</p>	<ul style="list-style-type: none"> • The rejects shall not be kept more than 03 months at the disposal site. 10 Ha area of temporary reject storage site is sufficient enough for storage of rejects for more than 03 months. • Thick green belt 45m width shall be provided around the washery. • To control the dust generation due to reject handling the washery rejects shall be transported through the covered belt conveyor from washery premises to temporary reject storage site. • Dust Suppression System shall be installed for the entire temporary reject storage site by providing a water pipe network fitted with nozzles, pumps & motors including all other accessories. • Garland Drains is to be provided along the reject storage site with sedimentation pond. The entire reject dump area shall be fenced by angle iron post and G.I. barbed wire. Toe walls shall be provided to avoid reject dump spillage. <p>Rejects (2.15) MTY shall be disposed by e-auction or MoU route as per CIL policy for disposal and utilization of rejects generated from CIL washeries (existing and future).</p>

48.3.4 The EAC, after deliberations, the committee observed the following:

Coal washery rejects of about 3 MTPA will be generated by this project. Substantive Plan for rejects management (storage, disposal and utilization) and proper environment management for handling is required.

As the proposed temporary storage location comes under Balram OCP, suitable revision in the mining plan of Balram OCP and further amendment in EC of the Balram OCP for change of the name of Balaram OCP as Kalinga OCP was required.

CER was not proposed as per the guidelines given dated 1st May, 2018.

48.3.5 The EAC, therefore, after deliberations, desired the following-

- *Plan for rejects management inter alia including dumping plan, utilization of the rejects beyond the quantity of 3 months, transportation, etc.*

- *Submission of revised mining plan of Balram OCP and further amendment in EC of the Balram OCP for change of the name of Balaram OCP as Kalinga OCP shall be submitted*
- *CER shall be proposed as per the guidelines given dated 1st May, 2018 for an additional capital investment on the instant proposal.*

The proposal was deferred on the above lines

Agenda No.48.4

Dulanga Opencast Coal Mining Project (7 MTPA) of M/s National Thermal Power Corporation Ltd in mine lease area of 785.37 ha located in villages Dulanga, Majhapara, Beldihi, Kathpali, Khuntirjharia, Khaprikachchar, Tehsil Hemgir, District Sundergarh (Odisha)- Amendment in Environmental Clearance

[IA/OR/CMIN/116194/2019, F.No. J-11015/1140/2007-IA.II(M)]

48.4.1 During deliberations, the Committee noted the following:-

The proposal is for amendment in Environment Clearance (EC) for Dulanga Coal Mining Project of M/s NTPC Limited (Peak Capacity 7MTPA; Current Capacity: 2.5 MTPA) in mine lease area of 785.37 ha located in villages Dulanga, Majhapara, Beldihi, Kathpali, Khuntirjharia, Khaprikachchar, Tehsil Hemgir, District Sundergarh (Odisha) in IB Valley Coalfields. Dulanga Coal Mining Project is a captive mine of NTPC Limited linked to Darlipali STPP, Stage-I (2x800 MW) of NTPC Limited located at about 10 km. from the mine. EC to the project was accorded by MoEF&CC under EIA Notification, 2006 vide Ministry's letter No J/11015/1140/2007-IA.II(M) dated 03.03.2014 for 7 MTPA. The EC was revalidated/ amended by Ministry on request of NTPC as follows:

Subsequent to deallocation of Dulanga Coal Mine by Hon'ble Supreme Court of India judgment dated 24.08.2014 read with order dated 24.09.2014 and reallocation by Ministry of Coal vide MOC Allotment Order No. 103/32/2015/NA dated 08.09.2015, the EC was revalidated vide Ministry's letter No J/11015/1140/2007-IA.II(M) dated 28.10.2015.

The said EC dated 3rd March, 2014 included the specific conditions as below:-

Para 4A(ix) – *'Transport of coal to Darlipali TPS located at a distance of about 10 km shall be by MGR.'*

Para 4A(xviii) - *'The entire transportation of 21210 TPD of coal from the mine to the linked Darlipali Super Thermal Power Plant shall be by MGR only with wagon loading by silo. Transportation of coal by road is not permitted.'*

Ministry vide letter dated 8th August, 2018 amended the conditions 4A(ix) and 4A(xviii) of EC regarding coal linkage to Darlipali STPP and coal transportation by MGR only respectively and permitted the coal transportation of 2000 Tonnes per day from Dulanga Coal Mine to Lara STPP of NTPC by road as an interim arrangement only till up to September, 2019 or commissioning of Darlipali STPP, whichever is earlier as under:-

'Coal transportation of 2000 tonnes per day (200 trucks to & fro) from the mine to Lara STPP shall be carried out through Route-3 (117.86 km) up to September, 2019 as an interim arrangement only or till commissioning of Darlipali TPP, whichever is earlier.'

Meanwhile, all efforts shall be made to start production of coal from its linked Talaipalli coal mine and complete the associated MGR system by March, 2020.

Ministry vide letter dated 4th July, 2019 amended the conditions 4A(ix) and 4A(xviii) of EC and permitted the coal transportation of 6000 Tonnes per day from Dulanga Coal Mine to Darlipali STPP of NTPC by road for a period of 25 months i.e. from October, 2018 to October, 2020 as an interim arrangement only as under:-

‘Coal transportation of 6000 tonnes per day (200 trucks to & fro) from the Dulanga coal mine to Darlipali STTP shall be carried out by road (35.77 km) for a period of 25 months i.e. from October, 2018 to October, 2020, as an interim arrangement only. Meanwhile, all efforts shall be made to start production of coal from its linked Talaipalli coal mine and complete the associated MGR system by March, 2020.’

The present proposal is for extension in amendment of EC conditions 4A(ix) and 4A(xviii) accorded vide letter dated 8th August, 2018 for temporary supply of coal from mine to Lara STPP of NTPC by Road with an enhanced capacity of 4,000 TPD over a period of one year, i.e. up to October, 2020.

48.4.2 Traffic Impact Study submitted by Project proponent has been discussed in details NTPC has undertaken a study through M/s Min Mec Consultancy Pvt. Ltd., New Delhi, for assessing the impacts arising due to transport of coal by road, which covers Traffic and road surveys for assessment of carrying capacity on route, Monitoring of air quality and noise levels along the route, Air quality modelling for impact assessment of incremental ground level concentration of air pollutants, Data collection regarding flora along the road and Identification of villages, forests within 100 m along the route. The studies have been carried out in line with the Standards available from Indian Road Congress (IRC), Ministry of Environment, Forest and Climate Change (MoEF&CC) and United States Environment Protection Agency (US EPA).

The summary of the route is as follows:

Total length, km	121.7
Urban –Rural Break-up	Urban Area – 15 km. Rural Area – 106.7 km
Surface wise Break-up	Black Top – 98.8* km Concrete – 21.3 km Haul Road (WBM)- 1.6 km
No. of Villages along the route	31
Length of the route passing through or adjoining or within 100 m of forest boundary, km	19.1 km
Width wise classification of the Route:	Total: 121.7 km. Single Lane (<5.5 m): 0 Inter-mediate Lane (5.5 m - 6.9 m): 12.2 km. Two Lane(7 m - 9.9 m): 67.2 km. Multi-lane(>=10 m): 42.3 km.
Additional Traffic Load wise	Total: 121.7 km.

Classification of the Route	Common Route for Both – Lara and Darlipali (Total Quantity to be transported – 10,000 TPD with 668 Trucks to and fro): 18.1 km. Route for Lara Project Only (Total Quantity to be transported – 4,000 TPD with 268 Trucks to and fro): 103.6 km.
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Note: *4.4 km of road out of 98.8 km is currently under strengthening and widening to 7 m. As per letter received from RWD, Sundargarh, vide letter no. 3549 dated 21.08.2019, the strengthening and widening work of road to 7 m is completed except black topping. Blacktopping also shall be completed shortly. The current road design is adequate to accommodate the traffic load from Dulanga to Lara and Darlipalli STPP.

The analysis of traffic on roads through urban areas indicates that the current road width at both the location will be sufficient to support current traffic volume and additional future traffic volume even in September, 2020 and the resultant DSV utilization of the road in future (till September, 2020) will vary between 62.3% to 68.0%.

Analysis of traffic on roads through rural areas indicate that indicate that out of total 12 census points, the present road widths in the rural area is sufficient to carry existing traffic volume as well as additional traffic volume in future at LoS B (CP-01 to CP-02, CP-04 to CP-09 and CP-13 to CP-14) and LoS C (CP-03 & CP-10) and the resultant DSV utilization of the road will vary between 13.6% and 88.0%.

48.4.3 *The EAC, after detailed deliberations, recommended for the proposed amendments for temporary supply of coal (3,000 TPD) to Lara STPP of NTPC by Road for a further period of six months, i.e. up to March, 2020 and while taking necessary mitigation and safety measures for habitation along the proposed route. Necessary approval for the road shall be obtained from the concerned regulatory authority before transportation of coal through the changed route.*

Agenda No.48.5

Talaipalli Coal Mining Project (OC at 18 MTPA capacity and UG at 0.72 MTPA Capacity) of M/s National Thermal Power Corporation Limited in mine lease area of 2349.35 ha, located in villages Talaipalli, Bichinara, Nayarampur, Kudurmoha, Raikera, Chotiguda, Ajijgarh and Salehpalli, in Tehsil Gharghoda, District Raigarh (Chhattisgarh)- Amendment in Environmental Clearance – reg. [IA/CG/CMIN/114462/2019, J-11015/279/2009-IA.II (M)]

48.5.1 The proposal is for amendment in Environment Clearance for Talaipalli Coal Mining Project of M/s NTPC Limited (Peak Capacity OC-18 MTPA& UG-0.72 MTPA) in mine lease area of 2113 ha located in villages Talaipalli, Bichinara, Nayarampur, Kudurmoha, Raikera, Chotiguda, Ajijgarh and Salehpalli, in Tehsil Gharghoda, District Raigarh (Chhattisgarh).

48.5.2 Talaipalli Coal Mining Project is a captive mine of NTPC Limited linked to Lara STPP (4800 MW) of NTPC Limited located at about 65 km. from the mine. Environment Clearance was accorded to Talaipalli Coal Mine by MOEF&CC under EIA Notification, 2006 Vide Ltr. No.J-11015/279/2009-IA.II(M) Dated 02nd January 2013.The EC was revalidated/ amended by Ministry on request of NTPC as follows:

- (i) Subsequent to deallocation of Talaipalli Coal Mine by Hon'ble Supreme Court of India judgment dated 25.08.2014 read with order dated 24.09.2014 and reallocation by Ministry of Coal vide MOC Allotment Order No. 103/31/2015/NA dated 08.09.2015, the EC was revalidated vide Ministry's letter No J/11015/1140/2007-IA.II(M) dated 28.10.2015.
- (ii) The present proposal of NTPC is for amendment of General conditions B(i) and B(ii) of EC for transportation of 2575 Tons per day of coal to linked Lara STPP of NTPC by Road over a period of two years, i.e. up to November, 2021.
- (iii) NTPC has submitted that due to cancellation of Contract for Mine Development and Operation (MDO), the coal production could not be started. Ministry of Coal (MoC) vide letter dated 15.02.2019 has communicated to NTPC that if due to legal reason the early appointment of the MDO is not possible, then alternative option of departmental mining may be explored so that the mine may be operationalized. In order to start the coal production within the stipulated timelines of Ministry of Coal, it is proposed to commence the mining operation in the South Pit of Talaipalli Coal Mining Project that coincides with 26th year of mine calendar plan. Permission from Coal Controller Organization (CCO) has already been obtained vide letter dated 30.03.2019. Further, NTPC has submitted that the commissioning of MGR system from Talaipalli Mines to Lara Plant could not be completed due to delays occurring in land acquisition for construction of Railway Line, enactment of new Land Acquisition Act and delay in obtaining forest clearance for the corridor identified for the railway siding.
- (iv) NTPC has undertaken a study through M/s Min Mec Consultancy Pvt. Ltd., New Delhi, for assessing the impacts arising due to transport of coal by road, which covers Traffic and road surveys for assessment of carrying capacity on route, Monitoring of air quality and noise levels along the route, Air quality modelling for impact assessment of incremental ground level concentration of air pollutants, Data collection regarding flora along the road and Identification of villages, forests within 100 m along the route. The studies have been carried out in line with the Standards available from Indian Road Congress (IRC), Ministry of Environment, Forest and Climate Change (MoEF&CC) and United States Environment Protection Agency (US EPA).

The summary of the route is as follows:

Total length, km	68.4	
Urban –Rural Break-up	Urban Area – 15 km. Rural Area – 53.4 km	
Surface wise Break-up	Black Top – 51.8 km Concrete – 16.6 km	
No. of Villages along the route	16	
Length of the route passing through or adjoining or within 100 m of forest boundary, km	16.1 km	
Width wise classification of the Route:		
Category	Length, Before Widening	Length, After Widening
Total	68.4 km.	68.4 km.
Single Lane (<5.5 m):	3.61 km.*	0 km.
Inter-mediate Lane (5.5 m - 6.9 m):	11.37 km.#	11.19 km.

Two Lane (7 m - 9.9 m):	34.57 km.	38.36 km.
Multi-lane (>=10 m):	18.85 km.	18.85 km.

Note:

1. * RW-01 to RW-09 and RW-22 to RW-23 is single lane road. This road stretch is proposed to be widened and strengthened to width of 7.0 mtr carriage way, by NTPC.

2. #RW-21 to RW-22 (0.18 km.) is having present width 6.0 m. This stretch is also under strengthening and widening to 7.0 m. After widening, this stretch will be under category of double lane road.

(v) Analysis of traffic on roads through urban areas indicate that the current road width at all the four location will be sufficient to support current traffic volume and additional future traffic volume even in December, 2021. The resultant DSV utilization of the road in future (till December, 2021) will vary between 21.1% and 74.1%.

(vi) Further, the analysis of traffic on roads through rural areas indicate that in case of the roads passing through the rural areas, the present road widths are also sufficient to carry existing traffic volume as well as additional traffic volume in future at LoS B (CP-01, CP-02, CP-09 & CP-10) and LoS C (CP-05 & CP-06). The resultant DSV utilization of the road will vary between 13.7% and 95.3%. Furthermore, in view of the "No Entry" timings for trucks in Gharghoda (6:00 AM to 10:00 AM and 12:00 Noon to 10:00 PM) and in Raigarh city, movement of coal carrying tippers/ dumpers through will be restricted in their movement to only 8 hours during 10:00 PM to 6:00 AM only.

(vii) To ensure the safety along the coal despatch route following measures will be taken up

- i. Installation of speed bumps near settlements to ensure slow driving
- ii. Awareness to tipper drivers & local people through hoardings on roads regarding road safety
- iii. Contact number of crane operators along the routes shall be made available to all vehicle drivers
- iv. All tippers will carry first aid kits and drivers will be trained in first aid in case of emergency
- v. Creating awareness for road safety to local population and drivers and ensuring availability of ambulance facility for the accident victims, if required.
- vi. Traffic marshals shall be arranged specially in Gharghoda to control and moderate the traffic movement of NTPC's tippers/ dumpers.

48.5.3 The EAC, after deliberations, noted the following:

The proposal is for amendment in Environment Clearance for Talaipalli Coal Mining Project of M/s NTPC Limited (Peak Capacity OC-18 MTPA & UG-0.72 MTPA) in mine lease area of 2113 ha located in villages Talaipalli, Bichinara, Nayampur, Kudurmoha, Raikera, Chotiguda, Ajijgarh and Salehpalli, in Tehsil Gharghoda, District Raigarh (Chhattisgarh).

It was stipulated that the coal transportation from Tallaipalli Coal Mining project to Lara STPP would be done through 85 Km stretch of the MGR System. The work of "Engineering, Project Management and Construction of total Coal Transportation System" has been awarded to M/s RITES Ltd. The MGR system is about 65 km in length and involves the land acquisition in 39 villages including Govt. and forest land. The commissioning of MGR is delayed and expected to be completed by December, 2021

It was informed that all permissions are in place and mine is ready to start production. It is proposed to commence mining operation in the South Pit of Talaipalli Coal Mining Project for which permission from Coal Controller and DGMS have already been obtained.

Therefore, it was requested to accord permission for transportation of 2,575 TPD of coal by road with 20 Tonne Tippers/ Dumpers (258 Tippers to and fro per day) from Talaipalli CMP to Lara STPP over a distance of 68.4 km. as interim arrangement for a period of 24 months i.e. from Jan., 2020 to Dec., 2021 or till the commissioning of MGR, whichever is earlier. The transportation is proposed at night time (10 PM – 6 AM) only.

Further it was requested to start coal production from South Pit of the coal mine with a production capacity of 0.94 MTPA for two years.

48.5.4 *The EAC, after deliberations, recommended for grant of permission for transportation of 2,575 TPD of coal by road with 20 Tonne Tippers/ Dumpers (258 Tippers to and fro per day) from Talaipalli CMP to Lara STPP over a distance of 68.4 km as an interim arrangement for a period of 24 months i.e. from January, 2020 to December, 2021 or till the commissioning of MGR, whichever is earlier; and to start coal production from South Pit with a production capacity of 0.94 MTPA for two years subject to following conditions.*

- *Adequate dust suppression measures shall be taken along the transportation route.*
- *The PP shall expedite the commissioning of MGR as early as possible*
- *No transportation of coal by road is allowed after commencement of the MGR.*
- *All the mitigation measures proposed in Traffic Impact Assessment study shall be complied.*

Agenda No.48.6

Kakri Expansion Opencast Coalmine Project (Production from 3 to 4 MTPA in the lease area of 828 ha) of M/s Northern Coalfields Limited located near village Kakri, Tehsil Dubhi, District Sonebhadra (Uttar Pradesh) – Extension of validity of environmental clearance

[IA/UP/CMIN/114168/2019, J-11015/218/2007-IA.II (M)]

48.6.1 The proposal is for extension of validity of the Kakri Expansion Opencast Coalmine Project (Production from 3 to 4 MTPA in the lease area of 828 ha) of M/s Northern Coalfields Limited located near village Kakri, Tehsil Dubhi, District Sonebhadra (Uttar Pradesh).

48.6.2 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 was granted initial EC for 2.5 MTY dated 29/08/1989. The project was granted Environment clearance from the Ministry of Environment and Forest, Government of India for expansion in production of Coal from 3MTPA to 4 MTPA as per EIA notification-2006 (under clause 7(ii)) vide letter No. J-11015/218/2007-IA-II(M), dated 20.08.2007 for 828 Ha. mining lease area. Public Hearing was held for the project at 3 MTPA capacities on 09.04.2004.

(ii) Mining Plan for Kakri OCP (4.00 MTPA) : As all the opencast projects of NCL are working 365 days per annum against the sanctioned schedule of 300 days per annum, there was possibility to enhance coal production to the tune of about 25% (maximum), more

than the planned capacity of the mine. Accordingly, the Mining Plan for enhanced coal production of 4.00 Mtpa was prepared by increasing efficiency for Environmental Management Plan (EMP).

(iii) The Project was granted Environment clearance from the Ministry of Environment and Forest, Government of India for expansion in production of coal from 3 MTPA to 4 MTPA vide letter No.J-11015/218/2007-IA.II(M), dated 20.08.2007. At that time, balance life of the mine was estimated at 6 years with enhanced production at 4 Mtpa. However, the mine could not attain the peak capacity and continued with lower level of production.

(iv) The Environmental Clearance (EC) to the Kakri Opencast Project was initially granted vide letter No.J-11015/3/87-IA, dated 29.08.1989. Since EC is granted subject to a maximum of thirty years for mining projects, extension of validity of EC will be required for the project to continue beyond 28.08.2019.

(v) Application for renewal of the forest lease granted to the project (required before 21st December 2019) has also been submitted vide proposal No.FP/UP/Min/29061/2017 dated 16.05.2018.

(vi) Mining plan incorporating Mine closure Plan for Kakri OCP has been prepared for coal production of 4.0 MTPA with mining leasehold area of 828.00 Ha, for the renewal/extension of validity of Environmental Clearance (EC) for Kakri OCP.

48.6.3 The EAC, after detailed deliberations, noted the following:-

The project proponent has obtained the prior environmental clearance vide J-11015/218/2007-IA-II(M), dated 20.08.2007 for increase in the production from 3 to 4 MTPA and for a balance life of 6 years. Therefore, the validity of the environmental clearance was only up to 20.08.2013. The mining operations after 20.08.2013 are amounts to be violation of EIA Notification, 2006.

The project proponent submitted that they have deemed the validity of thirty years from the initial date of grant of EC for 2.5 MTPA on 29/08/1989. In this regard, the committee opined that the validity of the environmental clearance granted under the EIA Notification, 1994 was held as 5 years by the Hon'ble Supreme Court in the matter of Common Cause Vs Union of India and reiterated in the matter of Goa Foundation Vs Union of India. The committee observed that the project proponent has not approached for ratification to remove the infirmity of the validity of the EC as per the notification issued by the Ministry on 6th April, 2018.

Further, the EIA Notification does not provide any provision for extension of validity beyond thirty years. Therefore, the mining operations after 20.08.2013 treated as violation of EIA Notification, 2006 considering the validity of the EC mentioned in the EC letter dated 20.08.2007.

48.6.4 *The EAC, after detailed deliberations, observed that in view of the above, the proposal comes under violation category wherein the proponent has produced coal after the validity of EC and EAC desired that the Ministry may take appropriate action for the said violation as per the extant norms/guidelines*

Agenda No.48.7

Expansion of Kulda OCP Coal Mining Project 14 MTPA to 15 MTPA in existing ML area of 634.205 ha of M/s Mahanadi Coalfields Limited Tehsil Hingir, District Sundargarh (Odisha)- For Amendment in Environment Clearance.

[Proposal no: IA/OR/CMIN/108962/2019, F.no. IA-J-11015/10/1995-IA-II(M)]

48.7.1 The proposal is for amendment in EC capacity from 14 MTPA to 15 MTPA in the environment clearance letter dated 22nd March, 2018 of Kulda Opencast Coal Mining Project 14 MTPA in an mining lease area of 634.205 ha of M/s Mahanadi Coalfields Limited located in Tehsil Himgir, District Sundargarh (Odisha).

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

- i) The proposal is for amendment in EC for expansion of OCP from 14 to 15 MTPA in an area of 634.205 ha.
- ii) The EC for 14 MTPA was granted vide letter No. J-11015/10/95-IA. II(M) dated 22nd March, 2018 and further continuance granted vide letter as mentioned above dated 28th March 2019 for one year only.
- iii) The latitude and longitude of the project are 21°42'00" to 21°44'30" N and 83°43'00" to 83°46'30" E respectively.
- iv) Joint Venture: There are no JV's
- v) Coal Linkage: Thermal Power Plant & Basket Linkage
- vi) Employment generated / to be generated: Employment provided so far around 320 nos. Additional 65 nos. shall be provided.
- vii) Benefits of the project: (i) Improvement in Physical Infrastructure (ii) Improvement in Social Infrastructure (iii) Increase in employment potential (iv) Contribution to the Exchequer (both State and Central Govt.) (v) Post mining enhancement of Green Cover (vi) Improvement of Electrical Power Generation and availability of electricity for 24x7 in rural areas (vii) overall economic growth of the country.
- viii) The land usage of the project will be as follows:

Pre-Mining

Particulars	Existing (14 MTY)			Proposed (15 MTY)		
	Forest	Non-Forest	Total	Forest	Non-Forest	Total
Excavation Area	187.155	134.755	321.910	187.155	134.755	321.910
Infrastructure/ Embankment and other areas including safety zone	36.615	115.178	151.793	36.615	115.178	151.793
External OB dumps	4.120	156.382	160.502	4.120	156.382	160.502
Mine Lease Area	227.890	406.315	634.205	227.890	406.315	634.205
Residential Colony	0.000	37.500	37.500	0.000	37.500	37.500
Rehabilitation site	0.000	22.900	22.900	0.000	22.900	22.900
Outside lease area	0.000	60.400	60.400	0.000	60.400	60.400
TOTAL	227.890	466.715	694.605	227.890	466.715	694.605

Post-Mining

Sl. No.	Land Use	Land Use (Ha)					Total
		Plantation / grass carpeting	Water Body	Dip side slope & haul road	Un- disturbed	Built - up area	

1.	Excavation Area	211.47	17.64	92.80	--	--	321.91
2.	OB dump Area	160.502	--	--	--	--	160.502
3.	Infrastructure	25.23	--	--	--	100.927	126.157
4.	Embankment	3.51	--	--	--	14.049	17.559
5.	Other area including safety zone & Road/ Nallah Diversion	8.077	--	--	--	--	8.077
	Total	408.789	17.64	92.80	--	114.976	634.205

ix) Total geological reserve is 245.71 MT. The mineable reserve 172.49 MT, extractable reserve is 99.42 MT. The per cent of extraction would be 70.20 %.

x) The coal grade is C to G (Avg.- G13/G14). The stripping ratio is 0.97 Cum/tonne. The average Gradient is 5° to 8°. There will be three major seams with thickness ranging from 0.12-34.07 m.

xi) Total estimated water requirement is 4083 m³/day. The level of ground water ranges from 1.57 m to 4.45 m.

xii) The method of mining would be opencast.

xiii) There are 2 (Two) (1 in phase-I) external OB dump with Quantity of 33.83 Mm³ (as on 01.4.19) in an area of 160.5.802 ha with height of 80-90 m (presently around 60 m) above the surface level and one internal dump with Quantity of 12.44 Mm³ in an area of 211.47 Ha (Post Mining).

xiv) The final mine void would be in 17.64 Ha (Post Mining) with depth varying up to 200 m and the Total quarry area is 321.91 Ha. Backfilled quarry area of 211.47 Ha shall be reclaimed with plantation. A void of 17.64 Ha (Post Mining) with depth varying up to 200 m is proposed to be converted into a water body.

xv) The baseline data is being generated for period of April 2018 to June 2018.

xvi) The life of mine is 07 Years (as on 01.04.19)

xvii) Details of transportation of coal:

- Existing: 99.44 % coal production was done by surface miner in the period of 2018-19. Balance 0.56 % of coal was sent to existing feeder breaker for sizing.
- Proposed: The entire coal production of 15.0 Mty will be done by Surface Miner.
- Existing: By road to Sardega / Kanika Siding.
 - i) Dispatch through siding (Sardega and Kanika siding) will be 10.0 Mty till the commencement of Basundhara Washery 10 MTY.
 - ii) Coal Dispatch through 20 MT Bunker-Pipe Conveyor to RLS proposed to be set at Sardega Siding.
 - iii) 1.0 Mty will be dispatched through road sale by tarpaulin covered trucks.

xviii) There is R & R involved. There are 572 PAFs. 321 employments provided & balance 41 is in process.

xix) Total capital cost of the project is Rs.622.21 crores (including additional Rs.319,25 crore for expansion). CSR Cost: Fund for CSR will be allocated based on 2% of the average net profit of the company for the three-immediately preceding financial years or Rs.2.00 per tonne of coal production of the previous year whichever is higher. R&R Cost - Rs.83.40 crores

- xx) Water body: Basundhara Nalla flows at a distance of 70 m; Iccha river flows at a distance of 9.2 km; Chattajor nallah passing through mine lease Area; Barhajharia nallah flows at a distance of 3.16 km; Bhaina jor flows at a distance of 0.5 km.
- xxi) Approvals: Ground water clearance: The project proponent has applied for ground water clearance from CGWB vide letter no. 21-4/2112/OR/MIN/2018 dated 28.09.2018. Query was raised by CGWB in October'18 and the corresponding reply was submitted by MCL on 24.11.2018 vide letter MCL/PO/KOCP/ENVT/18-19/51 to CGWB and the file is awaited for approval and authorization of the necessary clearances. Mine plan has been approved by Ministry of Coal vide Letter No. 34012/(04)/2011-CPAM dated 26-12-2016.
- xxii) Wildlife issues: There are no national Parks, wildlife sanctuary, biosphere reserves found in the 10 km buffer zone.
- xxiii) Forestry issues: Total forest area involved 227.89 Ha. Forest clearance for 227.89 ha obtained on 8th August, 2007.
- xxiv) Total afforestation plan shall be implemented covering an area of 408.789 ha at the end of mining. Density of tree plantation 2500 No. trees/ ha of plants.
- xxv) There are no court cases/violation pending with the project proponent.
- xxvi) The Public Hearing for 10 to 15 MTY was held on 10-01-2018 at Stadium Field near Jagannath Mandir, Basundhara Area.
- xxvii) The Regional Office, MoEF&CC, Bhubaneswar has conducted site inspection of the area on 12th November, 2018 to monitor the status of compliance of conditions stipulated in the environment clearance dated 22nd February, 2018, and submitted report vide their letter dated 26th December, 2018. The same was found to be satisfactory.
- xxviii) It was further submitted that
- EIA-EMP was prepared for incremental coal production of 5.0 Mty considering all environmental impacts over different environmental components along with their mitigation measures. Therefore the environmental aspects of proposed 1.0 Mty incremental coal has already been addressed in the earlier EIAEMP.
 - Due to commissioning of Sardega Siding the values of particulate matters has been significantly reduced. Following additional control measures has also been taken to control the Air pollution.

The details is given in following table:

#	Item	Control measures prior to EC	Control measures adopted after EC
1.	Fixed sprinklers at CHP, haul road, & railway siding	Fixed Sprinkler: 12 - CHP + 52 - Haul Road+ 12 - Rly.Siding. Mist Sprinklers : 53 - CHP Instant water showering system -02	Additional 27 numbers of fixed sprinklers 20 Mtr throw have been set up along haul road (5 km length) Instant water showering system -03
2.	Mobile water sprinkler for haul roads	6 Nos. (2x28 kl +4x12 kl)	9 Nos. (3x28 kl + 2 x 20 kl + 1 x 12 kl + 3 x 8/4 kl) have been deployed
3.	Cleaning / sweeping of dust from coal transportation road	Mechanical sweepers	Mechanical sweepers

4.	Greenbelt	53.60 ha	25000 plants in an area of 10 ha planted in 2018-19 and 9.13 proposed to be taken up in 2019-20. Total area covered : 68.47 ha
5.	Avenue Plantation	1.00 km	1.5 km done in Sardega railway siding
6.	Transportation of coal from mine to Siding	Road to Kanika Siding (31 km)	Road to Sardega siding (6 Km) till Conveyor & SILO system comes up

48.7.3 The EAC, after deliberations noted the following:

The proposal is for amendment in EC capacity from 14 MTPA to 15 MTPA in the environment clearance letter dated 22nd March, 2018 of Kulda Opencast Coal Mining Project 14 MTPA in the mining lease area of 634.205 ha of M/s Mahanadi Coalfields Limited located in tehsil Himgir, District Sundargarh (Odisha).

Earlier ToR for Expansion of Kulda OC Project from 10 to 15 MTPA for Project Area of 694.605 Ha (ML-Area 634.205 Ha) was granted vide letter no. J-11015/10/1995-IA-II(M) part dt: 18-05-2017.

The Public Hearing for expansion of Kulda OC Project from 10 to 15 MTPA for Project Area of 694.605 Ha was held on 10th January, 2018.

EC was granted for 14.0 MTPA only against 15.0 MTPA for which PH was conducted, for a period of one year upto 31-03-2019, vide letter no. J-11015/10/1995-IA-II(M) pt dtd: 22-03-18.

As per EC dated 22nd March, 2018, it states that 'The project proponent shall submit the details regarding action taken on different observations of the Regional Office before 31st December, 2018, for the Committee to examine adequacy and efficacy of pollution control measures and its impact on ambient air quality and to make its recommendations for continuance of the project thereafter.'

Based on site inspection by The Regional Office, MoEF&CC, Bhubaneswar on 12th November, 2018 and certified compliance report vide letter dated 26th December, 2018.

Ministry granted for continuance of Kulda Opencast Coal Mining Expansion Project from 10 to 14 MTPA of M/s Mahanadi Coalfields Ltd in mine lease area of 634.205 ha located in Tehsil Hemgir, District Sundargarh (Odisha), 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.

The application for the increase in the production capacity from 14 MTPA to 15 MTPA was made in the amendment category instead of expansion category. Ambient Air Quality data was also not updated for further appraisal to EAC. Also, CER was not proposed as per the guidelines given dated 1st May, 2018

48.7.4 The EAC, therefore, after deliberations, desired the following-

- An application shall be made under the provisions of clause 7(ii) of EIA Notification in the Form-2.

- *An addendum EIA for the additional production proposed i.e from 14 MTPA to 15 MTPA inter alia including adequate additional measures in light of additional production*
- *Action Taken Report on the commitments on the public hearing issues raised during the last Public Hearing.*
- *CER shall be proposed as per the guidelines given dated 1st May, 2018 for an additional capital investment on the instant proposal.*
- *Updated Certified compliance status of EC conditions dated 22nd March, 2018 for further extension of EC*

Therefore, the proposal was deferred for submission above observations

Agenda No.48.8

Expansion of Gare Palma IV/4 Coal Mine of M/s HINDALCO INDUSTRIES LTD from 1 MTPA (0.56 MTPA from opencast and 0.44 MTPA from underground) to 1.5 MTPA through opencast method of mining located in village- Banjikhoh, Tehsil-Tamnar, District- Raigarh (Chhattisgarh) – Terms of Reference

[IA/CG/CMIN/112199/2019 , J-11015/183/2010-IA-II(M)]

48.8.1 The proposal is for Terms of Reference for the proposed expansion of Gare Palma IV/4 Coal Mine of M/s Hindalco Industries Ltd from 1 MTPA (0.56 MTPA from opencast and 0.44 MTPA from underground) to 1.5 MTPA through opencast method of mining located in village Banjikhoh, Tehsil-Tamnar, District- Raigarh (Chhattisgarh).

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

- The project area is covered under Survey of India Topo Sheet No 64 N/8 and is bounded by the geographical coordinates ranging from Latitudes 22°07'40.125" N & 22°01'20.850"N and Longitudes 83°31'16.008E & 83°33'37.747"E (Applied Lease area). Geological Block Area – 891.904 Ha; Applied Area for Lease- 885.825 Ha; Area of Mining Plan – 715.52 Ha
- Coal linkage of the project is for i) Captive power generation (Captive Power Plant - 900 MW [6x150 MW] of Aditya Aluminium Project- Lapanga, Dist. Sambalpur, Odisha - 171.43 MT (Million Tonnes); and ii) Captive Power Plant of Hirakud complex Hirakud, Dist. Sambalpur, Odisha 467.5 MW [4X 100 MW & 1X 67.5 MW]- 89.81 MT (Million Tonnes).
- There is no joint venture in the project.
- 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.
- Employment generation: As it is an operating mine existing direct daily employment is 621. Besides this about 650 nos of persons are indirectly employed by way of transportation and other ancillary activities. Establishment of the proposed project would further aid the overall socio and economic development of the region; direct and indirect employment avenues will further increase due to enhanced capacity of the project; and additional ancillary industries will come up creating wide employment opportunities.
- The project is reported to be beneficial in terms of improvement of physical infrastructure, improvement in social condition, contribution to Exchequer and post mining enhancement of Green cover
- Earlier, the environment clearance to the project was obtained under EIA Notification 2006 & its subsequent amendments, vide Ministry's letter NoJ-11015/183/2010-1A-II(M)

dated 24th May 2019 by MoEF&CC for 1 MTPA (0.56 MTPA from opencast and 0.44 MTPA from underground).

(viii) The applied lease area is 885.525 ha which is within the vesting order coordinates of 23.03.2015 and the notification of Ministry of Coal vide letter F. No. 104/28/2015/NA dated 13th October, 2015 and the letter dated 01.03.2017 of Ministry of Coal. Mining Plan Including Mine Closure Plan (4th Revision/ Modification) related to this proposal has been approved by Ministry of Coal vide letter no. 34011/15/2019-CPAM dated 26th September, 2019.

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

Pre-mining land use details (in Ha)

Land Type	Area (Ha)
Tenancy	322.167
Govt Non- Forest	90.948
Forest	
Reserve & protected	433.329
C-J-B-J	39.081
Sub-Total (Forest)	472.41
Total	885.525

Post Mining Area (In Ha):

Sl. No	Land use	Area (ha)
1	Excavated area (including backfilled areas)	359.5
2	Top Soil Dump	15.68
3	External Dump	212.57
4	Surface corridor within the leasehold including safety zone and green belt	74.61
5	Infrastructure area	10.44
6	Others (Constrained and inaccessible area)	42.72
7	Undisturbed area	170.005
	Total (area)	885.525

(x) Total geological reserve reported in the block area is 65.18 MT with 36.08 MT mineable reserve (excluding 14.79 MT of reserves with Mining Potential). Out of total mineable reserve of 22.22 MT is available for extraction as on 01.04.2019 (Depletion till 31.03.19- 6.33 MT).

(xi) 5 regional coal seams viz. I, II, III, IV & V and 2 local seams viz. L1 & L2 are workable. Grade of coal is G2 to G14, stripping ratio 1: 10.14.

(xii) Mining operation envisages by Opencast method (by shovel Dumper).

(xiii) Life of mine is 17 years.

(xiv) The project has 4 external OB dumps in an area of 228.25 ha with 85.98 Mm³ of OB. 2 internal OB dumps in an area of 238.68 ha with height upto 70m & 131.53 Mm³ of OB is envisaged in the project.

(xv) Total quarry area is 359.50 ha out of which backfilling will be done in 238.68 ha while final mine void will be created in an area of 120.82 ha with a depth of 95 m. Backfilled quarry area of 238.68 ha shall be reclaimed with plantation. Final mine void will be converted to water bodies for recharge of ground water.

(xvi) Transportation of coal is being done by road from mine pit head to end use plants presently. Options of transportation by Rail are being explored and will be implemented once the connectivity is established.

(xvii) Reclamation Plan in an area of 466.83ha, comprising of 228.25 ha of external dump, 238.68ha of internal dump. In addition to this, an area of 7.04ha, included in the safety zone, has also been proposed for green belt development.

(xviii) 472.41ha of forest land has been involved in the project. Application for necessary Forest Clearance of the same vide application no FP/CG/MIN/40028/2019 dt 03.05.19 has been registered on 18.09.2019.

(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 3.05m to 15.70m during pre-monsoon and between 2.15 m to 12.70 m during post-monsoon. Total water requirement for the project is 562 KLD.

(xxi) NOC of the Central Ground Water Authority has obtained for 8432M³/day vide letter no.21-4(125)/NCR/CGWA-2011-761 dated 5th September 2019 (valid upto 04.09.2022)

(xxii) Public hearing for the project of 1.5 MTPA capacity in an area of 885.525 ha will be conducted. Appropriate action to address the issues raised in the Public Hearing will be taken.

(xxiii) Consent to Operate for the existing capacity was obtained from the State PCB vide letter 7228/TS/CECB/2018 naya Raipur dated 16.03.2018 and is valid till 31.03.2021. Consent to Establish as per the revised EC of J-11015/183/2010-1A-II(M) dated 24th May 2019 by MoEF&CC for 1 MTPA (0.56 MTPA from opencast and 0.44 MTPA from underground) has applied to CECB on 4th June 2019.

(xxiv) 2 nallas are flowing within lease. No diversion of these 2 nallas are proposed.

(xxv) Regular monitoring of ambient air quality is being carried out on monthly basis. The documented report is submitted to Member Secretary & Regional Officer, CECB and half yearly EC compliance report to Regional MoEF, Nagpur. The results of ambient air quality monitoring data were found within prescribed limits.

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

(xxvii) The project does not involve violation of the EIA Notification, 2006 and amendment issued there under. The coal production from the mine started from the December 2015 onwards after re-allocation of the block to Hindalco Industries Limited. No excess production of coal from the sanctioned capacity has been realized since the commencement of mining operations. The coal production, realized from the project, from 2015-16 onwards, is as under:

Year	EC sanctioned capacity (MTPA)	Actual production (MTPA)	Excess production beyond the EC sanctioned capacity
2015-16	1.0	0.068	Nil
2016-17	1.0	1.000	Nil
2017-18	1.0	0.938	Nil
2018-19	1.0	0.838	Nil

(xxviii) The project involves 65 PAFs, out of which 52 PAFs have been resettled. The Rehabilitation / Resettlement is carried out as per the Adarsh Chhattisgarh Punarvas Niti 2007 & The Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act, 2013. The Rehabilitation Action Plan has been approved by State Government vide letter dated 08.06.2018.

(xxix) Total cost of the project is Rs. 420crores. Cost of production is Rs. 4812/- per tonne. CER/ CSR expenditure is Rs. 1.34 crore (FY 18-19) & proposed budget for FY 2019-20 is 1.25 Crore. R&R cost is Rs 11.23 crores (Total Up to August 19). Environment Management expenditure is Rs. 25 Lakh (FY 18-19) & proposed budget for FY 2019-20 is 28 Lakh.

48.8.3 The EAC, after deliberations noted the following:

The proposal is for Terms of Reference for the proposed expansion of Gare Palma IV/4 Coal Mine, M/s Hindalco Industries Ltd from 1 MTPA (0.56 MTPA from opencast and 0.44 MTPA from underground) to 1.5 MTPA through opencast method of mining located in village Banjikhoh, Tehsil-Tamnar, District- Raigarh (Chhattisgarh).

Environmental clearance dated 12th March, 2013 granted by the Ministry in favour of M/s Jayaswal Neco Industries to Gare-Palma IV/4 Coal Block for production capacity of 1 MTPA (0.6 MTPA underground & 0.4 MTPA opencast mining) in mine lease area of 701.512 ha located in District Raigarh (Chhattisgarh).

Subsequent to cancellation of coal blocks pursuant to order of Hon'ble Supreme Court in August/September, 2014 and their reallocation to successful bidders, Gare Palma IV/4 coal block was vested with M/s Hindalco Industries Limited (HIL) vide Allotment Order No.104/16/2015/NA dated 23rd March, 2015. Accordingly, the said environmental clearance was transferred to M/s HIL vide Ministry's letter dated 16th April, 2015

Amendment in environment clearance to the project was granted by the Ministry on 24th May 2019 for 1 MTPA (0.56 MTPA from opencast and 0.44 MTPA from underground).

It was informed that Gare Palma IV/4 Coal Mine is a combination of Open Cast & Under Ground mining method. Underground operation has become un-sustainable as the development phase is complete and with depillaring existing output and rate of production is not achievable. Hence total conversion to Open cast is required. With complete opencast operation percentage of extraction will be higher and operation will be safer also.

48.8.4 *The EAC considering above, recommended the Terms of Reference to expansion of Gare Palma IV/4 Coal Mine of M/s Hindalco Industries Ltd from 1 MTPA (0.56 MTPA from opencast and 0.44 MTPA from underground) to 1.5 MTPA through opencast method of mining located in village Banjikhoh, Tehsil-Tamnar, District- Raigarh (Chhattisgarh), for preparation of EIA/EMP reports with public consultation, subject to compliance of all terms and conditions as specified/notified in the standard ToR applicable for opencast coal mines, along with the additional conditions as under:-*

- *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*
- *The activities and fund provisions for CER shall be made as per the guidelines issued by the ministry regarding CER on 1st May, 2018.*
- *Stage-I clearance for the entire forestland involved the project shall be obtained before making an application for the environmental clearance.*
- *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.*
- *Valid Mining Plan and the Progressive Mine Closure Plan duly approved by the competent authority*
- *The ground water permission from Central Ground Water Authority (CGWA) shall be obtained, if applicable.*
- *An integrated hydrological study would be carried out of the impact of coal mining on the baseflows in the downstream of the mine area.*
- *For proper baseline air quality assessment, adequate monitoring stations (4-5 nos.) in the downwind areas need to be set up and included in the air quality modeling.*

- *Ecological restoration and mine reclamation plan to be prepared with afforestation of local/native species found in the area.*
- *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*
- *Wind rose pattern in the area should be reviewed and accordingly location of AAMSQ will be planned by the collection of air quality data*
- *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.*
- *A certified report on the updated status of compliance of conditions stipulated in the environmental clearance dated 12th March, 2013 and 16th April, 2015 from the concerned Regional Office of the MoEF&CC.*
- *Nallah passing through the mine lease are vis –a-vis DGMS guidelines shall be enclosed as a part of EIA/EMP.*
- *Permission of road diversion and nallah diversion (if required) shall be submitted from authorized regulatory body.*
- *Details of court cases and the compliance status (if any).*

Agenda No.48.9

Surakachhar Underground Coal Mine of 0.456 MTPA capacity in mine lease area 1045.86 ha of South Eastern Coalfields Limited (SECL) located at Korba District (Chhattisgarh) – Terms of Reference- reg.

[IA/CG/CMIN/81628/2018, IA-J-11015/142/2018-IA-II(M)]

48.9.1 The proposal is for consideration of Surakachhar Underground Coal Mine of 0.456 MTPA capacity in mine lease area of 1045.86 ha of M/s South Eastern Coalfields Limited (SECL) located at Korba District of Chhattisgarh for grant of TOR under the EIA Notification, 2006.

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

- The project is an old underground mine running on Water & Air Consent to Operate.
- The project is located in the Korba coalfields in Katghora tehsil, Korba district of Chhattisgarh. Project area is covered with geographical coordinates ranging from 22°20'51" to 22°22'57"N and 82°36'20" to 82°39'20"E.
- Coal linkage of Surakachhar UG coal mine project is through rail mode. Main consumers are Bhilai Steel Plant, Chandrapur Power plant, KRPH (Koradih, Khaparkheda) and Birsinghpur Power Plant.
- No joint venture has been formed to operate the mine. Surakachhar UG mine has been proposed to be operated solely by M/s SECL.
- Employment generated/to be generated is 1027.
- The project is reported to be beneficial for generation of electricity to meet the national needs besides contributing to the society through generation of employment and development of infrastructure.
- Land use detail of the mine is given as under:

Pre-Mining

	LAND USE	Within ML	Outside	Total

S.No.		Area (ha)	ML Area (ha)	(ha)
1.	Agricultural land	372.53	-	372.53
2.	Forest land	Nil	-	Nil
3.	Waste land	Nil	-	Nil
4.	Grazing land	Nil	-	Nil
5.	Surface water bodies	*24.54	-	*24.54
6.	Settlements	-	-	-
7.	Others (Govt. land)	673.33	-	673.33
Total land (ha)		1045.86	-	1045.86

* Area of surface water bodies is included in Govt. land

Post – Mining

S.No.	LAND USE	LAND USE (ha)				
		Plantation	Water body	Public use	Undisturbed	TOTAL
1.	External OB Dump	NA	NA	NA	NA	NA
2.	Internal Dump/ Backfilled Area	NA	NA	NA	NA	NA
3.	Excavation	NA	NA	NA	NA	NA
4.	Built up area including roads	2.0	-	69.90	-	71.9
5.	Green Belt/Afforested Area	53.8	-	-	-	53.8
6.	Undisturbed Area	-	24.54	-	895.62	920.16
Total land (ha)		55.8	24.54	69.90	895.62	1045.86

Core area

S. No.	Particulars	Tenancy Land (ha)	Forest Land (ha)	Government Land (ha)					Grand Total (ha)
				Grazing Land	Waste Land	Water Body	Others	Total	
1	Road	1.95	Nil	-	-	-	4.25	4.25	6.20
2	Magazine	Nil	Nil	-	-	-	0.06	0.06	0.06
3	Railway Siding	1.97	Nil	-	-	-	2.70	2.70	4.67
4	Township, office buildings, other mine infrastructure and built-up area	6.09	Nil	-	-	-	50.94	50.94	57.03
5	Mine entries and approach road	0.79	Nil	-	-	-	3.15	3.15	3.94
6	plantation area	21.52	Nil	-	-	-	32.28	32.28	53.80
7	Undisturbed Area	340.21	Nil	-	-	24.54	555.41	579.95	920.16
Total land (ha)		372.53	Nil	-	-	24.54	638.79	673.33	1045.86

- (viii) Total geological reserve reported in the mine lease area is 15.2 MT as on 01.04.2019, out of which mineable reserve is 13.2 MT and extractable reserve is 10.56 MT as on 01.04.2019. The percent of extraction would be 80.
- (ix) 02 nos. (G III and G I) coal seams of thickness varying from 2.4 m to 3.2 m are workable. Grade of coal is G-7, degree of gaseousness is 1, and average gradient is 1 in 9.5.
- (x) Summary report of initial mining plan was approved by the N.C.D.C. Board of Directors on 30.06.1961 and by Govt. of India on 31.03.1962. Progressive Mine Closure Plans were approved by the Board of SECL on 18.05.2013.
- (xi) No forest land is involved in the project.
- (xii) There are no any national parks or eco-sensitive zones within 10 km radius of the project.
- (xiii) Application for obtaining the approval of the Central Ground Water Authority for dewatering of underground mine has been submitted on 31.12.2017.
- (xiv) Kholar Nalla is the main drainage of the area supported by Laxman Nalla. The nallas traverse the area from west to east and join Ahiran river in the North-Eastern direction.
- (xv) Availability of ground water has been reported to be varying between 6.55 to 10.10 m bgl (pre-monsoon) season and between 2.30 to 6.95 m bgl (post-monsoon) season. Total water requirement for the project has been reported to be 1851 KLD.
- (xvi) Method of mining envisages development with Bord & Pillar and depillaring with ash stowing.
- (xvii) Transportation of coal from stock yard to siding is through covered tippers and from siding to consumers is through rail mode.
- (xviii) Life of mine has been reported to be 23 years.
- (xix) The project, being an Underground mine, does not involve external and internal OBs.
- (xx) The PP has reported that no court cases, violation cases are pending against the project.
- (xxi) The project does not involve project affected families at present.
- (xxii) No violation cases have been reported to be pending against the project.
- (xxiii) Regular monitoring of ambient air quality is being carried out on fortnightly basis. The monitoring reports are submitted to the CECB. In general the results of ambient air quality monitoring data are found within prescribed limits except few aberrations which can be attributed to the specific local conditions during the day of sampling.
- (xxiv) Total cost of the project is Rs. 57.71 crore as on 01.04.2019. Cost of production is Rs. 5943.88/Te while sale price is Rs. 1750.13 /Te. CSR cost will be estimated based on 2% of the average net profit of the company for the three immediate preceding financial years or Rs. 2.00 per tonne of coal production of the previous year whichever is higher. Environment Management Cost is Rs. 40.35 lakh (expenditure on environmental conservation and pollution control measures in FY 2018-19)
- (xxv) Public Hearing has not been held.
- (xxvi) In an underground mine plantation is taken up in areas which are under All Right or under Surface Right. The area thus available is small and considering all features within this small area, a very little space is made available for plantation. Moreover, the anticipated level of pollution is also significantly less since except for surface transport of coal, no other mining activity is made on surface. As such requirement of plantation for arresting the air and noise pollution is also significantly less.

48.9.3 The EAC, after detailed presentation, noted the following:

The project is an old underground mine running on Water & Air Consent to Operate.

Production from the mine was found beyond the capacity mentioned in CTO in the year 1976-77, 1977-78, 1983-84, 2008-09 and 2009-10.

The project proponent was required to obtain prior environmental clearance before production of additional coal beyond the capacity mentioned in the CTO. This amounts to be violation under EIA Notification, 1994 and 2006. .

48.9.4 *The EAC, after detailed deliberations, observed that project does not have environmental clearance under EIA Notification, 1994 and 2006 and mining operation being carried out with CTO. However, PP operated mining beyond capacity in CTO in some years. Therefore, EAC, was of the view that the instant proposal shall be treated a violation of EIA Notification.*

Agenda No.48.10

Tikak Open Cast Project of 0.20 MTPA capacity in project area of 98.59 ha of M/s North Eastern Coalfields, Coal India Limited located in Tehsil Margherita, District Tinsukia, Assam – Terms of Reference

[IA/AS/CMIN/81417/2018 , IA-J-11015/129/2018-IA-II(M)]

48.10.1 The proposal is for prescribing Terms of Reference for Tikak Open Cast Project of 0.20 MTPA capacity in project area of 98.59ha of M/s North Eastern Coalfields, Coal India Limited located in Tehsil Margherita, District Tinsukia, Assam under the EIA Notification, 2006.

48.10.2 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. 83M/11, 83M/12, 83M/15 and 83M/16 and is bounded by the geographical coordinates ranging from Latitude - 27°17'25" to 27°43'40" N and Longitude - 95°43'00" to 95°45'00" E.
- (ii) Coal linkage of the project is proposed for Government and Non- Government use for various Purposes.
- (iii) No Joint Venture involved in the proposal.
- (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 218 persons will be provided from the project.
- (vi) The project is reported to be beneficial in terms of revenue generation to the government, employment generation, upliftment of community in the area.
- (vii) Earlier, the environment clearance to the project was obtained vide letter No. Z-11011/3/88-IA.II (M) dated 15.09.1995 issued by MoEF, Gol for the 0.2 MTPA capacity.
- (viii) Total mining lease area as per block allotment is 98.59 ha. Progressive Mine Closure Plan has been approved by the Coal India Limited Board on 13.11.2013.
- (ix) The land usage pattern of the project is as follows:

Pre-mining land use details

S.No.	LANDUSE	Within ML Area (ha)	Outside ML Area (ha)	Total
1.	Agricultural land	0.00	0.00	0.00
2.	Forest land	98.59	0.00	98.59
3.	Wasteland	0.00	0.00	0.00

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 (CIL Land)	0.00	0.00 (CIL Land)
	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			
	Green Belt			
	Balance Area			
	Total Project Area	98.59 ha		

Post Mining

S.No.	Land use during Mining (ha)		Post Mining Land Use (ha)				
			Plantation	Water Body	Public Use	Undisturbed	TOTAL
1.	External OB Dump	29.35	29.35	0	0	0	29.35
2.	Top soil Dump	0.00	0.00	0.00	0.00	0.00	0.00
3.	Excavation	53.26	46.97	6.29	0	0	53.26
4.	Roads	8	0	0	0	8	8
5.	Built up area	1.73	0.83	0	0	0.90	1.73
6.	Green Belt	0	0	0	0	0	0
7.	Undisturbed Area	0	0	0	0	0	0
8.	Safety Zone / Rationalization Area	0	0	0	0	0	0
9.	Diversion / Below River / Nala / Canal	0	0	0	0	0	0
10.	Water Body	0	0	0	0	0	0
11.	Staff Colony	6.25	0	0	0	6.25	0
	Total Area	98.59	77.15	6.29	0	15.15	98.59

(x) Total geological reserve reported in the mine lease area is 9.07 MT with 8.166 MT mineable reserve. Out of total mineable reserve of 8.166 MT, 4.28 MT are available for extraction. Percent of extraction is 52.41%.

(xi) 3 seams with thickness ranging from (i) 8ft Seam: 1.25 m – 2.80 m, (ii) 20ft Seam: 1.00 m – 5.95 m and (iii) 60ft Seam: 2.50 m – 19.81 m are workable. Grade of coal is G1, stripping ratio 8.85 while gradient is 32° dipping towards south.

(xii) Method of mining operations envisages by Shovel and Dumper method.

(xiii) Life of mine is 10 years.

(xiv) The project has one external OB dumps in an area of 29.35 ha with 85 m height and 24.63 Mm³ of OB. The OB from the current mining operations shall be backfilled from 5th year onwards in one internal OB in an area of 46.97 ha with 13.27 Mm³ of OB is envisaged in the project.

(xv) Total quarry area is 53.26 ha out of which backfilling will be done in 46.97 ha while final mine void will be created in an area of 6.29 ha with a depth 110 m. Backfilled quarry area of 46.97 ha shall be reclaimed with plantation. Final mine void will be converted into water body.

(xvi) Transportation of coal has been proposed by the ramps up in mine pit head, from surface to siding by trucks and at sidings by loading by Front end Loaders.

(xvii) Reclamation Plan in an area of 76.32 ha, comprising of 29.35 ha of external dump, 46.97 ha of internal dump.

(xviii) 98.59 ha of forest land has been reported to be involved in the project. Application under the Forest (Conservation) Act, 1980 for diversion of 98.59 ha has been submitted in 2012.

(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 0.20 m during pre-monsoon and 4.97 m during post-monsoon. Total water requirement for the project is 2720.80 KLD.

(xxi) Application for obtaining the approval of the Central Ground Water Authority for has not been submitted.

(xxii) Consent to Operate for the existing capacity was obtained from the PCB, Assam on 23.01.2019 and is valid till 31.03.2019. For year 2019-20, the application has been submitted on 22.02.2019.

(xxiii) Namdang river flowing to the west of the block. Burhi Dehing river is about 10 km.

(xxiv) Regular monitoring of ambient air quality is being carried out and the documented report is submitted to PCB, Assam and also to MoEF&CC. In general, the results of ambient air quality monitoring data were found within prescribed limits.

(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 1981-82 onwards. The coal production, realized from the project, from 1993-94 onwards, is as under:

S.No.	Year	Actual Production Capacity (MTPA)
1	1993-94	0.2
2	1994-95	0.117
3	1995-96	0.072
4	1996-97	0.055
5	1997-98	0.094
6	1998-99	0.112
7	1999-00	0.107
8	2000-01	0.12
9	2001-02	0.125
10	2002-03	0.156
11	2003-04	0.19
12	2004-05	0.113
13	2005-06	0.189
14	2006-07	0.261
15	2007-08	0.319

16	2008-09	0.342
17	2009-10	0.324
18	2010-11	0.261
19	2011-12	0.174
20	2012-13	0.101
21	2013-14	0.012
22	2014-15	0.02
23	2015-16	0.002
24	2016-17	0.142
25	2017-18	0.286
26	2018-19	0.252

(xxvii) There is no project affected families.

(xxviii) Total cost of the project is Rs. 461.55 lakhs. Cost of production is Rs.4317.81 per tonne at 100% production level and 4543.97 per tonne at 85% production level, CSR cost is as per the CIL's Policy, the company spend 2% of the retained Earning of the previous year subject to a minimum of Rs. 2/- per tonne of Coal production every year.

(xxix) Consent to operate (CTO) was obtained from the Pollution Control Board, Assam on 23.01.2019 for 2018-19 and is valid till 31.09.2019. For the year 2019-20, the application has been made on 22.02.2019.

48.10.3 The EAC, after detailed deliberation, noted that the production during 2006-07 to 2010-11 and 2017-18 to 2018-19 from the Tikak Open Cast Project was exceeded over the EC granted capacity of 0.20 MTPA, which amount be a violation of EIA Notification, 2006.

Further the project was granted environmental clearance under the provisions of EIA Notification, 1994 and suffers from the infirmity of validity as per the orders of Hon'ble Supreme Court in the matter of Common Cause Vs Union of India and Goa Foundation Vs Union of India. The proponent has not made an application under the provisions of notification dated 6th April, 2018 issued by the ministry.

48.10.4 Therefore, the EAC observed that in view of production capacity beyond EC in certain years involves violation of EIA Notification, 2006. Proposal was not taken forward due to violation in the proposal.

Agenda No.48.11

Tirap Open Cast Project of 0.75 MTPA capacity in mine project area of 586.91 ha of M/s North Eastern Coalfields, Coal India Limited located in Tehsil- Margherita, District Tinsukia, Assam – Terms of Reference

[IA/AS/CMIN/81278/2018 , IA-J-11015/134/2018-IA-II(M)]

48.11.1 The proposal is for Terms of Reference for Tirap Open Cast Project of 0.75 MTPA capacity of M/s North Eastern Coalfields in mine project area of 586.91 ha located in Tehsil- Margherita, District Tinsukia, (Assam).

48.11.2 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. 83M/15 and is bounded by the geographical coordinates ranging from Latitude - 27°16'44" to 27°18'21" N Longitude - 95°46'48" to 95°48'03" E.

- (ii) Coal linkage of the project is proposed for Government and Non- Government use for various Purposes.
- (iii) No Joint Venture involved in the proposal.
- (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 90 persons will be provided from the project.
- (vi) The project is reported to be beneficial in terms of revenue generation to the government, employment generation, upliftment of community in the area.
- (vii) The project is operating with the consent to operate under the Air and Water Acts..
- (viii) Total mining lease area as per block allotment is 586.91 ha. Progressive Mine Closure Plan has been approved by the Coal India Limited Board on 13.11.2013.
- (ix) The land usage pattern of the project is as follows:

Pre-mining land use details

S.No.	LANDUSE	Within ML Area (ha)	Outside ML Area (ha)	Total
1.	Agricultural land	0	0	0
2.	Forest land	289	0	289.00
3.	Wasteland	0	0	0
4.	Grazing land	0	0	0
5.	Surface water bodies	0	0	0
6.	Settlements (Colony Land)	0.00	0	0
7.	Others (Specify)	0.00	0	0
	Old Excavation Area (East Quarry)	4.6	0	4.6
	Old Excavation Area (West Quarry)	0	0	0
	Old OB Dumps	24.22	0	24.22
	Roads & Mine Infrastructure	11.34	0	11.34
	R & R Colony	2.6	0	2.6
	Staff Colony	4	0	4
	Green Belt	0	0	0
	Balance Area	0	251.15	251.15
	Total Project Area	335.76 ha	251.15	586.91

Post mining land use details

S.No.	Land use during Mining (ha)		Post Mining Land Use (ha)				
			Plantation	Water Body	Public Use	Undisturbed	TOTAL
1.	External OB Dump	29.35	29.35	0	0	0	29.35
2.	Top soil Dump	0	0	0	0	0	0
3.	Excavation	53.26	46.97	6.29	0	0	53.26
4.	Roads	8.00	0	0	0	8	8
5.	Built up area	1.73	0.83	0	0	0.90	1.73
6.	Green Belt	0	0	0	0	0	0
7.	Undisturbed	0	0	0	0	0	0

	Area						
8	Safety Zone / Rationalization Area	0	0	0	0	0	0
9	Diversion / Below River / Nala / Canal	0	0	0	0	0	0
10	Water Body	0	0	0	0	0	0
11	Staff Colony	6.25	0	0	0	6.25	0
	Total Area	98.59	77.15	6.29	0	15.15	98.59

(x) Total geological reserve reported in the mine lease area is **56.90 MT** with **10.94 MT** mineable reserves.

(xi) 3 seams with thickness ranging from (i) 8ft Seam: 0.20 m – 5.75 m (ii) 20ft Seam: 0.20 m – 16.67m and (iii) 60ft Seam: 2.90 m -31.95 m are workable. Grade of coal is G1, stripping ratio 15.48 while gradient is Min-8° and Max-33°.

(xii) Method of mining operations envisages by Shovel and Dumper method.

(xiii) Life of mine is 19 years.

(xiv) The project has 3 external OB dumps in an area of 303.88 ha with 90 m height and 79.00 Mm³ of OB. The OB from the current mining operations shall be backfilled from 9th year onwards. One (1) internal OB in an area of 170.44 ha with 90.40 Mm³ of OB is envisaged in the project.

(xv) Total quarry area is 228.04 ha out of which backfilling will be done in 170.44 ha while final mine void will be created in an area of 57.6 ha with a depth 150 m. Backfilled quarry area of 170.44 ha shall be reclaimed with plantation. Final mine void will be converted into water body.

(xvi) Transportation of coal has been proposed by the ramps up in mine pit head, from surface to siding by trucks and at sidings by loading by Front end Loaders.

(xvii) Reclamation Plan in an area of 474.32 ha, comprising of 303.88 ha of external dump, 170.44 ha of internal dump. In addition to this, an area of 24.15 ha included in the safety zone/rationalization area and 4 ha of built up area, has also been proposed for green belt development.

(xviii) 289 ha of forest land has been reported to be involved in the project. Application under the Forest (Conservation) Act, 1980 for diversion of 289 ha of forest land for non-forestry purposes has been submitted in 2008.

(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 1.35 m during pre-monsoon and 5.75 m during post-monsoon. Total water requirement for the project is 6091.7606 KLD.

(xxi) Application for obtaining the approval of the Central Ground Water Authority for has not been submitted.

(xxii) Consent to Operate for 2018-19 was obtained from the PCB, Assam on 23.01.2019 and is valid till 31.03.2019. For 2019-20 the application has been made on 22.02.2019.

(xxiii) Burhi Dehing River and Tirap River are flowing 5.5 km and 100 m from the Project boundary respectively.

(xxiv) Regular monitoring of ambient air quality is being carried out and the documented report is submitted to PCB, Assam and also to MoEF&CC. In general, the results of ambient air quality monitoring data were found within prescribed limits.

(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 1983-84

onwards. The coal production, realized from the project, from 1993-94 onwards, is as under:

(xxvii) The project involves 202 project affected families. R&R of the PAPs will be done as per Project report.

(xxviii) Total cost of the project is Rs. 203.14 Cr. Cost of production is Rs. 3199.65 per tonne at 100% Production level and Rs. 3352.28 per tonne at 85% Production level, CSR cost is as per the CIL's Policy, the company spend 2% of the retained Earning of the previous year subject to a minimum of Rs. 2/- per tonne of Coal production every year, R&R cost is Rs. 33.50 crores. Environment Management Cost is Rs. 95.74 crores.

(xxix) Consent to operate (CTO) was obtained from the State Pollution Control Board on 23.01.2019 and is valid till 31.03.2019. For year 2019-20, application has been made on 22.02.2019.

48.11.3 The EAC, after detailed deliberation, noted as following:

The proposal is for Terms of Reference for Tirap Open Cast Project of 0.75 MTPA capacity of M/s North Eastern Coalfields in mine project area of 586.91 ha located in Tehsil-Margherita, District Tinsukia (Assam).

The mine has no environmental clearance and is operating with consent to operate from State Pollution Control Board, Assam since its inception in 1983-84.

The project involves 289 ha of forest land; application of diversion for non-forestry activity has been filed in 2008 and still pending.

48.11.4 *The EAC considering above, recommended the Terms of Reference for preparation of EIA/EMP reports with public consultation, subject to compliance of all terms and conditions as specified/notified in the standard ToR applicable for opencast coal mines, along with the additional conditions as under:-*

- *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*
- *The activities and fund provisions for CER shall be made as per the guidelines issued by the ministry regarding CER on 1st May, 2018.*
- *Stage-I clearance for the entire forestland involved the project shall be obtained before making an application for the environmental clearance.*
- *Valid Mining Plan and the Progressive Mine Closure Plan duly approved by the competent authority*
- *The ground water permission from Central Ground Water Authority (CGWA) shall be obtained, if applicable.*
- *An integrated hydrological study would be carried out of the impact of coal mining on the baseflows in the downstream of the mine area.*
- *For proper baseline air quality assessment, adequate monitoring stations (4-5 nos.) in the downwind areas need to be set up and included in the air quality modeling.*
- *Ecological restoration and mine reclamation plan to be prepared with afforestation of local/native species found in the area.*
- *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*
- *Wind rose pattern in the area should be reviewed and accordingly location of AAMSQ will be planned by the collection of air quality data*

- *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.*
- *Nallah passing through the mine lease (if any) are vis –a-vis DGMS guidelines shall be enclosed as a part of EIA/EMP.*
- *Permission of road diversion and nallah diversion (if required) shall be submitted from authorized regulatory body.*
- *Details of court cases and the compliance status (if any).*

Agenda No.48.12

Kakatiya Khani Opencast-III (KTK OC-111) coal mining project of capacity 3.75 MTPA (Peak) by Opencast & 0.48 MTPA Underground in mine lease area of 1336.64 ha of M/s The Singareni Collieries Company Limited located in village Basawarajupalli, Tehsil Ghapur, District Jayashankar Bhupalpalli (Telangana) – Environmental Clearance – reg.

[IA/TG/CMIN/113818/2018, J-11015/464/2012-IA-II(M)]

48.12.1 The proposal is for environmental clearance for the proposed Kakatiya Khani OC-III Project of 3.0 MTPA (Peak 3.75 MTPA) by OC and 0.48 MTPA by UG in mine lease area of 1336.64 ha located near Village Basawarajupalli, Mandal Ghanpur, District Jayashanker Bhupalpalli (Telangana).

48.12.2 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. 56 N/15 on R.F. 1:50000 and is bounded by the geographical co-ordinates ranging from North latitude 18°19'40" and 18°22'56" and East longitude 79°52'42" and 79°55'30".
- (ii) **Coal Linkage:** The coal produced is mainly utilized in Power sector and partly in Cement industries, fertilizers and brick industries etc.
- (iii) **Joint venture:** There is no Joint Venture.
- (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:** The manpower required to operate the proposed Kakatiya Khani OC III Project is expected to be 252 in the open cast and 1113 in the Underground mine. Further, the project requires deployment of additional manpower to an extent of 960 by way of outsourcing for removal of overburden.
- (vi) The project is reported to be beneficial in terms of socio-economic and improving living standards.
- (vii) Earlier, the environment clearance to the project was obtained under EIA Notification, 2006 vide Ministry's letter No. J-11015/464/2012-IA.II(M), dated 11.05.2015 for 2.747 MTPA (Normative) 3.13 MTPA (peak) through underground mining in mine lease area of 601.20 ha.
- (viii) Total project area is 1336.64 ha. Mining Plan (Including Mine Closure Plan) has been approved by the MoC, Gol vide Ir.no. PCA-38011/12/2017 - PCA dated 19th November, 2018.
- (ix) The land usage pattern of the project is as follows:

Pre-mining land use details (Area in ha)

Land owner ship	Land use	Extent (Ha)
Forest	Forest	Nil
Private land	Agriculture	718.95
	Grazing	-
	Barren	-
	Built up area	13.63
	Nallah/ other	3.73
	Road	0.97
Sub Total		737.28
Government Land	Agriculture	282.96
	Built up area	3.68
	Grazing	280.38
	Barren	--
	Water bodies	28.30
	Roads	4.04
Sub Total		599.36
Total		1336.64

Post Closure Land Use Details (Area in ha)

Sl.No	Description	Land Use Details (ha)					Total
		Plantation	Water Body	Public/ Company Use	Agriculture	Undisturbed	
1.(a)	Excavation (Backfill)	281.13	2.75	-	182.71	-	466.59
(b)	Excavation (Voids)	-	211.62	-	-	-	211.62
	Sub-total excavation:	281.13	214.37	-	182.71	-	678.21
2.	External Dump Yard	382.04	-	-	-	-	382.04
3.	Safe barrier, Roads, Drainage around quarry & Dump yard.	129.15	21.99	39.56	-	-	190.70
4.	Built up area / Infrastructure	38.71	0.32	11.09	-	-	50.12
5.	Nallah Diversion	19.31	6.58	-	-	-	25.89
6.	Undisturbed/NFL (Exclusive UG Area)	-	-	-	-	9.68	9.68
	Grand Total	850.34	243.26	50.65	182.71	9.68	1336.64

NOTE: The actual area of plantation is 1033.05 Ha out which 182.71 Ha of land will be reclaimed for agricultural use and balance area to an extent of 850.34 ha will be left as plantation area.

(x) Total geological reserve reported in the mine lease area is 120.37 MT with 89.16 MT mineable reserves. Out of total mineable reserve of 89.16 MT, 77.45 MT are available for extraction (out of 77.45 MT of extractable reserves balance extractable reserves are

75.89 MT as 1.56 MT were extracted by existing Kakatiya khani Long wall project up to 2017-18). Percent of extraction is 64.34%.

(xi) Out of 16 seams 13 seams with thickness ranging from 0.17 m- 4.00 m are workable. Grade of coal is G-8 (4920 K Cal/kg), Stripping ratio is 13.48 Cum of OB per 1 tonne of coal, while gradient is 1 in 3.

(xii) Method of mining operations envisaged is by Opencast and underground (Mixed/integrated)

(xiii) Life of mine is 31 years from 2018-19 (Including 1 years of construction period) OC: 30 years and UG: 09 years.

(xiv) One external OB dump has been proposed in the project in an area of 382.04 ha with 120 m height to accommodate 252.52 Mm³ of OB (including 3.82 Mm³ of top soil).

(xv) Total quarry area is 678.21 ha out of which backfilling will be done in 466.59 ha while final mine void will be created in an area of 211.62 ha with a depth of 300 m. Out of 466.59 backfilled quarry area an area of 463.84 ha shall be reclaimed with plantation. Final mine void will be converted into water body.

(xvi) Transportation of coal has been proposed by Trucks / Dumpers in mine pit head, from surface to proposed siding by road and from the siding to consumer through Road/Rail.

(xvii) Reclamation Plan in an area of 1033.05 ha, comprising of 463.84 ha of internal dump and 382.04 ha of external dump, 148.46 ha green belt and 38.71 ha of other plantation. The cumulative plantation area Post closure stage is 1033.05 ha (850.34 ha plantation and 182.71 ha of Agriculture).

(xviii) No forest land has been reported to be involved in the project.

(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 1.14 m to 15.00 during pre-monsoon and between 0.10 m to 13.20 m during post-monsoon. Total water requirement for the project is about 2801 KLD.

(xxi) Ground Water Clearance for the Kakatiya longwall project was obtained vide Lr no. 5855/Hg-II(1)06-1 dated 28th June, 2006 from state ground water department. Requisition for ground water clearance for the present proposal was also made to district Ground water department vide Lr no. BHP/ENV/46/2018/147, dated: 17th December, 2018.

(xxii) Public hearing was conducted on 14.07.2019 at Zilla Praja Parishat Secondary School, Kondapur Village, Ghanpur Mandal, Jayashankar Bhupalpalli District, Telagana. Major issues raised in the public hearing inter alia include proper compensation to the land losers in the land acquisition, depletion UG ground water, infrastructure development., proper mitigation measures to control pollution, employment to land losers.

(xxiii) Three villages Madhavaraopalli, Ravinagar & Kondarajireddipalli (full) and two villages Jangupalli & Venkateshwarlapalli (Part) are falling in the Project area of KTK OC-III. Hence, Rehabilitation and Resettlement for these villages will be provided as per the existing R&R policy envisaged by the Government.

(xxiv) It was stated that SCCL will take all the necessary steps to control environmental pollution as per the Rules, Regulations and Guidelines of MoEF&CC, GoI.

(xxv) SCCL will provide necessary training to locals to improve their skill so that they can get employment and also give the priority in out sourcing employment to the land losers and local people where their services are required.

(xxvi) Consent to Operate will be obtained after obtaining EC.

(xxvii) One seasonal nallah Gundla vagu is flowing in the 1336.64 ha boundary of lease. The nallah will be diverted in consultation with the I&CAD.

(xxviii) Regular monitoring of ambient air quality is being carried out on fortnightly basis for the existing Kakatiya Longwall Project. The documented report is submitted to TSPCB and also to Regional office of MoEF&CC along with half yearly EC compliance report. In

general, the results of ambient air quality monitoring data were found within prescribed limits.

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

(xxx) The project does not involve violation of the EIA Notification, 2006 and amendment issued there under. 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 is as under:

Year	EC capacity (MT)	Actual production in MT
2006-07	2.150	0.003
2007-08		0.071
2008-09		0.149
2009-10		0.191
2010-11		0.185
2011-12		0.144
2012-13		0.077
2013-14		0.084
2014-15		0.114
2015-16	2.747	0.112
2016-17		0.130
2017-18		0.300
Total		1.560

(xxxii) The project involves 728 (PDFs) and 86 project affected families. R&R of the PAPs will be done as per prevailing Govt. Rules. Compensation to the land losers will be paid as per the directions of the State Govt.

(xxxiii) Total cost of the project is Rs.41,384 lakhs. Cost of production is Rs.1936.86/- per tonne, CSR cost is 2% of average net profits of the company made during last three years will be allocated for CSR at company level, R&R cost is Rs.71.04 crores. Environment Management Cost is -

- Direct : Rs 10.54 Crores
- Indirect : Rs 7.760 Crores
- Revenue cost : Rs 18.99/ tonne

48.12.3 The EAC, after detailed deliberation, noted that the project

The proposal is for environmental clearance for the proposed Kakatiya Khani OC-III Project of 3.0 MTPA (Peak 3.75 MTPA) by OC and 0.48 MTPA by UG in mine lease area of 1336.64 ha located near Village Basawarajupalli, Mandal Ghanpur, District Jayashanker Bhupalpalli (Telangana).

Earlier, environment clearance to the project was obtained under EIA Notification, 2006 vide Ministry's letter dated 11th May, 2015 for 2.747 MTPA (Normative) 3.13 MTPA (peak) through underground mining in mine lease area of 601.20 ha.

Terms of Reference for the proposal of Kakatiya Khani Opencast-III (KTK OC-III) coal mining project of capacity 3.75 MTPA (peak) by Opencast & 0.48 MTPA Underground in mine lease area of 1336.64 ha was granted by Ministry on 22nd April, 2019.

Public hearing was conducted on 14.07.2019 at Zilla Praja Parishat Secondary School, Kondapur Village, Ghanpur Mandal, Jayashankar Bhupalpalli District, Telagana

There is no forest land involved in this project area.

Mining Plan and Mine Closure Plan was approved by the Ministry of Coal vide file No PCA-38011/12/2017-PCA dated 19th November, 2018.

Baseline data was generated during the period of December, 2018 to February, 2019 by Environment Protection, Training & Research Institute, Hyderabad.

Mine is covered under Peddapur Block-I Extn (North) and Peddapur Mine lease of 330 ha and 955 ha which are valid up to 25th May, 2029 and 21th September, 2029 respectively.

48.12.4 *The EAC, after deliberations observed and asked for further clarification for the following:-*

- *Permission of diversion of gundla vagu nallah in mine lease area from authorised statutory body.*
- *Permission of DGMS for blasting as the distance of habitation along the quarry boundary is only 160 mtrs. Clarify how many villages/houses/population is present from mine boundary and propose environment mitigation measures*
- *Traffic Impact Assessment and mitigation measure for transportation of coal from mine to thermal power plant is 90 km and needs to be proposed. No of villages in 100 m and 500 m from the end of road getting affected and necessary mitigation measure for the same.*
- *Explore the possibility and provide certain commitment for developing railway siding in next 5 years to stop coal transportation by road (90 km).*
- *Road connecting parsumarpalli and peddapur villages across the project is proposed to be diverted. Permission of road diversion from statutory body, its distance from the mine and effect on public during mining operations*
- *Permission of diversion of 33 KV Transmission lines leading to KLP has to be done and dismantling of older transmission lines is pending*
- *Water balance diagram including Quantity of generation of sewage treatment plant and effluent treatment plan and further recycling/reuse quantity.*
- *Action plan for reducing the impact on quality of ground water parameters such as TDS, Calcium, Chlorides, Fluoride, Iron etc.*
- *Status of action taken on non-compliance observed by Regional Office, Chennai for the project of EC dated 11th May, 2015.*

Agenda No.48.13

Tara (East) & Tara (West) Coal Mining Project 4 MTPA Capacity in an area of 937.44 ha of M/s West Bengal Power Development Corporation Ltd, located in Village, Churulia, Chinchurbill, Birkulti, District Paschim Bardhaman (West Bengal) – Environmental Clearance

[IA/MP/CMIN/76052/2018] F. No. J-11015/22/1996-IA.II (M)

48.13.1 The proposal is for environmental clearance for Tara (East) & Tara (West) Coal Mine of 4 MTPA capacity in mine lease area of 937.44 ha of M/s West Bengal Power Development Corporation Limited (WBPDCCL) located in village Churulia, Chinchurbill,

Deshermohan, Joynagar, Birkulti, Manpur and Joyantipur of Jamuria Block in District Paschim Bardhaman (West Bengal).

48.13.2 The proposal was earlier considered by the sector EAC in its meeting held on 24-25th April, 2019, and the Committee desired for information in respect of the following:-

- (i) Total project area is 937.46 ha, including mine lease area of 800 ha. There is no Letter of Intent (LOI) available for 137.46 ha, to be issued by State Government.
- (ii) Present compliance status of the in-principle approval for the proposed nallah diversion.
- (iii) Base line air quality for critical pollutants namely, PM10, PM2.5 at railway siding is on much higher side. Mitigating measures need to be taken for the cumulative values and/or the predicted GLCs to be well within the acceptable limits.
- (iv) Railway siding is about 14 km from mine. Road widening shall be done before starting of coal transportation.
- (v) Traffic assessment and impact of air quality and habitation along the route (14km)
- (vi) Mitigation measures of mining activity for two villages which are coming core zone.
- (vii) Effect on ecosystem services available in the mining area.

48.13.3 The submission of the project proponent in response to its observations. The same are reproduced as under:-

S. No.	Observations	Comments/Compliance
1	Total project area is 937.46 ha, including mine lease area of 800 ha. There is no Letter of Intent (LOI) available for 137.46 ha, to be issued by State Government.	Copy of letter dated 24 th May, 2019 from the State government acknowledging the proposal of Lol for additional area of 137.44 ha is under consideration.
2	Present compliance status of the in-principle approval for the proposed nallah diversion.	In Principle Approval of this diversion of Nala has been accorded by Irrigation and Waterways Directorate, Govt of West Bengal vide their Memo No 91-1/I-4M-45/13 on 25.03.2019 (Copy enclosed) subject to the compliance of conditions WBPDC had submitted the necessary documents and drawings required for the purpose for vetting an approval from Irrigation and Waterways Directorate, Govt of West Bengal on 13.05.2019 On compliance of the conditions mentioned therein SE, Irrigation & waterway Directorate had vetted the proposal vide letter dated 6 th June, 2019.
3	Base line air quality for critical pollutants namely, PM10, PM2.5 at railway siding is on much higher side. Mitigating measures need to be taken for the cumulative values and/or the predicted GLCs to be well within the acceptable limits.	The proposal for mitigative measures proposed at Bhanora Railway siding has been suggested for compliance. Following specific mitigative measures are proposed : (a) Provision of two portable Mist Spray System of 30/40 m throw for Dust Suppression in Wagon Loading Area

		(b) Installation of 7 Nos. Of fixed Rainguns (having 90 m throw) to cover the entire length of the Coal Stack Yard along the siding. This will help in effectively suppressing the dust generated due to unloading/loading of coal. The installation of this system will be done within the first six months of starting of the project activities. (c) Protective fiber sheets of 6 m heights for 1 km length.
4	Railway siding is about 14 km from mine. Road widening shall be done before starting of coal transportation	The road connecting Bhanora Railway Siding is having width of 7 m. Road widening, wherever necessary will be undertaken before starting of the coal transportation. An undertaking given by M/s WBPDCCL in this regard is attached.
5	Traffic assessment and impact of air quality and habitation along the route (14km)	The traffic assessment & impact of air quality and habitation is carried out and appropriate mitigative plan has been prepared. Following are the mitigation measures (a) Use of tarpaulin cover on dumpers (b) Regular monitoring of vehicular exhaust (c) Regular maintenance of transport vehicles (d) Greenbelt development (3 tier arrangement of local tree species) along the roads (e) Regular maintenance of the road (f) Water spraying throughout the day through Mist Sprays
6	Mitigation measures of mining activity for two villages which are coming core zone.	Various mitigation measures for village Churulia and Joynagar are proposed considering Air Pollution Control Measures, Green Belt Development, Noise Pollution Control, Ground Vibration Control, Surface and Ground Water Pollution Control, Water Security Plan, Socio-Economic Aspects and Regular Monitoring of Environmental Parameters.
7	Effect on ecosystem services available in the mining area.	Report on effect of ecosystem services is submitted. Key mitigation measures with respect to provisioning services having critical, moderate, major significance and its impact will be complied.

The proposal was again considered by the sector EAC in its meeting held on 25th June, 2019, and the Committee desired for information in respect of the following:-

- (i) Lol/Grant Order available for 800 ha out of the total project area of 937.44 ha, insisted for the required permission/order from the State Government for utilizing the remaining area of 137.44 ha.
- (ii) Confirmation/approval (not only vetting of channel section of the waterway) from the concerned regulatory authority regarding nallah diversion.

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

The proposal is for environmental clearance to Tara (East) & Tara (West) Coal Mining project of 4 MTPA capacity of M/s West Bengal Power Development Corporation Limited

(WBPDCL) in an area of 937.44 ha located in villages Churulia, Chinchurbill, Deshermohan, Joynagar, Birkulti, Manpur and Joyantipur, Block Jamuria, District Paschim Bardhaman (West Bengal).

The submission of the project proponent in response to its observations. The same are reproduced as under

S. No.	Observations	Comments/Compliance
1	Lol/Grant Order available for 800 ha out of the total project area of 937.44 ha, insisted for the required permission/order from the State Government for utilizing the remaining area of 137.44 ha	Copy of letter dated 24 th May, 2019 from the State government acknowledging the proposal of Lol for additional area of 137.44 ha is under consideration.
2	Confirmation/approval (not only vetting of channel section of the waterway) from the concerned regulatory authority regarding nallah diversion	In Principle Approval of this diversion of Nala has been accorded by Irrigation and Waterways Directorate, Govt of West Bengal vide their Memo No 91-1/I-4M-45/13 on 25.03.2019

ToR for the project was granted on 12th December, 2018, and the public hearing was conducted by the State Pollution Control Board on 22nd February, 2019 at Jamuria Panchayat Samiti Office Compount, Dist Paschim Bardhaman.

Revised Mining Plan and Mine Closure Plan (3rd Revision) for Tara (East) and Tara (West) Coal Mine of M/s West Bengal Power Development Corporation Ltd. (WBPDCL) was approved by Ministry of Coal on 30th August, 2018.

Project proponent has proposed to dewater Pits which are filled with water and further discharge in nearby stream. Committee observed that chemical analysis and further treatment/neutralisation of water before disposal in streams shall be done.

48.13.5 *The EAC, after deliberations, recommended for grant of environmental clearance to the Tara (East) & Tara (West) Coal Mine of 4 MTPA capacity in mine lease area of 937.44 ha of M/s West Bengal Power Development Corporation Limited (WBPDCL) located in village Churulia, Chinchurbill, Deshermohan, Joynagar, Birkulti, Manpur and Joyantipur of Jamuria Block in District Paschim Bardhaman (West Bengal), subject to compliance of terms and conditions as applicable, and the additional conditions as under:-*

- *The project proponent shall obtain Consent to establish from the State Pollution Control Boards for the proposed peak capacity of 4 MTPA prior to commencement of the increased production.*
- *Transportation of coal from face to Coal heap shall be carried out by truck. Further, the coal transportation from Coal heap to Coal Handling Plant shall be carried out through covered trucks.*
- *Treatment /Neutralisation of water after necessary chemical analysis from two pits before disposal/dewatering of pits in streams shall be done.*
- *The road widening wherever necessary shall be undertaken connecting Bhanora Railway Siding to the site (14 km) upto 8 m with 1 m divider before starting of the coal transportation. Mitigative measures as submitted during the appraisal at EAC shall be done.*
- *Pollution mitigation measures for village Churulia and Joynagar or any other villages coming in core zone as submitted shall be implemented.*

- *Key mitigation measures with respect to provisioning ecosystem services having critical, moderate, major significance and its impact shall be implemented*
- *To control the production of dust at source, the crusher and in-pit belt conveyors shall be provided with mist type sprinklers.*
- *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 railway siding, etc.*
- *The company shall obtain approval of CGWA for use of groundwater for mining operations at its enhanced capacity of 4 MTPA.*
- *Continuous monitoring of occupational safety and other health hazards, and the corrective actions need to be ensured.*
- *Persons of nearby villages shall be given training on livelihood and skill development to make them employable.*
- *To ensure health and welfare of nearby villages, regular medical camps shall be organized at least once in six months.*
- *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.*
- *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.*
- *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.*
- *CSR and CER activity should include action plan for health impacts and its mitigation measures*

Agenda No.48.14

Kapurdi Lignite Coal Mining Project of 3.75 MTPA to 4.50 MTPA capacity in an area of 3223.511 ha of M/s Barmer Lignite Mining Company Limited located in villages Kapurdi, Rohili, Ishwarpura & Bothia, Tehsil & District Barmer (Rajasthan) - For continuation/extension in Environmental clearance – reg.

[IA/RJ/CMIN/113733/2019 , J-11015/17/2014-IA.II (M)]

48.14.1 The proposal is for amendment in environmental clearance of Kapurdi Lignite Mine for continuation of production capacity for 4.5 MTPA as per approved mining plan.

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

- The project area is bounded by the geographical co-ordinates ranging from North latitude 25°54'30.6" to 25°58'42.6" N and East longitude 71°19'15.2" to 71°22'21.7" E.
- M/s Barmer Lignite Mining Company Limited (BLMCL) – JV Company between Rajasthan State Mines & Minerals Limited and Raj West Power Limited, Presently known as JSW Energy(Barmer) Limited.
- Mining Plan for 3 MTPA capacity approved by MOC on 29.01.2008. Revised Mining Plan & Mine Closure Plan for Peak capacity of 7 MTPA approved by MOC on 29.01.2014.
- EC for 3.0 MTPA granted by MoEF&CC on 10.12.2008; EC for 3.75 MTPA granted by MoEF&CC on 24.12.2013; EC for 7.0 MTPA for 4 years granted on 22.09.2014; and

amendment letter of above EC as production capacity of 4.5 MTPA for two years was issued on 28.02.2019.

(v) The total Mining Lease Area= 3223.5110 Ha. Out of which agricultural land =2709.53 Ha; waste land = 283.42 Ha; water bodies including dry channels = 189.26 Ha; and others = 41.30 Ha.No forestland is involved in the project.

(vi) Pre-mining and post-mining land use details:

i. Pre mining

a) Initial Pre mining Land Use:

S. No	Land Use	Area in Ha	Remark
1	Agriculture Land	2709.53	Only one crop is raised. In the period 1999-2000 to 2009-2010 only 13% land yielded single crop.
2	Waste Land	283.42	-
3	Water bodies including dry channels	189.26	These are mainly dry and sometimes get water during monsoon period.
4	Other	41.30	-
Total		3223.51	

a) Land use at the stage of revision of Mining Plan:

S. No	Description	Area Hectare as on 31/03/2012 (as per 7MTPA Mining Plan)
1	Mining/Excavation	180.99
2	Surface Dump in ML Area	380.70
3	Top Soil Dump	12.00
4	Facilities including Lignite Stack	25.00
5	LHP & Conveyor	13.15
6	Road	32.60
7	Settling Pond/Reservoir	9.50
8	Green Belt	16.11
9	Void	180.99
10	Undisturbed/Indirectly Affected	2553.46
Total		3223.51

i. Post Mining

Sl. No.	Description of Area	Plantation	Water Body	Public Use	Undisturbed	Total
1	Excavation	1640.08	541.27	0.00	0.00	2181.35
2	External Dump	703.01	0.00	0.00	0.00	703.01
3	Top soil Dump	0.00	0.00	0.00	0.00	0.00
4	Facilities including lignite stack	0.00	0.00	5.00	0.00	5.00
5	Road	2.00	0.00	3.00	0.00	5.00
6	LHP and conveyor	10.00	0.00	0.00	0.00	10.00
7	Settling pond / reservoir	10.00	0.00	0.00	0.00	10.00
8	Green belt	96.66	0.00	0.00	0.00	96.66
9	Undisturbed	0.00	0.00	0.00	212.49	212.49
Total		2461.75	541.27	8.00	212.49	3223.51

- (vii) Reserves: Gross geological reserve = 150.40 MT; Net Geological reserves (after 10% deduction) = 135.36 MT; Extractable reserves = 129.79 MT (Out of which 41.29 MT has been extracted up to August 2019).
- (viii) Rated capacity: Production capacity was enhanced from 3.75 MTPA to 7.0 MTPA for four years (2014-15 to 2017-18). Four year period is expired on 31.03.2018 and after that EC was amended for the capacity of 4.5 MTPA, for next two years.
- (ix) Linkage: Entire Lignite produced from the mine is supplied to Pit head power plant of JSW Energy (Barmer) at regulated price decided by Rajasthan Electricity Regulatory Commission. No other linkage.
- (x) Life of the Mine: 34 years (since inception); 24 years (in future)
- (xi) Stripping ratio: 12.48:1 Cum:t
- (xii) Method of Mining: Opencast Mechanized
- (xiii) Blasting: No blasting is required. It may be adopted if during further course of mining, hard material is encountered
- (xiv) Working days: 330 days, 8 hours, 3 shift
- (xv) Manpower: Mine is already in operation with the capacity of 4.5 MTPA and required man power is already working.
- (xvi) Transportation: From the mine lignite is being transported to pit head Lignite handling system by dumpers and from pit head to Power plant by 4.5 Km long covered conveyor belt.
- (xvii) Elevation & Topography: 180-190 Above MSL; and Plain with occasional sand dunes
- (xviii) No drainage diversion is required
- (xix) Water requirement & Source of water: 2738 m³/day and Mine Water and procurement from market
- (xx) Power Requirement & Source of power: 20 MVA (same as approved earlier) and sourced from Jodhpur Vidyut Vitaran Company of GoR .
- (xxi) Employment Generated/ To be generated: Project is already running at requested capacity therefore there will be no additional employment generation due to proposed amendment
- (xxii) Benefits of the Projects: Uninterrupted fuel supply to power plant which is giving entire power to Rajasthan DISCOM on regulated tariff.
- (xxiii) Certified compliance from the regional office, Lucknow has been obtained vide report no. IV/INV/R/Mine-524/884/2014/527 dated 11.12.2018.
- (xxiv) Date of Ground Water clearance: Letter no.21-4(450)/WR/CGWA/2010-201 dated 07.03.2011&corrigendum no. 21-4(450)/WR/CGWA/2010-463 dated 26.4.2011
- (xxv) Date mine closure approval: Revised Mine Closer Plan approved by MoCvide letter No. 13016/12/2012-CA-I dated 29th January 2014
- (xxvi) Ambient air Quality survey was conducted during summer season from 1st March 2018 till 30th May 2018. The study was for three months with frequency of twice a week in core zone and buffer zone. 24 hour average samples were collected from each station. These samples were analysed in laboratory by adopting the methods specified in National Ambient Air Quality Standards. The results were within prescribed limit. Details are furnished below:

Pollutant	Standard for Ambient Air (µg/M ³)	At the Mine working Area (µg/M ³)	In the Buffer zone(µg/M ³)
PM10	100	42.18 –	31.41 –
PM2.5	60	20.16 –	14.49 –
SO2	80	10.87 –	7.47 –
NOx	80	12.30 –	9.63 –
CO	2000	-	-

- (xxvii) Cost of the project:

i. Total capital cost:	Rs 527 Cr
ii. Cost of Production:	Rs. 1336.18 /te
iii. Sale Price:	Rs1731.26 / te
iv. CSR cost:	Rs5/- per ton as per directives of MoEF&CC.
v. R&R Cost:	No R&R involve in present capacity enhancement.
vi. No. of PAFs:	No PAF involve in present capacity enhancement as there is no additional land acquisition.
vii. Environmental Management cost:	Capital Cost – Rs. 4618.09 lakh, Annual Recurring Cost –Rs. 2253.30 lakh. up to March-2019

(xxviii) No public hearing for this proposal. Last public hearing held on 06.06.2014 for capacity expansion from 3.75 MTPA to 7.0 MTPA for four years.

(xxix)

48.14.3 The EAC, after deliberations, noted the following: -

The Ministry of Environment, Forest and Climate Change has considered the proposal for amendment in the environmental clearance dated 22nd September, 2014 granted by the Ministry in favour of M/s Barmer Lignite Mining Company Limited (BLMCL) for expansion of Kapurdi Lignite Opencast Mining Project from 3.75 MTPA to 7 MTPA capacity for a period of 4 years in an area of 3223.511 ha in villages Kapurdi, Rohili, Ishwarpura & Bothia, Tehsil & District Barmer (Rajasthan).

The project was granted environmental clearance by the Ministry for production of Lignite @ 7MTPA for a period of four years to meet the requirement of pit head Thermal Power Plant of capacity 1080 MW of M/s Raj West Power Limited. Lignite production from Kapurdi Block was to be tapered after 4 years, commensurate with the increase in Lignite production from Jalipa Lignite block of 6 MTPA for which environmental clearance was granted on 29th April, 2010.

Due to delay in Lignite production from Jalipa Block and to meet the Lignite requirement of Thermal Power Plant, amendment in environmental clearance has been sought to allow increase in Lignite production up to 4.5 MTPA from Kapurdi Block for a period of 9 years (starting from 2018-19). It has been informed that the proposed calendar production programme is in conformity with the revised Mining Plan approved by the Ministry of Coal on 29th January, 2014.

The proposal was considered by the sectoral Expert Appraisal Committee (EAC) in the Ministry for Thermal & Coal Mining Sector in its meeting held on 13-14 December, 2018. The EAC, after deliberations, has recommended for the proposed amendment in the environmental clearance dated 22nd September, 2014 for increase in Lignite production up to 4.5 MTPA from Kapurdi Lignite Block for a period of two years, subject to the terms and conditions stipulated therein remaining the same.

Project proponent has sought further extension of EC dated 28th February, 2019 for continuation of operation of mine as per approved mining plan i.e 4.5 MTPA for next 7 years and that after as per calendar program.

Ministry's Regional Office, Lucknow has conducted site visit on 8th December, 2018 and submitted its Certified Compliance Report on 11th December, 2018.

48.14.4 The EAC, after detailed deliberations and in view of calendar program of excavation of Kapurdi Lignite Opencast mine an area of 3223.511 ha, recommended for the proposed amendment in environmental clearance dated 28th February, 2019 for production of 4.5 MTPA for next 7 years (till 2026-27) and that after decrease in capacity as per calendar program of Revised Mining Plan dated 29th January, 2014, as approved by Ministry of Coal, subject to terms and conditions stipulated in EC dated 22nd September, 2014

Agenda No. 48.15

Expansion of Neyveli Mine-II Opencast Project (5321.99 ha to 71393.975 ha and 10.5 MTPA to 15 MTPA) by of M/s Neyveli Lignite Corporation Limited in village Neyveli, Tehsil Vridhachalan, District Cuddalore (Tamil Nadu) - Amendment in Environmental Clearance

[IA/TN/CMIN/104844/2019 , J-11015/30/2001-IA-II(M)]

The project proponent did not attend the meeting. Therefore the proposal is deferred.

Agenda No. 48.16

Barsingsar Opencast Lignite Mining Project (revised) of M/s Neyveli Lignite Corporation Limited - Amendment in Environmental Clearance

[IA/RJ/CMIN/105046/2019 , J-15012/23/97-IA-II(M)]

The project proponent did not attend the meeting. Therefore the proposal is deferred.

Agenda No. 48.17:

Manoharpur Opencast Coalmine Project (8 MTPA) of M/s Odisha Coal and Power Ltd, located in District Sundargarh (Odisha) - Amendment in Environmental Clearance

[IA/OR/CMIN/19231/2008, J-11015/139/2008.IA.II(M)]

48.17.1 The proposal is for amendment in environmental clearance dated 21st February, 2014 granted by the Ministry in favour of M/s Odisha Power Generation Corporation Ltd (OPGCL) to Manoharpur Opencast Coal Mining project of capacity 8 MTPA located in mine lease area of 977.875 ha in Ib Valley, District Sundargarh (Odisha).

48.17.2 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) Manoharpur & Dip-side Manoharpur coal blocks are located in Ib valley area in Sundargarh District, Odisha. Manoharpur Coal Mine Project is an opencast mine of 8 MTPA rated capacity. The blocks were earlier allocated to Odisha Power Generation Corporation Limited (OPGC) by the Ministry of Coal (MoC), GoI, in 2007 which were cancelled by the Hon'ble Supreme Court of India during the year 2014. Thereafter, Odisha Coal and Power Limited (OCPL), Govt. of Odisha Company has been allocated with these coal blocks, with an intention to develop and operate the coal mines to cater to the fuel requirement of OPGC Power Projects (4x660 MW).

(ii) Prior to the allotment of the Manoharpur coal mine to OPCL, OPGC had already obtained the Environment Clearance of the Manoharpur coal mine vide MoEF&CC letter no.

J-11015/139/2008-IA.II (M), dated 21st February, 2014. On allotment of the coal mine to OCPL the same was vested in favour of OCPL vide MoEF&CC letter no. J-11015/139/2008-IA.II (M) Pt. file, dated 30th December 2015.

(iii) The EC for the linked Power Plants (2x660 MW) was already obtained in 2010 and the plants (2x660 MW) are already commissioned. Current coal demand for the plant will be met through bridge linkage from Lakhanpur OCP of MCL. The validity of linkage is up to 2022 on tapering basis from 2019 to 2022 as per recommendations of the Standing Linkage Committee (Long-Term) of Ministry of Coal dated 15.05.2018.

(iv) Point no. (xii) of specific condition of the EC letter of Manoharpur Coal mine Project, states that *“Coal transportation from mine to railway siding by conveyor belt and from siding to TPP by MGR through SILO loading of the wagons”*.

(v) The commissioning of MGR system is getting delayed due to land acquisition issues in MCL command area. However, the construction work is in full swing and expected to be ready by March, 2022.

(vi) OCPL has obtained all the permits and clearances including mine opening permission of Manoharpur coal mine and the mine is now operational. The mine operations commenced on 1st November 2018 and about 2.32 Mcum of OB have been removed and around 0.15 million tonne of coal have been exposed. Since the commissioning of MGR is delayed and the bridge linkage of the linked Ib TPP will be tapered down, OCPL proposes to transport the coal by road through 20/25 T tippers/ trucks as an interim arrangement for an initial period of 3 years of coal production i.e. from June 2019 to March 2022 or till the dedicated MGR is operational, whichever is earlier. It is being proposed to transport 4.6 MTPA of coal by road for next three years to Ib TPP of OPGC through two routes, which are as follows:

- a. 9200 TPD of coal from Manoharpur coal mine to Kanika siding/ ACB siding/ any other Indian railway sidings in the near vicinity of mine by road and from there to Ib TPP of OPGC by Indian Rail.
- b. 4740 TPD of coal from Manoharpur coal mine to Ib TPP directly by road. In unforeseen situations, coal will be transported to Ubuda/ Chharla siding (near plant and located at the proposed transportation route) by road and from there to Ib TPP by rail.

(vii) Further, as per Clause no. 8.5 of the Allotment Agreement signed with the Nominated Authority, any coal extracted from the Coal Mine which is in excess of the requirements of coal for the End Use Plant and the other plants(s) shall be required to be supplied to CIL at its Notified Price. As per Clause no. 8.3, the coal company may sign an agreement with other companies for optimal utilization of coal. The dispatch of this excess coal would be by rail/ road mode.

(viii) Findings from road survey: The coal evacuation will be done through two option as stated earlier. The corresponding two routes are as follows:

- a. Manoharpur coal mine to Kanika/ ACB siding via Route-1: 22.81 km long via Durubaga, Hemgir and Kanika. Out of total route length 22.81 km, 0.34 km is single lane, 0.91 km is intermediate lane, 2.16 km is double lane and 19.4 km is multilane road
- b. Manoharpur coal mine to Ib TPP via Route-2: 117.65 km long via Durubaga, Duduka, Sundargarh bypass, Jharsuguda bypass, Belpahar and Ubuda village. Out of total route length 117.65 km, 1.22 km is single lane, 10.72 km is intermediate lane, 34.7 km is double lane and 71.01 km is multilane road
- c. There are 6 nos. of villages/Settlements lying within 100 m along the Route-1 and 41 nos. of villages/Settlements lying along the Route-2. There will be movement of maximum 1394 tippers per day (if 20 T Capacity tippers are used which has been termed as Scenario-1 for study) or 1116 tippers per day (if 25 T Capacity tippers are used which has been termed as Scenario-2) on common route from Manoharpur

coal mine to Durubaga chowk. Further, these tippers will be distributed over two routes by 66% on Route-1 and by 44% on Route-2. The ultimate worst case situation w.r.t. pollution load on environment will be use of 20 T capacity tippers as the no. of coal carrying tippers will be more as compare to 25 T capacity coal carrying tippers for same quantity of coal.

d. Traffic volume carrying capacity of road has been calculated and it was found that the carrying capacity (as per IRC 64-1990) of road at all Census points were sufficient to carrying present as well as additional traffic load due to OCPL's Trucks for next 3 years at LoS B/ C.

e. The ambient air & noise level monitoring was carried out at 7 locations along the coal transportation route during study period. PM₁₀ was found between 62.2 to 84.1 µg/m³, PM_{2.5} was found between 36.2 to 48.7 µg/m³, SO₂ from 6.8 to 12.4 µg/m³ and NO₂ from 8.1 to 15.6 µg/m³. All the values of the air pollutant parameters are found well within the permissible limits. Value of SO₂ and NO₂ are found considerably low are compare to 80 µg/m³ specified in NAAQS, 2009. The baseline noise level was found well within the permissible limit of the National Ambient Air Quality Standards with respect to noise both during day time and night time except in Surgurha, Amlipali and Panchparha village. High noise level in these area may be attributed due to heavy traffic on nearby roads.

f. Air quality dispersion modeling exercise have been done for worst case scenario as discussed above. The maximum incremental values due to emissions from plying coal carrying trucks and air born dust, when added to the maximum existing air quality result are observed as 89.7 µg/m³ for PM10, 50.01 µg/m³ for PM2.5, 16.44 µg/m³ for SO2 and 39.31 µg/m³ for NO2 in scenario-1 while in scenario-2, the maximum resultant air quality result are observed as 88.6 µg/m³ for PM10, 49.8 µg/m³ for PM2.5, 15.09 µg/m³ for SO2 and 35.0 µg/m³ for NO2. The resultant air quality is expected to be remaining well within the prescribed limit.

48.17.3 The proposal was considered in the 45th EAC (Coal Mining) meeting held on 27.05.2019. The EAC, after deliberations, desired the following information:

EAC Observation	Submission by Project Proponent
Explore for more coal transportation through Route 1, involving transport through road in a stretch of 23 km (from the coal block to Kanika/ACB Siding) and through rail in a stretch of approx 50 km (from Kanika/ACB siding to Ib TPP) in order to avoid coal transportation by road through Route 2 (117 km). In this regard, the Committee asked for confirmation from the Railway Authorities regarding non-availability of sufficient rakes for coal transportation more than 3 MTPA.	Letter no. P /Optg /LJKR /OPGC /Modification/19 dated 01.07.2019 from SER has been obtained which states "Movement of 02 nos. of rakes from Kanika/ACB siding to Ib Thermal Power Station of OPGC Ltd. Via Lajkura Y-curve & BOCM siding may be allowed".
Adequate road widening with black topping of road in a stretch of 350 m, common in case of both the routes	The 350 m long single lane stretch has been widened to 7 m. Completeness certificate in this regards has been obtained from RWD, Sundargarh vide their letter no.3441 dated 14.08.2019

48.17.4 *The EAC, after detailed deliberations, recommended for transportation of coal by road for two years subject to the following: -*

- *High rated tippers i.e. 25 to 30 tonne capacity coal carrying tippers for same quantity shall be used to reduce number of tips.*
- *Accordingly, 9200 TPD of coal from Manoharpur coal mine to Kanika siding / ACB siding/ any other Indian railway sidings in the near vicinity of mine (23 km) by road and from there to Ib TPP of OPGC by Indian Rail.*
- *Further, 3000 TPD of coal from Manoharpur coal mine to Ib TPP directly by road (i.e. 117 km road) only if Route 1 is not available. The stretch of 1.2 km having width of ~5.5 mts (single lane) shall be widened to 7 mts width and made double lane before commencement of transportation.*
- *All necessary environment mitigation such as tree plantation, mechanised road sweeping should be taken to prevent increase in air pollution level in villages/Settlements lying within 100 m (23 km till Kanika Railway siding) along the Route-1 and villages/Settlements (117 km road) lying along the Route-2.*
- *The State Pollution Control Board, while considering consent to operate for the project, shall ensure that with the proposed coal transportation by road, air quality would remain within the national ambient air quality standards.*
- *Implementation of MGR shall be expedited.*

Agenda No. 48.18

Prakasham Khani Opencast Mine (Amalgamation of Manuguru OC II Expansion & Manuguru OC IV Extension) of 10 MTPA capacity in mine lease area of 2402.40 ha. (2214.84 ha is Forest Land and 187.56 ha is Non Forest Land) located in Village & Mandal Manuguru, District Bhadradi Kothagudem) – Terms of Reference – reg.

[IA/TG/CMIN/117465/2019 , J-11015/78/2013-IA-II(M)]

48.18.1 The proposal is for Terms of Reference for proposed Prakasham Khani Opencast Mine (Amalgamation of Manuguru OC II Expansion & Manuguru OC IV Extension) of 10.00 MTPA capacity in mine lease area of 2402.40 ha. (2214.84 ha is Forest Land and 187.56 ha is Non Forest Land) located in Village & Mandal Manuguru, District Bhadradi Kothagudem).

48.18.2 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 Mine take area is covered under Survey of India Topo Sheet No. No. 65C/9 & 65C/13 and is bounded by the geographical co-ordinates ranging from Latitudes 17°55'36.81" N to 17°58'54.87" N & Longitudes 80°44'16.41" E to 80°48'48.34" E.
- (ii) Coal linkage of the mine is proposed as per Fuel Supply Agreement (FSA) of the Company.
- (iii) There is no joint venture in the proposed project.
- (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 persons out of which about 1458 permanent and 710 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 was accorded to the projects :

- a. For Manuguru OC II Extension mine, EC was granted for a Capacity of 4.00 (Peak_5.00) MTPA in the year 2008 for an area of 3205.76 ha Lr. No. J-11015/144/2007-IA.II(M), dated 31.07.2008. Further in the year 2014, EC was granted for an enhanced capacity of 6.25 MTPA vide Lr.No. J-11015/78/2013-IA-II(M) dated 21.02.2014.
- b. For Manuguru OC IV Extension mine, EC was granted for a capacity of 3.00 (Peak_3.5 Mty) for an area of 734.60 ha vide Lr. J-11015/286/2010-IA.II(M) dated 10.12.2014.
- (viii) Prakasham Khani OC Mine is covered under following 7 mining leases:-
- a. 921.00 ha is covered in 1st Renewal of Manuguru Mining Lease (2186 ha) granted vide G.O.Ms. No. 217 dated 12.08.2008.
- b. 125.90 ha is covered in 1st Renewal of Manuguru Extn. Addl. Mining Lease (125.90 ha) granted vide G.O.Ms. No. 259 dated 23.09.2008.
- c. 198.22 ha is covered in OC - II Manuguru (Phase - III Balance) Mining Lease (198.22 ha) granted vide G.O.Ms. No. 63 dated 06.03.1999.
- d. 75 ha is covered in OCP - III Manuguru Mining Lease (75 ha) granted vide G.O.Ms. No. 91 dated 24.03.2005.
- e. 175.69 ha is covered in Manuguru OCP - II Expansion Mining Lease (175.69 ha) granted vide G.O.Ms. No. 238 dated 27.08.2008.
- f. 384.31 ha is covered in Manuguru OCP-IV Extn. Mining Lease (384.31 ha) granted vide G.O.Ms. No. 13 dated 18.05.2016.
- g. 288.74 ha is covered in Manuguru OC II Expn. Phase II ML (288.74 ha) vide G.O.Ms. No. 5 dated 12.04.2019.
- (ix) Mining Plan (Including Mine Closure Plan) was submitted to MoC for approval vide Ir.CRP/PP/D/394/667, dated 29.06.2019 and is under consideration.
- (x) The land usage pattern of the project is as follows:

Pre-mining land use details (Area in ha)

Land owner ship	Land use	Extent (ha)
Tenancy/Private Land	Agricultural	25.498
	Township & Structures	--
	Grazing	
	Plantation	
	Barren	
	Roads	
	Water bodies	
	Village	
	Sub Total	25.498
Government Land (Non- Forest)	Agriculture Land	126.745
	Township	35.317
	Grazing /other	
	Plantation	
	Barren	
	Roads	
	Water bodies	
	Village	
	Sub Total	162.062
	Forest	2214.840
	Free Hold	--
	Grand Total	2402.400

Post Closure Land Use Details (Area in ha)

Type	Total	Plantation	Water	Public/	Forest Land
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	Area		Body	Company Use	(Return)
Excavation Area :	1495.476				
Backfilled Area	783.119	30.585			752.534
Excavated Void	712.357		0.193		712.164 (Water Body)
External Dump	504.341	107.576			396.765
Safety Zone //Rationalization area	179.743	15.042	3.594	3.332	157.775 (30.625-Water Body)
Diversion/ below River/Nallah/canal	22.085				22.085
Road & Infrastructure area	137.976	23.278		52.98	61.718
Embankment	33.334				33.334
Green Belt	28.116	2.043			26.073
Water Reservoir near pit/Water body	1.329				1.329
Total	2402.400	178.524	3.787	56.312	2163.777

- (xi) Total geological reserve reported in the mine lease area is 402.01 Mt with 309.35 Mt mineable reserves. Out of total mineable reserve of 309.35 Mt, 290.55 Mt are extractable, out of which 193.80 Mt were already extracted by UG and OC mining till the base date and 96.75 Mt are available for extraction by OC Mining. Percent of extraction is 72.27%.
- (xii) 15 seams viz., 1 Seam, H1Seam, B1 Seam, B2Seam, H2 Seam, B3 Seam, H3 Seam, H4 TOP, H4 Bott., T S Top, TS Bott, TS(Comb), Index, SS1 Seam
- (xiii) SS2 Seam are workable. Grade of coal is in the range of G-4 to G-12. Stripping ratio 7.19 Cum of OB per 1 tonne of coal, while gradient is varying from 1 in 5.5 to 1 in 7.5.
- (xiv) Method of mining operations envisages is by opencast method.
- (xv) Life of mine is 11 years from 2019-20.
- (xvi) The Prakasham Khani OC Mine has 3 external OB dumps with an area of 504.341 ha with maximum height of 120 m & 437.22 Mm³.
- (xvii) Total quarry area is 1495.476 ha out of which backfilling will be done in 783.119 ha and 712.357 ha will be left as water body with a depth of 270 m. Backfilled quarry area of 783.119 ha will be reclaimed with plantation.
- (xviii) Transportation of coal has been proposed by Trucks / Dumpers up to in pit crusher, from where it will be transported to Kondapuram CHP through series of belts, from Kondapuram CHP railway siding to end users is by rail.
- (xix) Reclamation Plan in an area of 1516.199 ha, comprising of 504.301 ha of the external dump, 783.119 ha of internal dump, 28.116 ha of green belt & 200.623 ha included in the safety zone/rationalization area, Infrastructure & Embankment etc has also been proposed for green belt development.
- (xx) 2214.84 ha of forest land has been reported to be involved in the project. Approval under the Forest (Conservation) Act, 1980 for diversion of 2214.84 ha of forest land for non-forestry purposes has been obtained vide MoEF&CC letter Nos. 828.16 ha covered in F.No. 8-73/2005-FC dated 10.07.2008 (Corrigendum Dated 06.11.2009) (1161 ha), 286.25 ha covered in F.No. 8-8/96-FC dated 10.10.1997(286.25 ha), 75.00 ha covered in F.No. 8-37/2001-FC dated 31.12.2003 (75.00 ha), 125.90 ha covered in F.No. 8-56/2004-FC dated 14.07.2008 (125.920 ha) 175.69 ha covered in F.No. 8-7/2008-FC dated 30.12.2008 (175.69 ha), 4.68 ha covered in F.No. 8-71/2009-FC dated 06.01.2016 (10.50 ha) 430.42

ha covered in F.No. 8-79/2013-FC dated 24.04.2017 (430.42 ha), 288.74 ha covered in F.No. 8-70/2014-FC dated 02.11.2018 (367.03 ha)

(xxi) National Parks, Wildlife Sanctuaries and Eco-Sensitive Zones have been reported with 10 km boundary of the project. - Eco-Sensitive Zone of Kinnerasani Wild Life Sanctuary is at a distance of 2.0 km

(xxii) The ground water level has been reported to be varying between 1.0m to 8.45m during pre-monsoon period and 0.45m to 4.6 m during post-monsoon period. Total water requirement for the mine is about 6508 KLD.

(xxiii) Ground Water Clearance was issued by the State Government vide Memo No.5789/Hg II (2)/07 dated 18.10.2007 for Manuguru OC II Extension & vide Memo No.907/T/SCCL/2010 Dated 17.09.2012 for Manuguru OC IV Extension.

(xxiv) Public hearing done for MNG OC II & MNG OC IV on 28.08.2007 & 25.07.2012 respectively. However, Public hearing is to be conducted for the present proposal i.e. Prakasham Khanl OC Mine of 10.00 MTPA capacity.

(xxv) Appropriate action to address the issues raised during the Public Hearing will be taken care of.

(xxvi) Consent to Operate for the existing capacity was obtained from the State Pollution Control Board for Manuguru OC II Extension vide order no.7/TSPCB/CFE/RO-KGM/HO/2015, dated 04.11.2015 is valid till 03.11.2020 and For Manuguru OC IV Extension vide order no.7/PCB/CFE/RO-KGM/HO/2015/811, dated 20.07.2015 and is valid till 19.07.2020.

(xxvii) Gorrepeta Vagu, an ephemeral tributary of Godavari River, is flowing across the boundary of the mining lease. The Vagu will be diverted along the boundary of the mine.

(xxviii) Regular monitoring of ambient air quality is being carried out on fortnightly basis. The documented report is being 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.

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

(xxx) The project does not involve violation of the EIA Notification, 2006 and amendment issued there under.

(xxxi) The project does not involve any R&R.

(xxxii) Total cost of the Manuguru OC II Extension project is Rs. 992.96 Crores as per FR of May, 2007 & Total cost of the Manuguru OC IV Extension project Rs. 480.67 Crores as per FR of Jan' 2010. The cost of production for the Manuguru OC II Extension mine as on Feb' 2019 is Rs.1572 per tonne & for the Manuguru OC IV Extension mine as on Feb' 2019 is Rs.1876 per tonne.

(xxxiii) CSR cost is 2% of average net profits of the company made during last three years will be allocated for CSR at company level. Environment Management Cost is-

Capital Cost - Manuguru OC II Extension	Manuguru OC IV Extension	
Direct	: Rs 14.50 Crores	Rs 1.75 Crores
Indirect	: Rs 105.05 Crores	Rs 39.65 Crores
Revenue	: Rs 25.54 Per Tonne	Rs 24.42 Per Tonne

48.18.3 The EAC, after detailed presentation, noted the following:

The proposal is for amalgamation of Manuguru OC II Expansion project and Manuguru OC IV Extension project for which environmental clearance was obtained for a peak production capacity of 6.25 MTPA and 3.5 MTPA respectively vide EC dated 21.02.2014 and 10.12.2014.

It was reported that initially, Environmental Clearance was obtained for Manuguru OC-II Expansion project for a peak production capacity of 5.00 MTPA for an area of 3205.76 ha

Lr. No. J-11015/144/2007-IA.II(M), dated 31.07.2008. Subsequently, during the year 2014, EC was granted for an enhanced capacity of 6.25 MTPA vide Lr.No. J-11015/78/2013-IA-II(M) dated 21.02.2014.

However, the EC for the peak production capacity of the 6.25 MTPA was construed to Forestland for which stage-I FC was obtained and non-forestland.

It was informed that, in order to avoid the diversion of forestland envisaged for the external dumping, the mining scheme was re-worked with an integration of the adjacent Manuguru OC-IV Expansion project, by utilizing the voids available in the Manuguru OC-IV Expansion project for dumping of OB which was originally envisaged in the forestland. Thus, the amalgamation of Manuguru OC II Expansion project and Manuguru OC IV Extension project was proposed under the name of PRAKASHAM KHANI OC MINE for a peak production capacity of 10.00 MTPA in mine lease area of 2402.40 ha. (2214.84 ha is Forest Land and 187.56 ha is Non Forest Land).

The proposed mine lease area of 2402.40 ha is carved out of the 3940.36 (i.e. 3205.76 ha of Manguru OC-II Expansion Project and 734.60 Ha of Manuguru OC-IV Extension Project).

It was reported that forest clearance was obtained in stages for all the 2214.84 ha of forestland involved in the project.

The project proponent has requested for exemption of public consultation since the present proposal is for amalgamation for two adjacent project, saving of the substantial forestland and envisaged for a production of 10 MTPA (in place of combined production of 9.75 MTPA).

The committee suggested restricting the production capacity to 9.75 MTPA instead of 10 MTPA, for which the project proponent has agreed.

The committee also observed that there is a diversion of Nallah is involved in the proposal. The PP has informed that the permission for diversion of nallah has been obtained as a part of Manguguru OC-II Expansion project.

48.14.4 *The EAC, after detailed deliberations, recommended for grant of Terms of Reference for the proposed amalgamation under the name of Prakasham khani Opencast Mine for a peak production capacity of 9.75 MTPA in mine lease area of 2402.40 ha and also recommended for exemption of fresh public consultation since the public consultation was already held for the area involved and the for the peak production capacity, for preparation of EIA/EMP reports, subject to compliance of all terms and conditions as specified/notified in the standard ToR applicable for opencast coal mines, along with the additional conditions as under:-*

- *The activities and fund provisions for CER shall be made as per the guidelines issued by the ministry regarding CER on 1st May, 2018.*
- *Stage-I clearance for the entire forestland involved the project shall be obtained before making an application for the environmental clearance.*
- *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.*
- *Valid Mining Plan and the Progressive Mine Closure Plan duly approved by the competent authority*
- *The ground water permission from Central Ground Water Authority (CGWA) shall be obtained, if applicable.*

- *An integrated hydrological study would be carried out of the impact of coal mining on the baseflows in the downstream of the mine area.*
- *For proper baseline air quality assessment, adequate monitoring stations (4-5 nos.) in the downwind areas need to be set up and included in the air quality modeling.*
- *Ecological restoration and mine reclamation plan to be prepared with afforestation of local/native species found in the area.*
- *Wind rose pattern in the area should be reviewed and accordingly location of AAMSQ will be planned by the collection of air quality data*
- *A certified report on the updated status of compliance of conditions stipulated in the environmental clearance of Manuguru OC II Exp (EC dated 21st February, 2014) and Manuguru OC IV Ext (EC dated 10th December, 2014) from the concerned Regional Office of the MoEF&CC.*
- *Details of court cases and the compliance status (if any).*

Agenda No. 48.19

Makardhokra-I Expansion OC mine (Phase-I) for expansion in Capacity from 2.00 MTY to 3.50 MTY within existing ML area of 614.69 ha of M/s Western Coalfields Limited located in Umrer tehsil of Nagpur district (Maharashtra) – Terms of Reference – reg.

[IA/MH/CMIN/114573/2019 , J-11015/54/2006-IA.II(M)]

48.19.1 The proposal is for prescribing Terms of Reference for proposed Makardhokra-I Expansion OC mine (Phase-I) for expansion in Capacity from 2.00 MTY to 3.50 MTY within existing ML area of 614.69 ha of M/s Western Coalfields Limited located in Umrer tehsil of Nagpur district (Maharashtra).

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

- The existing Makardhokra-I OC Mine has been granted EC vide MoEF&CC letter no J-11015/54/2006-IA (M) dated 26th November 2015 for Production capacity of 2.00 MTPA within ML area of 660.70 ha.
- The proposal is for obtaining ToR for Makardhokra-I Expansion OC mine (Phase-I) for expansion in Capacity from 2.00 MTY to 3.50 MTY within existing ML area of 614.69 ha of M/s Western Coalfields Limited located in Umrer tehsil of Nagpur district (Maharashtra) in accordance with the EIA Notification, 2006.
- The area of Makardhokra-I Expansion OC mine (Phase-I) is bounded by Latitude N 200 50'33" to N 20052'14" and Longitude E 79014'7.8" to E 79016'24" The block is covered in the Survey of India Toposheet No. - 55 P/1 and 55 P/5.
- Coal linkage of the project was for Thermal power plants of MAHAGENCO & Miscellaneous consumers. There is no Joint venture involved.
- 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.
- Employment generation: Proposed Manpower of the project is 275 Nos as per approved Mining Plan. The manpower requirement for the proposed Mining Plan of Makardhokra-I Expansion OC mine is 275. Approximately 300 contractual workers will get employment through outsourcing agencies.
- This proposed expansion 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 consumer. This will help the nation in saving foreign exchange against import of

coal to the extent of the production from the mine. In addition to 255 direct employment (as on 31.03.2019), there are continuing indirect employment generation through various contractual job, trade & business etc. Further the various CSR activities undertaken have already added to the social benefits of coal community. This will be continued with additional inputs due to enhancement in capacity.

(viii) Total mining lease area is 614.69ha. There is no additional land requirement in Phase-I .The Mining Plan along with Mine closure Plan for expansion of Makardhokra-I Expansion OC (Phase-I & II) was approved by the WCL Board vide letter no.WCL/BD/SECTT/BM-313/2019/712dated 06/08/2019.

(ix) No forest land is involved in Phase-I of the project i.e. present proposal.

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

Pre-mining land use details

Sl. No.	Type of land	Land (Ha) Proposed in Approved PR (March, 2014)	Land as per revenue records	Land (Ha) under physical possession	Land (Ha) Proposed in Mining Plan	Balance land to be acquired
1	2	3	4	5	6	7(6-5)
1	Tenancy Land	589.97	589.97	580.25	589.97	9.72
2	Govt. Land	29.22	24.72	24.72	24.72	0.00
3	Forest land	0.00	0.00	0.00	0.00	0.00
	Sub Total (A)	619.19	614.69	604.97	614.69	9.72

Post-mining land use details

S.N.	Land use during mining	Land use (ha)			
		Plantation	Water Body	Undisturbed	Total
1	Backfilled Area	0.00	0.00	25.00	25
2	Excavated Area	0.00	227.96	0	227.96
3	Road	0.50	0.00	1.50	2
4	External OB dump	20.00	0.00	147.57	167.57
5	Infrastructure	2.00	0.00	11.00	13
6	Top Soil Dump	0.00	0.00	30.38	30.38
7	Miscellaneous (300m blasting zone, river diversion, power line diversion & rationalization)	10.00	0.00	138.78	148.78
Total		32.50	227.96	354.23	614.69

(xi) The total net in-situ geological reserves within the quarry works out to 36.505 Mt. The mineable reserves considering 5% mining losses in quarry area works out to 34.68 Mt (36.505-1.825). 6.44 Mt coal reserves have been already extracted in existing Makardhokra-I OC mine up to 31.03.2019. Balance minable reserves as on 01.04.2019 are 28.44 Mt. The mineable reserves as on 01.04.2019 works out to 16.30 Mt in Phase-I and 11.94 Mt in Phase-II.

(xii) The Number of seams to be worked on are 6(Six). Thickness of Seams to be worked on are given below

SEAM	THICKNESS (m)	
	MIN	MAX
V	2.65	6.27
IV	2.52	8.85
III	1.19	4.37

SEAM	THICKNESS (m)	
	MIN	MAX
II TOP	1.21	4.97
II BOTTOM	0.10	1.86
I	1.23	4.60

Grade of Coal GCV – 4997 Kcal/kg, G8, stripping ratio 1: 7.35 m³/t/.

(xiii) Mining operations are undertaken by opencast method with shovel dumper Combination. Same method of mining will be continued during expansion as per approved mining plan.

(xiv) Life of mine : 5 years in phase-I

(xv) Two hard OB dumps and one Top Soil dump are within ML area of Makardhokra-I OC. An external dump located within the ML area of Makardhokra-II OC will also be utilized for OB dumping. The total area of external dumps is 197.95 ha with maximum height of 90 m above GL and quantity of 106.41 Mm³ of OB. (9.58 Mm³ OB has been already dumped, balance 97.83 Mm³ OB will be dumped in Phase-I). Two internal dumps (Void of Makardhokra-I OC and adjacent Makardhokra-II OC) will be utilized for OB dumping. Internal dumping is proposed from the first year of the project. At the end of mining operations in Phase-I, 25 ha of quarry area will be backfilled. Total quantity 37.87 Mm³ is proposed to be as internal dump in Phase-I (15.88 Mm³ is already backfilled in adjacent mine void of Makardhokra-II OC, balance quantity is 21.99 Mm³ will be backfilled during Phase-I).

(xvi) Total quarry area is 252.96 ha. backfilled quarry area of 25 ha shall be reclaimed with plantation. Final mine void will be created in an area of 227.96 ha with maximum 150 m depth at the end of Phase-I.

(xvii) 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.

(xviii) Reclamation Plan/afforestation plan is for 32.50 ha in Phase-I of the project. It includes 20.00 ha of external OB dump, 10 ha of undisturbed land and 2 ha along roads & infrastructure in Phase-I.

(xix) No forest land is involved in the phase-I of the project i.e. present proposal. No plantation proposed on internal dump during Phase-I. Plantation will be carried out during implementation of Phase-II operation.

(xx) No National Parks, Wildlife Sanctuaries and Eco-Sensitive Zones have been reported with 10 km boundary of the project.

(xxi) The ground water level has been reported to be varying between 3.55 to 6.75 m during pre-monsoon and between 2.00 to 5.06 m during post-monsoon (core zone). Total water requirement for the project is 460 KLD.

(xxii) Application of approval of the Central Ground Water Authority for withdrawal of groundwater from CGWA is under process. Application for the same has been made via application no. 21-4/685/MH/MIN/2017 on 09.01.2017.

(xxiii) Public hearing for this project is yet to be conducted. Last Public hearing was carried out by MPCB on 23.08.2005 for the rated capacity of 1.0 MTPA in land area of 660.70 ha.

(xxiv) Consent to Operate: The consent to operate has been granted by MPCB for existing Makardhokra-I OC mine vide letter no. BO/CAC-Cell/CAC-UAN No. 24388/CC-1901000356 dated 05.01.2019 for 2.00 MTPA capacity valid from 31.03.2016 to 31.03.2021.

(xxv) Shirpur nala has been diverted beyond quarry surface of Phase-I quarry.

(xxvi) Baseline for Ambient Air Quality have been generated during April 2019 to June 2019 in the study area. The results have been found to be within prescribed limits.

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

(xxviii) 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 grant of EC in 2015.

Year	EC sanctioned capacity (MTPA)	Actual production (MTPA)	Excess production beyond the EC sanctioned capacity
2014-15	2.00	0.069	Nil
2015-16	2.00	0.962	Nil
2016-17	2.00	1.808	Nil
2017-18	2.00	1.60	Nil
2018-19	2.00	1.99	Nil
2019-20 (Upto Aug'19)	2.00	0.27	Nil

(xxix) No rehabilitation is envisaged in Phase-I of the project.

(xxx) Total cost- Rs 266.2308 Crores including WDV of Rs 30.4700 Crores of existing assets. (as per approved PR, March'2014)

48.19.3 The EAC, after detailed presentation, noted the following:-

- The Topsoil dump and external OB dump proposed in the south east and south side of the quarry divided by the nallah passing through the area. Further the dump is designed with number of acute angled curves. Therefore, the committee desired to shift the location of the topsoil dump to mineralized area and reused for reclamation as the present proposal of the topsoil dump is also for temporary storage. The area proposed for topsoil dump may be utilized for the development of green belt. The project proponent has agreed for the same.
- Proposed diversion of the road to the village Kanhwa is also with the number of curves along the periphery of the topsoil dump. Since it is proposed to shift the Topsoil dump, the diverted road leading to Kanhwa village shall be made as straight as possible. The project proponent has agreed for the same.

48.19.4 *The EAC considering above, recommended the Terms of Reference for Makardhokra-I Expansion OC mine (Phase-I) for expansion in Capacity from 2.00 MTY to 3.50 MTY within existing ML area of 614.69 ha of M/s Western Coalfields Limited located in Umrer tehsil of Nagpur district (Maharashtra), for preparation of EIA/EMP reports with public consultation, subject to compliance of all terms and conditions as specified/notified in the standard ToR applicable for opencast coal mines, along with the additional conditions as under along with site visit is proposed with sub-committee later for further additional conditions (if any after site visit)*

- *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*
- *As committed, the topsoil dump of 6.6 m³ on south east side shall be shifted to the coal bearing area and the green belt shall be developed in an area envisaged for topsoil dump at present.*
- *As committed, the diverted road leading to Kanhwa village shall be made as straight as possible.*
- *The activities and fund provisions for CER shall be made as per the guidelines issued by the ministry regarding CER on 1st May, 2018.*
- *Stage-I clearance for the entire forestland involved the project shall be obtained before making an application for the environmental clearance.*

- *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.*
- *Total 8 nos. of Ambient Air Quality Monitoring Station shall be placed for monitoring.*
- *The ground water permission from Central Ground Water Authority (CGWA) shall be obtained, if applicable.*
- *Valid Mining Plan and the Progressive Mine Closure Plan duly approved by the competent authority*
- *An integrated hydrological study would be carried out of the impact of coal mining on the baseflows in the downstream of the mine area.*
- *For proper baseline air quality assessment, adequate monitoring stations (4-5 nos.) in the downwind areas need to be set up and included in the air quality modeling.*
- *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*
- *Ecological restoration and mine reclamation plan to be prepared with afforestation of local/native species found in the area.*
- *Wind rose pattern in the area should be reviewed and accordingly location of AAMSQ will be planned by the collection of air quality data*
- *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.*
- *A certified report on the updated status of compliance of conditions stipulated in the environmental clearance dated 26th November, 2015 from the concerned Regional Office of the MoEF&CC.*
- *Details of court cases and the compliance status (if any).*

Agenda No. 48.20

Jhiria West Opencast Project of capacity 1.50 MTPA (Normative) & 1.875 MTPA (Peak) in mine lease area of 427.993 ha of M/s South Eastern Coalfields Limited (SECL) located in villages Bhalhuri, Fulkona, Dumarkachhar, Bangawan, Padritola, Tehsil Kotma, District Anuppur (Madhya Pradesh) – Terms of Reference – reg.

[IA/MP/CMIN/106968/2019, IA-J-11015/57/2019-IA-II(M)]

48.20.1 The proposal is for grant of Terms of Reference to Jhiria West Opencast Project of capacity 1.50 MTPA(Normative) & 1.875 MTPA(Peak) in mine lease area of 427.993 ha of M/s South Eastern Coalfields Limited (SECL) located in villages Bhalhuri, Fulkona, Dumarkachhar, Bangawan, Padritola, Tehsil Kotma, District Anuppur (Madhya Pradesh).

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

- The project area is a part of West Jhiria block located in Hasdeo Area of SECL in Anuppur district (Madhya Pradesh). Project area covered under Survey of India Topo Sheet No. 64 I/4 with geographical coordinates ranging from latitudes 23° 10' 05" N to 23° 11' 05" N and longitudes 82° 05' 00" E to 82° 07' 05" E.
- Coal linkage of Jhiria West Opencast Project mainly lies with thermal power stations.
- No joint venture cartel has been formed to operate the mine. Jhiria West Opencast Project has been proposed to be operated solely by the M/s SECL, Bilaspur.

(iv) With regards to employment generation, it is estimated that departmental manpower required at rated capacity will be 304.

(v) The project is reported to be beneficial for generation of electricity to meet the national needs besides contributing to the society through generation of employment, development of infrastructure.

(vi) Land use detail of the mine is given as under:

Pre-mining (in Ha)

SN	LAND USE	Within ML (Ha.)	Outside ML (Ha.)	Total (ha)
1	Agricultural/ Tenancy Land	59.720	Nil	59.720
2	Forest Land	354.258	Nil	354.258
3	Waste Land*	0.866	Nil	0.866
4	Grazing Land	Nil	Nil	Nil
5	Water Body*	1.665	Nil	1.665
6	Other specific (Govt. Land)	14.015	Nil	14.015
Total		427.993	Nil	427.993

* **Included in Govt. Land**

Post – mining:

S. N.	LAND USE	Afforested Area	Final void/ water body	Built-up Area	Total in ha
1	Excavated Area	259.706 (Internal Dump)	64.064	Nil	323.770
2	External OB Dump	Nil	Nil	Nil	Nil
3	Safety zone as Green Belt	92.175	Nil	Nil	92.175
4	Infra., colony & others	9.298	Nil	2.75	12.048
Total in ha		361.179	64.064	2.75	427.993

(vii) Total geological reserve reported in the mine lease area is 16.254 MT, mineable reserve is 14.35 MT and extractable reserve is 14.35 MT. The percentage of extraction would be 100 %.

(viii) Coal seam of thickness varying from 0.50 m to 5.25 m is workable with average gradient 1 in 60. The stripping ratio is 8.04 cum/tonne. Grade of coal is G-6.

(ix) Mining Plan of the mine for 1.50 MTPA (Normative) & 1.875 MTPA(Peak) productions was approved by the SECL Board in its meeting held on 28.11.2018. Mine Closure Plan was approved by the Board of SECL on 28th Nov., 2018.

(x) Total Forest land involved in the project is 354.258 ha. Application had already been made for obtaining Stage-I Forest Clearance vide Proposal No.: FP/MP/MIN/39881/2019 dated 28.05.2019.

(xi) There are no National Park, Eco-sensitive Zones present within 10.00 Km. radius of the project.

(xii) Kulaharia nallah is flowing along the periphery of the eastern boundary of the project.

(xiii) Availability of ground water has been reported to be varying between 0.85 m to 11.00 m during pre-monsoon season with an average of 6.33 m and between 0.60 m to 6.35 m during post-monsoon season with an average of 2.745 m. Mined out Water to be utilized for Mine operation/industrial use 228 KLD and for Domestic uses 145 KLD.

(xiv) Method of mining envisaged would be Open cast mining.

(xv) Transportation of coal from mine pit to siding by covered tippers and at siding to consumer through rail.

(xvi) Life of mine has been reported to be 12 years from the start of the mine.

(xvii) There is no external OB dump and two internal dumps both side of the haul road with quantity of 115.33 Mcum in an area of 259.706 ha with height of 50 meters from the surface. The total quarry area is 323.77 ha with maximum quarry depth will be around 60.12 m, backfilled quarry area of 259.706 ha shall be reclaimed with plantation. A final mine void of 64.064 ha with depth upto 60 m (approx) which is proposed to be converted into a water body.

(xviii) The PP has reported that no court cases, violation cases are pending against the project of the PP.

(xix) Total 220 nos. of affected families (PAFs) involved in this project.

(xx) No violation cases have been reported to be pending against the project.

(xxi) Total cost of the project is Rs. 389.97 crores, cost of production is Rs. 1499.74/Te (at 100 % Production level) and Rs. 1644.23 per tonne at 85% production level while weighted average sale price is Rs. 2395.15 per tonne as per PR, CSR cost will be estimated based on 2% of the average net profit of the company for the three immediate preceding financial years or Rs. 2.00 per tonne of coal production of the previous year whichever is higher. Total capital cost for Environment Protection measures is Rs. 7076.44 lakh and total revenue nature Environment Protection measures cost per annum is Rs. 550.58 lakh.

48.20.3 The EAC, after detailed presentation, noted as under:

The proposal is for grant of Terms of Reference to Jhiria West Opencast Project of capacity 1.50 MTPA(Normative) & 1.875 MTPA(Peak) in mine lease area of 427.993 ha of M/s South Eastern Coalfields Limited (SECL) located in villages Bhalhuri, Fulkona, Dumarkachhar, Bangawan, Padritola, Tehsil Kotma, District Anuppur (Madhya Pradesh).

Forest land involved in the project is 354.258 ha. Application was made for obtaining Stage-I Forest Clearance vide Proposal No.: FP/MP/MIN/39881/2019 dated 28th May, 2019.

No external dump is proposed however only one temporary OD dump will be created in quarry zone and will be re-handled.

Water body of about 1.665 ha area is present in the Mine lease area.

48.20.4 *The EAC considering above, recommended the Terms of Reference Jhiria West Opencast Project of capacity 1.50 MTPA(Normative) & 1.875 MTPA(Peak) in mine lease area of 427.993 ha of M/s South Eastern Coalfields Limited (SECL) located in villages Bhalhuri, Fulkona, Dumarkachhar, Bangawan, Padritola, Tehsil Kotma, District Anuppur (Madhya Pradesh), for preparation of EIA/EMP reports with public consultation, subject to compliance of all terms and conditions as specified/notified in the standard ToR applicable for opencast coal mines, along with the additional conditions as under:-*

- *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.*
- *The activities and fund provisions for CER shall be made as per the guidelines issued by the ministry regarding CER on 1st May, 2018.*
- *Valid Mining Plan and the Progressive Mine Closure Plan duly approved by the competent authority*
- *Stage-I clearance for the entire forestland involved the project shall be obtained before making an application for the environmental clearance.*

- *Nallah (Kulhariya Nallah Middle & Western part- Jhiria nallah and Sautanchua nallah) passing through the block boundary vis –a-vis DGMS guidelines shall be enclosed as a part of EIA/EMP.*
- *The ground water permission from Central Ground Water Authority (CGWA) shall be obtained, if applicable.*
- *An integrated hydrological study would be carried out of the impact of coal mining on the baseflows in the downstream of the mine area.*
- *For proper baseline air quality assessment, adequate monitoring stations (4-5 nos.) in the downwind areas need to be set up and included in the air quality modeling.*
- *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*
- *Ecological restoration and mine reclamation plan to be prepared with afforestation of local/native species found in the area.*
- *Wind rose pattern in the area should be reviewed and accordingly location of AAMSQ will be planned by the collection of air quality data*
- *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.*
- *Water body shall be created in nearby villages of about 1.667 ha of area.*
- *Details of court cases and the compliance status (if any).*

Additional Agenda:

48.21 Transfer of environmental clearance for Dumri Coal Mine Project of 1 MTPA located in North Karanpura Coalfields, Tehsil Terhesa, District Hazaribagh (Jharkhand) – Revoking of abeyance – reg.

48.21.1 The proposal is for transfer of Environmental clearance of Dumri Coal Mine project of 1 MTPA located in North Karanpura Coal Fields, Tehsil Terhesa, District Hazaribagh, Jharkanad from M/s Nilachal Iron and Power Limited to M/s Hindalco Industries limited for a production capacity of 1 MTPA in the ML area of 259.64 Ha.

48.21.2 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) Ministry has accorded environmental clearance for the Dumri Coal Mine project of 1 MTPA in an ML area of 279 ha located in North Karanpura Coal Fields, Tehsil Terhesa, District Hazaribagh, Jharkanad to M/s Nilachal Iron and Power Limited on 23rd December, 2010.
- (ii) Hon'ble Supremem Court of India vide Judgement dated 25th August, 2014 read with orders dated 24th September, 2014 has cancelled the allocation of 204 coal blocks which include the North Karanpura Coal Fields.
- (iii) Subsequent to cancellation of coal blocks in pursuance of the order of Hon'ble Supreme Court, the said coal mine was allocated to M/s Hindalco Industries Ltd (HIL) vide vesting order dated 22nd April, 2015 issued by the Nominated Authority in the Ministry of Coal.
- (iv) Accordingly, M/s HIL has requested for transfer of the said environmental clearance in their favour.

- (v) Ministry has issued a notification dated 23rd March, 2015 to facilitate transfer of ECs in such cases without referring to the sectoral EAC. Pursuant to the said Notification, Ministry has transferred ECs to successful bidders in case of nearly 90% of the proposals. However, in cases where the project involves forest land not having stage-I forest clearance, ECs were not transferred in view of Lafarge Judgment of Hon'ble Supreme Court in July, 2011. This practice was invariably followed in all similar cases with approval of the competent authority.
- (vi) During a meeting held in the Ministry on 12th January, 2017 under the chairmanship of Secretary (EF&CC) on the subject matter, following decisions were taken:-
- a. Transfer of ECs to the fresh allottees of coal blocks involving forest area but not having stage-FC for the entire pocket of forest land, shall not be considered. The project proponent is required to first submit stage-I FC to take their proposals forward.
 - b. In cases where stage-I FC is not available for even a part of the total forest land, the project proponent shall be required to revise the mining plan accordingly followed by submitting fresh proposals to obtain ECs as provided under the EIA Notification, 2006.
 - c. The implication of Lafarge Judgment in case of transfer of EC, which was issued prior to date of judgment, may be examined in consultation with LMC/MoL&J.
- (vii) In the instant case, the project involves 183 ha of forest land. The Ministry vide letter dated 30th March, 2012 has accorded stage-I-FC for diversion of 158.64 ha of forest land for non-forestry purpose.
- (viii) It was informed that the said EC was earlier transferred in favour of M/s HIL on 28th October, 2016 subject to certain terms and conditions. However, the same was kept in abeyance vide letter dated 9th March, 2017 for want of stage-I FC for 24.36 ha of forest land. M/s HIL has now informed that stage-I FC for diversion of further 5 ha of forest land has been obtained on 22nd May, 2019, and the remaining forest land of 19.36 ha is proposed to be surrendered. Mine lease area thus gets reduced from 279 ha to 259.64 ha. The revised mining plan for the reduced mine lease area has the approval of Ministry of Coal vide their letter dated 24th October, 2018.
- (ix) During the meeting held between Secretary, Coal and Secretary, EFCC on 3rd September, 2019, It was decided to refer such cases to the sectoral EAC for early consideration on case to case basis based on merits involved.
- (x) Therefore, the instant proposal was referred to the EAC for examination of impact of reduction of area on the attributes like dumping area, mining sequence, mine closure plan, etc.
- (xi) In the above background, the proposal for transfer of EC in favour of M/s HIL was deliberated at length by the EAC. The committee after detailed deliberations noted the following:-
- a. The reduction in the forest area of 19.36 ha is from the area around the quarry and does not envisaged for either dumping of OB or for quarry. Thus there is no change in the dumping area or mining sequence.
 - b. It was also informed that requisite safety distance has been ensured after reduction of the forestland.
 - c. The committee, also, observed that there is change in the mine closure plan.
 - d. The mining plan for the reduced area was approved by the MoC

48.21.3 The EAC, after detailed deliberation, recommend to revoke the abeyance on transfer of EC for Dumri Coal Mine project of 1 MTPA located in North Karanpura Coal Fields, Tehsil Terhesa, District Hazaribagh, Jharkanad from M/s Nilachal Iron and Power Limited to M/s Hindalco Industries limited for a production capacity of 1 MTPA in the ML area of 259.64 Ha subject to the following conditions in addition to the terms and conditions prescribed in the EC letter dated 23rd December, 2010.

- The safety distance of at least 15 m shall be maintained all along the forest boundary.
- The project proponent shall develop greenbelt all along the mine boundary with broad leaved, native tree species.
- Control blasting techniques using NONEL and down the hole initiation shall be adopted while working near the forest boundary and habitations
- The project proponent shall adhere to the approved mining plan for the ML area of 259.64 ha.
- The fund allocation for the CER shall be made as per the guidelines issued by the Ministry vide Om dated 1st May, 2018

48.21.4 The EAC also suggested to issue the general guidelines, for dealing of such cases that in case of variation in the production capacity or mine lease areas, transfer of environmental cases shall also be referred to Expert Appraisal Committee for apprising on the impact on the attributes like dumping area, mining sequence, mine closure plan, etc and to prescribe the additional safeguards, if required.

Site visit Report:

Report on Site Visit of Gevra and Kusmunda Opencast Coal Mine Projects, SECL, Bilaspur During 10-11 September 2019

EAC in its meeting held on 25th June 2019 recommended for a site visit by a sub-committee to assess adequacy and efficacy of pollution control measures and its impact on ambient air quality and compliance status of EC conditions. The following members have been nominated for the site visit:

1. Dr Navin Chandra - Chairman
2. Sri Gururaj P Kundergi - Member
3. Dr J K Pandey - Member

No representative from MOEF&CC has not participated during the visit. Report of Gevra and Kusumunda projects are presented separately in following sections:

1. Kusmunda Opencast Coal Mine Projects:

Based on the recommendations of EAC and subsequent approval of the competent authority, the project for expansion from 26 to 36MTPA in an area of 1655.825 Ha was granted EC on 3rd July 2018 for a period of upto 31st March 2019 subject to compliance of terms and conditions.

The proposal for further expansion of project from 35 to 50 MTPA (normative) /62 MTPA(peak) was considered by EAC in its meeting held on 26 Oct 2018 and 14 Dec 2018. In view of the reported shortage of coal and to cater to the demand of linked critical and super critical thermal power plants, the committee recommended the grant of EC for further expansion upto 40MTPA for a period of 1 year subject to terms and conditions stipulated in EC dated 3rd July 2018 alongwith additional conditions as below:

- The sub-committee of the EAC shall make a site visit to assess adequacy and efficacy of pollution control measures and its impact on ambient air quality.
- 3rd Party monitoring (by NEERI/CIMFR/IIT) for air quality shall be carried out at identified locations, both ambient and process area, to arrive at the impact of the proposed expansion in phases (26-36MTPA and then up to 40 MTPA). The monitoring results along with the recommendations shall be presented before the EAC to assess the efficacy and adequacy of pollution control measures.

- An undertaking duly endorsed by NEERI/CIMFR/IIT shall be submitted regarding mitigating measures and infra-structure available for the proposed coal production capacity of 40MTPA.
- (1) The progress on the compliance of pollution control measures implemented after the issuance of EC for expansion from 36-40 MTPA dated 22 /01/2019 are enclosed as Annexure 1(A) and 1(B). It is observed from the progressive measures taken that (a) order has been placed on IIT Kharagpur for monitoring of air quality on 14/6/2019 (copy enclosed), the final report to be submitted by 15 Jan 2020 (b) work has been awarded for preparation of wild life conservation plan (copy enclosed) on 14/06/2018 to state forest research and training Institute (c) an interim report has been received from Chhattisgarh Council of Science and Technology Raipur for the work on comprehensive catchment treatment plan in the area to arrest flow of silt in the Hasdeo river and to improve water regime in respect of Kusmunda OC project (d) high capacity dumpers and shovels deployed after phasing out of low capacity dumpers in phased manner (e) additional two numbers of 70kL capacity and 2 nos 28kL capacity mist spray arrangement have been commissioned after 30/11/2018 for effective dust control along coal and OB transportation roads (f) a long range water sprinkler with horizontal throw of 40 m (min) mounted on truck chasis has been installed which is working satisfactorily.
 - (2) Air quality assessment for a period Dec 2018- March 2019 has been collected alongwith a location of monitoring stations and is enclosed as Annexure II. Further, monthly monitoring of air quality done by CMPDI has also been collected alongwith monitoring station locations for the month of May 2019, June 2019, July 2019 and Aug 2019. It is observed that some of the readings of PM10 and PM2.5 have marginally exceeded the limited in the months of May and June while they are within limits during July and Aug 2019. There is a decreasing trend in PM values from May to Aug 2019. The monthly reports of air monitoring along with location of monitoring station is enclosed at Annexure III (a), III(b), III(c), 3(d) and 3(e).
 - (3) Consent to operate for 40 MTPA valid up to 21/1/2020 has been obtained and enclosed as Annexure IV.
 - (4) Mine has introduced surface miners for extraction of coal which is more environment friendly.
 - (5) The PP has applied for stage 1 FC for 43.942 Ha of revenue forest land which is included in the phase II of 3510.348 Ha (including Phase I). Stage 1 FC is yet to be received.
 - (6) Green Belt and afforestation taken by the mine from 2001-02 to 2018-19 along with reclamation and plantation program as per mine plan is enclosed at Annexure V.

- (7) The Mine was receiving intermittent rains during the visit of Sub-committee, hence the air pollution could not be observed.

2. Gevra Opencast Coal Mine Project:

The MoEF&CC vide letter dated 21st Feb 2018 has granted EC for expansion of Gevra OC project from 41 to 45 MTPA in mine lease area of 4184.486Ha subject to the compliance of certain terms and conditions. The EC for the proposed increase in the capacity shall be valid upto 31st March 2019. Further, the proposal was considered by the sectoral EAC in the meeting held on 21st Feb 2019. Based on the recommendation of EAC, MoEFCC accorded approval for continuance of Gevra OC project from 41 to 45 MTPA in the mine lease area of 4184.486 Ha for a further period of 1 year.

- (1) The progress on the compliance of pollution control measures implemented after the issuance minutes of meeting held on 25th June 2019 are enclosed as Annexure VI which includes introduction of surface miners, construction of 2 additional silos (4000 T Capacity), construction of inpit conveyor system (4.75 kM), introduction of truck mounted mist blower with horizontal throw of 40 m, introduction of mechanical road sweeping machine, introduction of additional 1 no 70 kL water sprinkler and 4 nos 9kL water sprinkler. Dust barrier/wind breaking arrangements have been provided. It is also observed that Coal is transported in covered tarpolin. Wild life conservation plan has been prepared and submitted to PCCF Raipur for approval.
- (2) Compliance status of the conditions duly endorsed by RO as submitted to MOEFCC is enclosed at Annexure VII. Further compliance of EC conditions after the visit of RO on 12/12/2018 and action taken subsequently as on 10/09/2019 was handed over by PP during the site visit which is enclosed as VIII.
- (3) Regarding issuing of publish notice through SPCB, member secretary SPCB, Chhattisgarh has requested for letter from MOEFCC and accordingly Director Tech (P&P) has written to MOEF&CC . Details mentioned in Annexure IX.
- (4) Air quality assessment for a period Dec 2018- March 2019 and April-June 2019 has been collected along with a locations of monitoring stations and is enclosed as Annexure X(a) and X(b). Further, monthly monitoring of air quality done by CMPDI has also been collected along

with monitoring station locations for the month of May 2019, June 2019, July 2019 and Aug 2019. It is observed that some of the readings of PM10 and PM2.5 have marginally exceeded the limited in the months of May and June while they are within limits during July and Aug 2019. There is a decreasing trend in PM values from May to Aug 2019. The monthly reports of air monitoring along with location of monitoring station is enclosed at Annexure XI (a), XI(b), XI(c) and XI(d).

- (5) Green Belt and afforestation taken by the mine from 1986 to 2018 and reclamation and plantation program as per mine plan is enclosed at Annexure XII.
- (6) During the visit it was noticed that CAAQMS is installed at a place which is about 2km from active mining area and about 500 m from the railway siding. The area is surrounded by tall tree towards the mine working and the sensors are located at a height of 18 feet from the ground. These need to be located at suitable location and height so as to record data, which are representative of real situation.
- (7) The PP has been asked to obtain clarification from SPCB regarding the applicability of NGT order dated 10th July 2019 for both the above projects as Korba is listed in the list of 100 industrial areas/cluster.
- (8) During the discussion, it was mentioned by the sub-committee that tyre washing system for the trucks leaving the mine may substantially help in reducing the dust on the ambient environment.
- (9) The environmental cell of the both the mine to be strengthened by persons of diversified disciplines.

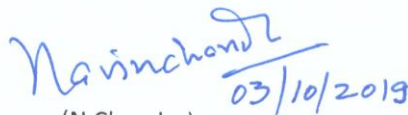
The Meeting on 10th and 11th Sept 2019 were attended by seniors officials of both the coal mining projects. The attendance sheets is enclosed as Annexure XIII (a) and XIII(b). Some of the photographs taken during the visit are enclosed as Annexure XIV.



(J K Pandey)
Member



(G P Kundergi)
Member



(N Chandra)
Chairman

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 draw.
- 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-II013/25/2014-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.N.	YEAR*	Green Belt	External Dump	Backfilled Area	Others(Undisturbed Area/etc)	TOTAL
1.	1 st year					
2.	3 rd year					
3.	5 th year					
4.	10 th year					
5.	15 th year					
6.	20 th year					
7.	25 th year					
8.	30 th year					
9.	34 th year(end of mine life)					
10.	34- 37 th Year (Post-mining)					

* As a representative example

(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	Public	Undisturbed	TOTAL

			Body	Use		
1.	External OB Dump					
2.	Top soil Dump					
3.	Excavation					
4.	Roads					
5.	Built up area					
6.	Green Belt					
7.	Undisturbed Area					
	TOTAL					

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

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

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

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

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

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

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

(xxxix) Corporate Environment Responsibility:

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

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

- (xli) In built mechanism of self-monitoring of compliance of environmental regulations should be indicated.
- (xlii) Status of any litigations/ court cases filed/pending on the project should be provided.
- (xliii) Submission of sample test analysis of Characteristics of coal: This should include details on grade of coal and other characteristics such as ash content, S and heavy metals including levels of Hg, As, Pb, Cr etc.
- (xliv) Copy of clearances/approvals such as Forestry clearances, Mining Plan Approval, mine closer plan approval. NOC from Flood and Irrigation Dept. (if req.), etc. wherever applicable.

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

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

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



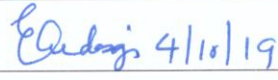



- (i) An EIA-EMP Report would be prepared for a combined peak capacity ofMTPA for OC-cum-UG project which consists of MTPA in an ML/project area of ha for OC and MTPA for UG in an ML/project area of ha based on the generic structure specified in Appendix III of the EIA Notification 2006.
- (ii) An EIA-EMP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

ANNEXURE-5

PARTICIPANTS IN 48th EXPERT APPRAISAL COMMITTEE (EAC) (THERMAL & COAL MINING) MEETING HELD ON 3rd October, 2019. 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.	Shri S. K. Pallerla	Member Secretary	

PARTICIPANTS IN 48th EXPERT APPRAISAL COMMITTEE (EAC) (THERMAL & COAL MINING) MEETING HELD ON 4th October, 2019. 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.	Shri S. K. Pallerla Member Secretary	

14/10/2019

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Dear Dr. Sharad/Dr. Shah

I have gone through the Minutes of the Meeting of EAC (Coal) held on 3rd and 4th October, 2019. These are in order. Please upload the Minutes on the Website of MoEF&CC.

Thanking you,

yours truly,

(NAVIN CHANDRA)

Dr. Navin Chandra,
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.
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