

## **Minutes of the 46<sup>th</sup> meeting of the Expert Appraisal Committee held on 25<sup>th</sup> June, 2019 for appraisal of coal mining projects at Indira Paryavaran Bhawan, Ministry of Environment, Forest and Climate Change, New Delhi-3**

The 46<sup>th</sup> meeting of the Expert Appraisal Committee (EAC) for Coal mining projects was held on 25<sup>th</sup> June, 2019 in the Ministry of Environment, Forest & Climate Change at Narmada Meeting Hall, Jal Wing, Ground Floor, Indira Paryavaran Bhawan, Jor Bagh Road, New Delhi to consider the proposals relating to coal mining sector. The following members were present:

1.	Dr. Navin Chandra	-	Chairman
2.	Dr. N. P. Shukla		Member
3.	Shri N.S.Mondal		Member (Representative of CEA)
4.	Shri Surmya D Vora		Member
5.	Shri G.P. Kundargi	-	Member
6.	Dr. S. K. Paliwal		Member (Representative of CPCB)
7.	Dr. Jai Krishna Pandey	-	Member
8.	Dr. Sunil Kumar Gupta		Member
9.	Shri S. K. Srivastava	-	Member Secretary

### **Confirmation of minutes**

There being no comments from any of the members of the Committee, minutes of the 44<sup>th</sup> meeting of the EAC held during 27<sup>th</sup> May, 2019 were confirmed in the presence of the members who had been present in the 45<sup>th</sup> 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:-

### **Agenda No.46.1**

**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)**

**46.1.1** 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).

**46.1.2** The proposal was earlier considered by the sector EAC in its meeting held on 24-25<sup>th</sup> 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.

**46.1.3** 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 <sup>th</sup> 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.	<p>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</p> <p>WBPDCCL 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</p> <p>On compliance of the conditions mentioned therein SE, Irrigation &amp; waterway Directorate had vetted the proposal vide letter dated 6<sup>th</sup> June, 2019.</p>
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.	<p>The proposal for mitigative measures proposed at Bhanora Railway siding has been suggested for compliance. Following specific mitigative measures are proposed :</p> <p>(a) Provision of two portable Mist Spray System of 30/40 m throw for Dust Suppression in Wagon Loading Area</p> <p>(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.</p> <p>(c) Protective fiber sheets of 6 m heights for 1 km length.</p>
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.

**46.1.4** 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 (WBPDCCL) 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).

There is no forest area involved.

ToR for the project was granted on 12<sup>th</sup> December, 2018, and the public hearing was conducted by the State Pollution Control Board on 22<sup>nd</sup> February, 2019 at Jamuria Panchayat Samiti Office Compound, 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. (WBPDCCL) was approved by Ministry of Coal on 30<sup>th</sup> August, 2018.

Copy of Letter from the State Government acknowledging the proposal of Lol is stated as under consideration of the additional area of 137.44 ha dated 24<sup>th</sup> May, 2019. No Lol from state government is approved yet.

**46.1.5** *The EAC, after deliberations and in view of the 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. The Committee also desired for confirmation/approval (not only vetting of channel section of the waterway) from the concerned regulatory authority regarding nallah diversion.*

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

## **Agenda No.46.2**

**Expansion of Tawa-II UG with production capacity of 0.60 MTPA (Normative) & 0.95 MTPA (Peak) in an area of 523.75 ha (520 ha mining area + 3.75 ha for power line diversion) of M/s Western Coalfields Limited located in Village Hirapalla, Tehsil Ghoradongri, District Betul (MP)- Revalidation and Environment Clearance**

**[IA/MP/CMIN/103388/2006, J-11015/53/2006-IA.II(M) ]**

**46.2.1** The proposal is for expansion and revalidation of Tawa-II UG with production capacity of 0.60 MTPA (Normative) & 0.95 MTPA (Peak) in an area of 523.75 ha (520 ha mining area + 3.75 ha for power line diversion) of M/s Western Coalfields Limited located in Village Hirapalla, Tehsil Ghoradongri, District Betul (Madhya Pradesh).

**46.2.2** Details of the proposal, as ascertained from the proposal documents and also as informed during the meeting, are reported to be as under:

- (i) The project area is covered under Survey of India Topo Sheet No55 J/4(RF 1:50,000) and is bounded by the geographical coordinates ranging from Latitudes: N 22°09'42" to 22°11'17" Longitudes: E 78°11'03" to 78°13'18" (WGS-84).
- (ii) Coal linkage of the project is proposed for MPPGCL use and for various Consumers
- (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 13<sup>th</sup> January, 2010 has imposed moratorium on grant of environment clearance.
- (v) Employment generation: Existing manpower is 953 and additional manpower proposed for this project is 61 nos.
- (vi) The project is reported to be beneficial in terms of: It will bridge the gap (to the extent of the peak production capacity of the project) between demand & supply of non-coking coal for the power houses and other bulk consumers of western as well as southern part of the country.
- (vii) Earlier, the EC to the project was obtained vide Ministry's letter No. J-11015/53/2006-IA.II (M) dated 02-08-2006 with production capacity of 0.60 MTPA in mine lease area of 520.ha.
- (viii) Total mining lease area is 523.75 ha (520 ha for mining + 3.75 ha for power line erection) Project Report (including Mining Plan) has been approved by the WCL Board vide dated 1-11-2010.The Mining Scheme (including Mining Plan & MCP) has since been recast in Oct 2016 and the same has been duly approved by WCL Board in its 282<sup>nd</sup> meeting held on 25-10-2016 for capacity of 0.95 MTPA (Peak) with an estimated additional capital requirement of Rs. 14.9715 crores.
- (ix) Total geological reserve reported in the mine lease area is 26.507 MT with 12.064 MT mineable reserve. Out of total mineable reserve of 6.2945 MT (Balance reserves as on 01-04-2018) are available for extraction. Percent of extraction is 50% (approx.).
- (x) Two seams (LWS, Bagdona) with thickness ranging from 0.90m – 3.34m are workable. Overall Grade of coal is G-8, stripping ratio - Not applicable, Degree of gaseousness is Degree-II while gradient is 1 in 6 to 1 in 8.5.
- (xi) Method of mining operations envisages Bord and Pillar with caving (Continuous Miner Technology)
- (xii) Life of mine is 11 Years.
- (xiii) The anticipated maximum value of 49.0mm/m slope, i.e. a tilt of 2.8° is not likely to cause falling of trees in the forest. The estimated maximum possible slope and tensile strain likely to occur are 49.00 mm/m and 24.50 mm/m respectively.
- (xiv) Transportation of coal has been proposed by conveyor belt upto surface, from surface to siding by tippers/dumpers and at sidings by pay loaders.
- (xv) Reclamation details (External dump & internal dump) - Not applicable as it is underground mine covered with thick green cover on surface.
- (xvi) The mine is located at about 8 km from the viable Tiger corridor.

(xvii) Consent to Operate – is secured from MPPCB for Tawa-II UG Expansion of 0.60 MTPA production capacity is valid up to 31.08.2019

(xviii) The project does not involve violation of the EIA Notification, 1994/2006 and amendment issued thereunder. Production of coal with respect to sanctioned capacity since inception of the project.

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

**Pre-mining:**

S.N.	LAND USE	Total (ha)
	<b>Non-Forest Land</b>	
1	Agricultural land	69.265
2	Waste land/Govt. land	54.456
		<b>123.721</b>
	<b>Forest Land</b>	
3	Forest land	400.029
	<b>Total</b>	<b>523.75</b>
Note: 400.029 ha (396.279 ha for mining + 3.75 ha for power line erection)		

**Changes of Land Use during Mining**

Sl. No	Particulars	Area (ha)
1.	Mining Infrastructure such as Inclines (Mine Entries), Surface Infrastructure, Airshafts & approach road to these airshafts.	10.748 3.75 (powerline erection)
2.	Land required for Underground Mining Operation	<b>520</b>

**Post Mining** – The land covered under surface right wherein infrastructure etc. are existing will be dismantled, cleared during the closure period. The land released thereafter will be reclaimed with plantation.

(xx) The ground water level has been reported to be varying between 4.55m to 14.45m during pre-monsoon and between 2.95m to 11.70m during post-monsoon (core zone). Total water requirement for the project is 875 KLD.

(xxi) Application has been submitted for obtaining the approvals of the Central Ground Water Authority for NoC vide application no. 21-4/563/MP/MIN/2017 dated 13.12.2017. The same is under process for approval.

(xxii) Public hearing was conducted twice

(a) Public hearing was conducted as per EIA, 2006 for the project of normative capacity of 0.60 MTPA and peak capacity of 0.95 MTPA in an area of 523.75 ha was conducted on 16-12-2011, 11.00 am at Workshop, Tawa-II Mine, Pathakhera Area, Betul District, Madhya Pradesh.

(b) Public Hearing was conducted as per EIA, 1994 for project with production capacity of 0.60 MTPA in an area of 520 ha was conducted on 28-04-2005 at CGM Office, Conference hall, WCL, Pathakhera Area, Betul District, M.P.

(xxiii) River/Nallah flowing near or adjacent to the mine- Tawa River is flowing adjacent to the western boundary of the project and Satpura Reservoir is situation on the southern side of the project.

(xxiv) The project involves no land losers.

(xxv) Total cost of the project is Rs. 14.9715 Crores (additional) Cost of production is Rs.2960.31/- per tonne., CSR cost is Rs 2 per tonne, R&R cost – Nil. Environment Management Cost is Rs. 25.62 lakhs. (additional under capital head) has been provisioned. Rs.6/t for Revenue Cost of Environment Management.

(xxvi) The mine closure plan was approved along with Mining Plan (Scheme) vide dated 05-11-2016 and amount deposited till 2018-19 is Rs. 5.100 Crores (including bank interest)

(xxvii) The project does not involve violation of the EIA Notification, 1994/2006 and amendment issued thereunder. Production of coal with respect to sanctioned capacity since inception of the project is given below-

**46.2.3** The proposal was earlier considered by the sectoral EAC in its meeting held on 4-5 February, 2013, wherein the Committee recommended the project for environmental clearance subject to submission of additional information with respect to water requirement and Forest Clearance of 201.079 ha.

The project was further considered by EAC in its meeting on 27<sup>th</sup> September, 2018 for revalidation of earlier environmental clearance dated 2<sup>nd</sup> August, 2006, wherein the Committee desired for information in respect of the following

- (i) Public Consultation, including public hearing, shall be conducted through concerned SPCB as per the provisions/procedure contained in the EIA Notification, 2006 for information of the stakeholders about the present coal mining operations inviting comments and their redressal,
- (ii) Valid Mining Plan and the Progressive Mine Closure Plan duly approved by the competent authority,
- (iii) Compliance status of the conditions stipulated in the environmental from the concerned Regional Office of the Ministry.
- (iv) Consent to operate from the State Pollution Control Board for the present mining operations.
- (v) Redressal of issues raised during the last public hearing conducted by the SPCB.
- (vi) Coal production realized from the mine from 1993-94 vis-à-vis capacity stipulated in the environment clearance.
- (vii) Need assessment survey for the activities proposed under the CSR and the comprehensive plan to be prepared accordingly for implementation by the project proponent. Also, impact of the CSR activities undertaken at an interval of 5 years to be evaluated and a report to be submitted.
- (viii) Stage-I/Renewal of forest clearance under the Forest (Conservation) Act, 1980, as the case may be, of the forest land involved in the project.
- (ix) Details of court cases and the compliance status.

**46.2.4** In response to the above observations, parawise details provided are as under:-

S. No.	EAC Observations	Compliance
1	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 Public Hearing was carried out on dated 7 <sup>th</sup> June, 2005 for the production capacity of 0.60 MTPA in total ML area of 520 ha and once again Public Hearing has been carried out on dated 16 <sup>th</sup> December, 2011 for the production capacity of (0.60 MTPA Normative, 0.95 MTPA Peak) in total ML area of 523.75 ha (ML area of 520 ha + 3.75 ha for diversion of 33 kV power line). Thus it can be seen that Public Hearing for the entire 523.75 ha has already been conducted as per the requirement of EIA notification, 2006 and it was conducted by MPPCB i.e. to say, that public hearing complied with the provisions of EIA notification 2006 and since then there is no

		change in the mining project w.r.t the present proposal. Therefore, it is submitted that conducting fresh public hearing for same project parameters may kindly be exempted
2	Valid Mining Plan and the Progressive Mine Closure Plan duly approved by the competent authority.	WCL Board in its 194 <sup>th</sup> meeting held on 16 <sup>th</sup> December, 2005 has approved Tawa-II UG mine proposal for expansion in capacity of 0.60 MTPA in an area of 520 ha and subsequently communicated vide resolution no. WCL/BD/SECTT/BM-194/2006/5916 dated 7 <sup>th</sup> January, 2006. Project Report for Expansion Tawa-II U/G Mine with expansion in capacity from 0.60 MTY to 0.75 MTY (peak 0.95 MTPA) in an area of 523.75 ha was approved by WCL Board in its 227 <sup>th</sup> meeting held on 22 <sup>th</sup> October, 2010 and communicated vide resolution no. WCL/BD/SECTT/BM-227/2010/3008 dated 11 <sup>th</sup> November, 2010. Mine closure plan has been approved in 282 <sup>nd</sup> meeting of WCL Board held on 25 <sup>th</sup> October, 2016 as communicated vide letter no WCL/BD/SECTT/282/2016/738 dated 5 <sup>th</sup> November, 2016
3	Compliance status of the conditions stipulated in the environmental from the concerned Regional Office of the Ministry	The Inspection by RO, MoEF & CC, Bhopal has been carried out on 9 <sup>th</sup> October, 2018 and the EC compliance certificate was issued vide letter no. 3-50/2006(ENV)/809 dated 24-10-2018. The Action taken report against non-compliance observed in certified copy of compliance has been submitted to office of RO,MOEF&CC, Bhopal vide letter no WCL/GM/PKD/ENV/2018/288 dated 15 <sup>th</sup> November, 2018
4	Consent to operate from the State Pollution Control Board for the present mining operations	Consent to Operate (CTO) for Tawa-II UG Expansion of 0.60 MTPA production capacity is valid up to 31 <sup>st</sup> August, 2019
5	Redressal of issues raised during the last public hearing conducted by the SPCB.	A concise report of action taken by project to redress the issues raised during the last public hearing conducted by the SPCB on 7 <sup>th</sup> June, 2005 is submitted
6	Coal production realized from the mine from 1993-94 vis-à-vis capacity stipulated in the environment clearance	The mine secured EC in 1998-99 but production could start from year 2006-07. The production performance since opening of the mine. No violation reported in the production capacity.
7	Need assessment survey for the activities proposed under the CSR and the comprehensive plan to be prepared accordingly for implementation by the project proponent. Also, impact of the CSR activities undertaken at an interval of 5 years to be evaluated and a report to be submitted.	CSR measures which are implemented are usually recommended by local elected / administrative officials considering the needs of the local populace. The directives of the EAC will be followed. Also, impact of the CSR activities undertaken at an interval of 5 years will be evaluated and report will be submitted accordingly. The similar studies have been carried in other areas of WCL

8	Stage-I/Renewal of forest clearance under the Forest (Conservation) Act, 1980, as the case may be, of the forest land involved in the project	Total forest land – 400.029 ha. <ul style="list-style-type: none"> <li>• FC Obtained vide letter no F-5/29/97/10/3 dated 09.08.1999 – 195.20 ha</li> <li>• Stage-I FC vide letter F.no.8-52/2017-FC dated 14.05.2018 – 201.079 ha.</li> <li>• Forest clearance (surface only) has been granted vide letter 6-MPB-109/2006-BHO3741 dated 16.08.2007 (for erecting 33 KV power line) – 3.75 ha</li> </ul>
9	Details of court cases and the compliance status	There are no court cases pertaining to environmental aspects against Tawa II UG.

**46.2.5** During deliberations, the EAC noted the following:-

The project proponent has obtained Stage-I FC for the remaining forest land of 201.079 ha vide letter dated 8-52/2017-FC dated 14<sup>th</sup> May, 2018 for expansion of production capacity of 0.6 MTPA to 0.95 MTPA (Peak).

As per one of its earlier recommendations in its meeting held on 4-5 February, 2013 and communicated vide this Ministry's letter 10<sup>th</sup> May, 2014, detail report on water requirement was not submitted.

Two of the observations during the meeting on 27<sup>th</sup> September, 2018 were not complied by the project proponent namely, public notice through concerned SPCB for information of the stakeholders about the present and proposed expansion of coal mining operations, and Impact of CSR activities undertaken at an interval of 5 years.

**46.2.6** *The EAC, after deliberations on the proposal for revalidation of the environmental clearance dated 8<sup>th</sup> February, 2006, as mandated under the Ministry's Notification dated 6<sup>th</sup> April, 2018, insisted for compliance of all its observations.*

*For the proposed expansion of the project, the Committee desired for detail report on water requirement, fresh one season baseline study, impact assessment and detailed compliance report of issues addressed during the public hearing dated 16<sup>th</sup> December, 2011.*

*The proposal was deferred on above lines.*

**Agenda No.46.3**

**Moher, Moher-Amlohri Extension Project of 20 MTPA capacity (Peak) in mine lease area of 1539 ha of M/s Sasan Power Limited located in village Amlohri, Tehsil Waidhen, District Singrauli (Madhya Pradesh)- Amendment in Environmental Clearance**

**[IA/MP/CMIN/9321/2007, J-11015/60/2008-IA.II(M)]**

**46.3.1** The proposal is for amendment in environmental clearance for Moher, Moher-Amlohri Extension Project of 20 MTPA capacity (Peak) in mine lease area of 1539 ha of M/s Sasan Power Limited located in village Amlohri, Tehsil Waidhen, District Singrauli (Madhya Pradesh).

**46.3.2** The proposal was earlier considered during 4<sup>th</sup> & 8<sup>th</sup> sectoral EAC of coal mining dated 30-31<sup>st</sup> January, 2017 and 27<sup>th</sup> April, 2017 respectively. The proposal was deferred for want of certain information/approvals as mentioned below:

(a) Permission required, if any, from the Director General of Mines Safety (DGMS)



- (b) Approval from the Ministry of Coal for the Mine Plan revised to extending the OB dump height from 90 to 150 m.
- (c) Compliance status of EC conditions from the concerned Regional Office of MoEF&CC.

**46.3.3** In response to above observations, parawise replies provided by the project proponent are as under:-

S. No.	Observations	Compliance Status
1.	Permission required, if any, from the Director General of Mines Safety (DGMS)	Permission accorded from Directorate of Mines Safety, Ministry of Labour & Employment, North Zone at Varanasi (UP) vide letter dated 25 <sup>th</sup> April, 2017 to increase height of OB dump upto 150 m, subject to compliance of certain conditions as stipulated therein
2.	Approval from the Ministry of Coal for the Mine Plan revised to extending the OB dump height from 90 to 150 m	It sights "Guidelines for preparation of Mining Plan for Coal and Lignite blocks-Section D-(o)" published by Ministry of Coal dated 4 <sup>th</sup> April, 2011. In light of this, there is no need to revise the Mining Plan due to increase in dump height
3.	Compliance status of EC conditions from the concerned Regional Office of MoEF&CC	Compliance status of EC conditions from the concerned Regional Office Lucknow, MoEF&CC has been submitted vide MoEF&CC dated 26 <sup>th</sup> November, 2018

**46.3.4** The EAC, after deliberations on the proposal and taking note of compliance of its earlier observations, desired to know whether increasing height of OB dump in view of limited land availability, requires revision of the existing/approved mining plan. The same needs to be confirmed through the earlier approving authority and submitted by the project proponent.

*The proposal was deferred for the needful as above.*

#### **Agenda No.46.4**

**Kathara Opencast Coal Mine project of 1.9 MTPA with mine lease area of 792.81 ha of M/s Central Coalfields Limited located in District Bokaro (Jharkhand) - Amendment in Environmental Clearance**

**[IA/JH/CMIN/11566/2008, No.J-11015/482/2008-IA.II(M)]**

**46.4.1** The proposal is for amendment in environmental clearance to Kathara Opencast Coal Mine project 1.90 MTPA with mine lease area of 792.81 Ha of M/s Central Coalfields Limited located in District Bokaro (Jharkhand).

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

- (i) The project Kathara OCP with capacity 1.9 MTPA was given EC vide letter No.J-11015/482/2008-IA-II(M) on 08.01.2014, as per EIA Notification 2006 with a life of 3 years.
- (ii) Public hearing was held on 04.11.2011 and baseline data was generated during the post-monsoon season of 2008-09.
- (iii) CCL Board approved the Project Report of Kathara OCP in September, 2018 for an additional capital investment of Rs.19.85 crores with a mine life of 9 years with mine reserve considered at 15.54 MT. The approval of Board of Director of CCL in respect of Kathara OCP

(Capacity 1.9 MTPA) with a mine life of 15 years was given on 29.10.2012 with total mineable reserve of 26.80 MT with a mine life of 15 years. It was approved in the 390th (No.7 of 2012) meeting of CCL Board.

(iv) Therefore, present proposal is for amendment in EC with the same capacity of 1.9 MTPA and project area of 792.81 Ha with increased quarry area of 258.46 ha and increased mine life of 12 years.

#### **46.4.3** During deliberations, the EAC noted the following

The proposal is for amendment in environmental clearance dated 8<sup>th</sup> January, 2014 to Kathara Opencast Coal Mining project of capacity 1.90 MTPA with mine lease area of 792.81 Ha of M/s Central Coalfields Limited located in District Bokaro (Jharkhand).

Earlier EC was granted for a life of 3 years which needs amendments as it is found that mine has sufficient balance reserves.

Present proposal is for amendment in EC with the same capacity of 1.9 MTPA in project area of 792.81 Ha with increased quarry area of 258.46 ha and increased mine life of 12 years.

The approval of Board of Director of CCL in respect of Kathara OCP (Capacity 1.9 MTPA) with a mine life of 15 years was given on 29<sup>th</sup> October, 2012 with total mineable reserve of 26.80 MT with a mine life of 15 years. It was approved in the 390<sup>th</sup> (No.7 of 2012) meeting of CCL Board.

Renewal of Consent to operate has been withheld by State Pollution Control Board since the validity of environmental clearance has been completed.

***46.4.4** The EAC, after deliberations, observed that in view of the mine life earlier estimated to be of 3 years, environmental clearance dated 8<sup>th</sup> January, 2014 was valid till 8<sup>th</sup> January, 2017 only. There being no amendment so far in the said environmental clearance and the same no more valid as of now, ongoing/continuing mining would be seen as violation of the EIA Notification, 2006. The Committee suggested that the Ministry may take necessary action as per the extant norms/guidelines in this regard.*

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

#### **Agenda No.46.5**

**Integrated Ashok Washery with raw coal capacity of 10 MTPA in project area of 24 ha cum FBC based TPP (2x 30 MW) of M/s Central Coalfields Limited located in village Benti, Tehsil Tandwa, in North Karanpura Coalfields in District Chatra (Jharkhand)**

**[IA/JH/CMIN/7288/2009, J-11015/121/08-IA.II(M)]**

**46.5.1** The proposal is for extension of validity of EC for Ashok Washery with raw coal capacity of 10 MTPA capacity in project area of 24 Ha of M/s Central Coalfields Limited located in Chatra District (Jharkhand).

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

- (i) The project area is bounded by the geographical coordinates ranging from latitudes 230 42' 53" & 230 44 '41" N and longitudes of 84° 57' 07" & 85° 02'11" E.
- (ii) Coal linkage of the project is proposed with Ashok OCP.

- (iii) No Joint venture cartel has been formed for Ashok Washery
- (iv) Project does not fall in the Critically Polluted Area (CPA), where the MoEF&CC's vide its OM dated 13<sup>th</sup> January, 2010 has imposed moratorium on grant of environment clearance.
- (v) Total project area is 24 ha. No forest land is involved in the project.
- (vi) The land usage pattern of the project is as follows:

**Land use details**

S. No.	Land Use	Area (ha)
1	Forest	-
2	Non Forest (tenancy nature)	24
	Total Project Area	24

- (vii) Life of project is 18 years.
- (viii) Washed coal has been proposed to be transported to railway siding for wagon loading.
- (ix) No forest land is involved in the project
- (x) No National Parks, Wildlife Sanctuaries and Eco-Sensitive Zones have been reported with 10 km boundary of the project.
- (xi) Water for the proposed washery will be sourced from the Ashok OCP that contain approximately 2700cum/day of water.
- (xii) Public hearing held on 31<sup>st</sup> January, 2012.
- (xiii) Garhi river drains the northern side of the project while Damodar river flows towards southern side of the project.
- (xiv) It is proposed to develop green belt all along the project boundary, infrastructure sites and service building area besides avenue plantation on both sides of the roads.
- (xv) Regular monitoring of ambient air quality is being carried out twice on fortnightly basis.
- (xvi) No court cases, violation cases are pending against the project of the PP.
- (xvii) The project does not involve violation of the EIA Notification, 2006 and amendment issued thereunder.
- (xviii) The project involves no PAFs.
- (xix) Total cost of the project is Rs. 16830 Lakhs.

**46.5.3 During deliberations, the EAC noted the following**

The proposal is for extension of validity of environmental clearance dated 3<sup>rd</sup> May, 2012 granted by the Ministry to the project for Ashok Washery of capacity of 10 MTPA of M/s Central Coalfields Limited in an area of 24 ha located in District Chatra (Jharkhand).

Washery has not been constructed yet by the project proponent due to legal issues and further no changes is proposed in the technology (i.e. scope of work remains the same) and other environmental parameters such as water requirement, washery rejects handling and utilisation, transportation of raw coal and washed coal.

**46.5.4** *The EAC, after deliberations on the proposal, recommended for extension of validity of the environmental clearance for a period of 3 years i.e. up to 3<sup>rd</sup> May, 2022, with all terms and conditions stipulated therein remaining unchanged.*

**Agenda No.46.6**

**Jamuniya underground project for capacity of 0.72 MTPA (Normative)/0.828 MTPA (Peak) by M/s Western Coalfields Ltd in ML area of 376.94 ha located in Pench-Kanhan Coalfields, District Chhindwara (MP) - Amendment in Environmental Clearance**

**[IA/MP/CMIN/11616/2009, No.J-11015/67/2009-IA.II(M)]**

**46.6.1** The proposal is for amendment in environmental clearance to the project for Jamuniya underground (Phase-II including forest land) project for capacity of 0.72 MTPA (normative) and 0.828 MTPA (peak) by M/s Western Coalfields Ltd. in a ML area of 376.94 ha (including forest land of 54.639 ha) located in Pench Kanhan Coalfields, District Chhindwara (MP).

**46.6.2** Details of the proposal, as ascertained from the proposal documents and also as informed during the meeting, are reported to be as under:

- (i) The project area is covered under Survey of India Topo Sheet No. 55 J/15(RF 1:50,000) and is bounded by the geographical coordinates ranging from 22°16'49" to 22°18'07" N and longitudes 78°57'00" E and 78°59'00" E.
- (ii) Coal linkage of the project is proposed for MPPGCL use and for various Consumers
- (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 13<sup>th</sup> January, 2010 has imposed moratorium on grant of environment clearance.
- (v) Employment generation: Total manpower proposed for this project is 530 nos.
- (vi) The project is reported to be beneficial in terms of: It will bridge the gap (to the extent of the peak production capacity of the project) between demand & supply of non-coking coal for the power houses and other bulk consumers of western as well as southern part of the country.
- (vii) Earlier, the EC to the project was obtained vide Ministry's letter No. J-11015/67/2009-IA.II(M) dated 31-12-2012 for Normative capacity of 0.72 MTPA and peak capacity of 0.828 MTPA in mine lease area of 332.30 ha.
- (viii) Total mining lease area is 376.94 ha. (The existing EC is for mine lease area of 332.30 ha without any forest land. Now, with 54.639 ha of forest land, total mine lease area for which EC is solicited as Phase-II is 376.94). The Project report (including Mining Plan with the Mine Closure Plan) has been duly approved by WCL Board in its 279<sup>th</sup> meeting held on 18.07.2016 vide item no. 279/C-9 for capacity of 0.84 MTPA with an estimated capital requirement of Rs. 409.8748 crores.
- (ix) The land usage pattern of the project is as follows:

#### **Pre-mining land use details**

The original plan (Nov'2008) has been recast and the Recast PR (Sept'2015) (including mining plan) has been duly approved by WCL Board in its 279<sup>th</sup> meeting held on 18.07.2016.

A) Land Area - 376.940 ha

- a. Tenancy Land - 308.585 ha
- b. Govt. Land - 13.716 ha
- c. Forest land - 54.639 ha

B) Capacity - 0.72 MTPA (Normative) and 0.828 MTPA (Peak)

The land use details as per original plan (TOR) was as below:

Sr. No	Particulars	Government land (ha)	Tenancy land (ha)	Forest land (ha)	Total (ha)
1.	All Rights	9.09	316.24	--	325.30
2.	Surface Rights	--	7.0	--	7.0
3.	Mining Rights	--	--	74.70	74.70
	Total	9.09	323.24	74.70	407.0

As per approved PR (July'2016), the land use pattern is as given below:-

Sr. No	Particulars	Government land (ha)	Tenancy land (ha)	Forest land (ha)	Total (ha)
1.	All Rights	9.053	301.585	-	310.638
2.	Surface Rights	-	7.0	-	7.0
3.	Mining Rights	-	-	59.302	59.302
	Total	9.053	308.585	59.302	376.940

As per actual acquisition, the land use pattern is as given below:-

Sr. No	Particulars	Government land (ha)	Tenancy land (ha)	Forest land (ha)	Total (ha)
1.	All Rights	13.716	301.585	--	315.301
2.	Surface Rights	--	7.0	--	7.000
3.	Mining Rights	--	--	54.639	54.639
	Total	13.716	308.585	54.639	376.940

## Post Mining

The land below which UG mining is proposed, would be adequately reclaimed if any damage is observed. The land over which surface infrastructure would be made, is proposed to dismantled at the closure of the mine and land reclaimed thereafter would be properly reclaimed.

As per approved Mine Closure plan the activities to be done after the closure of the mine were:

- Dismantling of Residential and Industrial Structures.
- Subsidence management for 3 years.
- Landscaping of cleared land for improving its aesthetics.
- Plantation over the cleared Area obtained after dismantling and on other barren spaces.
- Post Closure Environmental Monitoring for 3 years.
- Supervision of the Abandoned site.

(x) Total geological reserve reported in the mine lease area is 42.03 MT with 25.22MT mineable reserve. Out of total mineable reserve of 25.22MT, 17.50MT are available for extraction. Percent of extraction is 69.38%.

(xi) Three seams Seam II, Seam (III+ IV) comb, Seam V with thickness ranging from 2.85m – 4.40 m are workable. Overall Grade of coal is G-6, stripping ratio - Not applicable as mine is underground, Degree of gaseousness is Degree-I while gradient is 1 in 10.

(xii) Method of mining operations envisages Bord and Pillar with caving (Continuous Miner Technology)

(xiii) Life of mine is 26 Years.

(xiv) The details of OB dumping (External and Internal) is not applicable as it is a underground mine

(xv) Quarry details, Final mine void details is not applicable as it is a underground mine.

(xvi) Transportation of coal has been proposed by conveyor belt upto surface, from surface to siding by tippers and at sidings by payloaders.

(xvii) Reclamation details: this is an underground mine where extraction will be carried out by caving. In order to access the impact of subsidence on surface, study has been carried out. Moreover, the impact of subsidence takes place only during depillaring before start of depillaring necessary permission from DGMS will be taken and operations will be carried out accordingly so that impact remains minimal. In case, any damage occurs, adequate control measures will be taken. As proposed, 6 ha of green belt / afforested area would be created during life of the mine. At present, only drivage of mine entries is in progress & coal seam is yet to be touched.

(xviii) Stage-I Forest clearance of 54.639 ha has been obtained vide letter no. F.No.8-47/2017-FC dated 03-01-2018.

(xix) There is no National Park, eco-sensitive Zones, within 10 km radius

(xx) The ground water level has been reported to be varying between 2.30m to 5.50 m during pre-monsoon (May'2018) and between 2.65m to 12.30 m during post-monsoon (Nov'2018) (core zone). Total water requirement for the project is 600KLD.

(xxi) Application for grant of NOC for discharge of groundwater has been applied vide 21-4/851/MP/MIN/2019 dated 16.05.2019.

(xxii) In order to access the present ambient air quality status, the data has been generated in immediate surrounding covering five villages during May-June, 2019 (for one month at base line frequency) and the results have been found to be within prescribed limits.

(xxiii) Public hearing for the project of capacity of 0.72 MTPA (normative) and 0.828 MTPA (peak) in an area of 407 ha was conducted on 30<sup>th</sup> July, 2009, 11.00 am at Jamuniya underground project campus, Jamuniya village, Parasia Tehsil, Chhindwara, Madhya Pradesh. Major issues raised in the public hearing includes:

- Employment to local populace
- Welfare/CSR works like construction of School, roads, drinking water facilities, Health facility etc.

(xxiv) Consent to Operate – not applicable as its new project

(xxv) River/Nallah flowing near or adjacent to the mine- two water bodies namely Gunor River and a nallah flow over the mine area.

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

(xxvii) The project does not involve violation of the EIA Notification, 2006 and amendment issued thereunder. Production of coal with respect to sanctioned capacity- Coal production yet to be started, Incline drive is in progress.

(xxviii) The project involves 328 nos. land losers.

(xxix) Total cost of the project is Rs. 409.8748 crore. Cost of production is Rs.1926.94/- per tonne. CSR cost is Rs 2 per tonne, R&R cost – 43.2119 crores. Environment Management Cost is Rs.57.73 lakhs. (capital) has been made.

#### **46.6.3 During deliberations, the EAC noted the following**

The proposal is for amendment in environmental clearance to Jamuniya UG Phase-I Coal Mining project of capacity 0.72 MTPA (Normative)/0.828 MTPA (Peak) of M/s Western Coalfields Ltd in mine lease area of 376.94 ha located in Pench Kanhan Coalfields, District Chhindwara (MP).

Terms of reference for the project, earlier covering an area of 407 ha (includes forest land of 74.7 ha), was granted on 15<sup>th</sup> April, 2009. Public hearing was conducted on 30<sup>th</sup> July, 2009.

The project was earlier considered by the sectoral EAC in its meeting held on 27-28 August, 2012. Based on recommendations of the EAC, the project was granted environmental clearance on 31<sup>st</sup> December, 2012 for its capacity of 0.828 MTPA in mine lease area of 332.3 ha i.e. after excluding 74.7 ha of forest land involved/assessed at that stage.

After re-assessment and rationalisation of land involved, total project area stands revised to 376.94 ha including forest land of 54.639 ha. The project proponent has submitted stage-I FC for 54.639 ha granted by the Ministry vide letter dated 3<sup>rd</sup> January, 2018.

Ambient air quality in five nearby villages was carried for PM10, PM2.5 NOx and SO2 which are under stipulated norms. 4 locations in villages were selected for ground water monitoring and 33 nos. of parameters were analysed. Noise Monitoring at 10 nos. was conducted.

**46.6.4** *The EAC, after deliberations, recommended for amendment in the environmental clearance dated 31<sup>st</sup> December, 2012 to effect increase in project area from 332.3 ha to 376.94 ha (forest land 54.639 ha) at the same capacity of 0.72 MTPA (Normative)/0.828 MTPA (Peak) and all other terms and conditions remaining unchanged.*

#### **Agenda No.46.7**

**Expansion Kamptee deep OC of 3.20 MTPA (2.0 + 1.20) capacity in mine lease area of 857.60 ha of M/s Western Coalfields limited located in village Tekdi, Tehsil Parseoni, District Nagpur (Maharashtra) - Amendment in Environmental Clearance**

**46.7.1** The proposal is for amendment in environmental clearance for Expansion Kamptee deep OC of 3.2 MTPA (2 + 1.2) capacity in mine lease area of 857.60 ha of M/s Western Coalfields limited located in village Tekdi, Tehsil Parseoni, District Nagpur (Maharashtra).

**46.7.2** 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 No55O/3 and 55O/4 and is bounded by the geographical coordinates ranging from N 21°13' 50.5" to N 21°16' 34.1" N and longitudes E 79° 11' 52.9" and E 79° 14' 24.8".
- (ii) Coal linkage of the project is proposed for MahaGenco & various consumers.
- (iii) Joint venture cartel has not been formed.
- (iv) Project does not fall in the Critically Polluted Area (CPA), where the MoEF&CC's vide its OM dated 13<sup>th</sup> January, 2010 has imposed moratorium on grant of environment clearance.
- (v) Employment generated from the project is 549 nos
- (vi) The project is reported to be beneficial in terms of: Inder UG to OC expansion mining project and Expansion of Kamptee deep OC mine project are adjacent on-going projects of Nagpur Area. Amalgamated Inder-Kamptee deep OC mine (targeted production capacity 3.20 MTPA (1.20 + 2.0) within the ML area of 857.60 Ha is proposed in order to achieve following objectives:
  - Coal Conservation
  - Rationalize the land requirement for proposed mine considering difficulty in acquisition of additional land and problem of OB dumping.
  - To achieve the complete customer satisfaction in respect to quantity and quality of coal.
  - To achieve the desired productivity in respect to HEMM and manpower deployment.
  - Socio-economic development of the area
- (vii) Earlier, the environment clearance to Expansion of Kamptee deep OC project was obtained under EIA Notification, 2006 vide Ministry's letter NoJ-11015/287/2010-IA.II(M) dated 11.05.2015 for 1.50 MTPA (normative), 2.0 MTPA (peak) in mine lease area of 661.65 ha.
- (viii) The environment clearance to Inder UG to OC Expansion project was obtained under EIA Notification, 2006 vide Ministry's letter No J-11015/35/2010-IA.II(M) dated 06.02.2013 for production capacity of 1.20 MTPA in mine lease area of 463.80 ha.
- (ix) Total mining lease area is 857.60 ha. Project Report (including Mining Plan with built in Mine Closure Plan) has been approved by the WCL Board Vide its resolution no WCL/BD/SECTT/BM-304/2018/538 dated 09.10.2018.
- (x) The land usage pattern of the project based on the approved PR (Sept'2018) of amalgamated Inder-Kamptee deep OC is as follows:

### Pre-mining land use details

Total land involved in present proposal is 857.60 ha.

The existing land in Inder UG to OC Expansion mine and Kamptee Deep OC mine are 267.76 ha and 299.03 ha respectively. Thus total existing land in these two mines is 566.79 ha. Balance 290.81 ha land (857.60 ha – 566.79 ha) is proposed to be acquired. Out of 290.81 ha land proposed for acquisition, 280.96 ha is tenancy land and 9.85 ha is government land. The acquisition of this additional land is one of the most critical activities for development of this mine

Type of Land	Existing Land (ha)				Additional land (ha)	Total Land (ha)
	Inder UG to Expn.	Land to be transferred from Gondagaon - Ghatrohan OC	Kamptee Deep OC	Total		
Tenancy land	213.42	54.34	299.03	566.79	280.96	857.60

Govt. land					9.85	
Forest land	-	-	-	-	-	-
<b>TOTAL</b>	<b>213.42</b>	<b>54.34</b>	<b>299.03</b>		<b>290.81</b>	<b>857.60</b>

### Post Mining

The total land requirement for present proposal is 857.60 ha. The land use of the entire land is tabulated below:

### Land Use Details

Sl. No.	Particulars	Area (ha)
1.	Entire Quarry Area	378.98
2.	External OB dump	260.56
3.	Infrastructure	40.00
4.	Embankment	28.00
5.	Colony	20.00
6.	Road	12.00
7.	Area needed for rationalization and blasting zone	118.06
	<b>Total Land</b>	<b>857.60</b>

### Land Use Details

Sl. No.	LAND USE	Within ML Area (ha)	Outside ML Area ( ha)	Total
1	Agricultural land	847.75	-	847.75
2	Forest	-	-	-
3	Waste land	9.85	-	9.85
4	Grazing land	-	-	-
5	Surface Water bodies	-	-	-
6	Settlements	-	-	-
7	Others ( Specify )	-	-	-
	<b>Total</b>	<b>857.60</b>	<b>-</b>	<b>857.60</b>

### Post Mining land use pattern

Sl.No.	Land use during mining	Land use (ha)				
		Plantation	Water Body	Public use	Undisturbed	Total
1	External OB Dump	260.56	0	0	0	260.56
2	Top soil dump	0	0	0	0	0
3	Excavation	119	259.98	0	0	378.98
4	Area around building & Infrastructures	7	0	53	0	60
5	Embankment	28	0	0	0	28
6	Undisturbed Area	42	0	0	88.06	130.06
	<b>Total</b>	<b>456.56</b>	<b>259.98</b>	<b>53</b>	<b>88.06</b>	<b>857.60</b>

(xi) Total geological reserve reported in the mine lease area is 60.713MT with 41.27MT mineable reserve. Out of total mineable reserve of 41.27MT, 37.143 MT are available for extraction. Percent of extraction is 90.0 %.

(xii) Seven seams with thickness ranging from 0.90 m – 15.68 m are workable. Grade of coal is G-9, stripping ratio 1 in 4.28, while gradient is 1 in 3 to 1 in 4.5.



(xiii) Method of mining operations envisages by Opencast with Shovel dumper combination method

(xiv) Life of mine is 15 years (at rated output of 3.20 MTPA starting from 01.04.2018).

(xv) The project has three external OB dumps in an area of 260.56 ha with 90 m maximum height and 101.33 Mm<sup>3</sup> of OB. The OB from the current mining operations shall be backfilled from 1<sup>st</sup> year onwards, one internal OB (quarry void) in an area of 119.0 ha with 80.60Mm<sup>3</sup> of OB is envisaged in the project.

(xvi) Total quarry area is 378.98 ha out of which backfilling will be done in 119 ha while final mine void will be created in an area of 259.98 ha with maximum depth of 200 m. Backfilled quarry area of 119 ha shall be reclaimed with plantation. Final mine void will be converted into water body

(xvii) Transportation of coal has been proposed by dumpers in mine pit head, from surface to siding by tippers/dumpers and at sidings by payloaders.

(xviii) Reclamation Plan in an area of 456.56 ha, comprising of 260.56 ha of external dump, 119.0 ha of internal dump, 77 ha of embankment, undisturbed area, area around building and infrastructure.

(xix) No forest land has been reported to be involved.

(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 10.30m to 15.20 m during pre-monsoon and between 2.95 m to 16.90 m during post-monsoon. Total water requirement for the project is 1292 KLD.

(xxii) Expansion of Kamptee deep OC coal mine project - Application for grant of NOC for discharge of Groundwater has been applied vide 21-4/784/MH/MIN/2017 dated 19.01.2017.

Inder UG to OC Expansion Mining project - Application for grant of NOC for discharge of Groundwater has been applied vide application no. 21-4/775/MH/MIN/2017. Both the application has been recommended for NOC to CGWA, New Delhi

(xxiii) Public Hearing conducted on 12.09.2012 for Expansion of Kamptee deep OC coal mine project of Normative 1.50 MTPA to peak 2.0 MTPA in ML area of 661.65 ha. Date and Place : PH was conducted on 12.09.2012 at Black diamond stadium, Tekdi, Tal Parseoni, dist Nagpur.

Major issues raised in the public hearing includes:

- Land use pattern, land under acquisition details
- Monetary Compensation, employment.
- Welfare activities
- Monetary compensation and employment for youths
- Alternate mode of transport for coal evacuation
- Mine discharge details

The above issues were duly addressed and report has been submitted to State PCB.

Public Hearing conducted on 11.04.2012 for Inder UG to OC Expansion mining project for increase in production from 0.60 MTPA to 1.20 MTPA in land area of 463.80 ha.

The following issues were raised during Public Hearing conducted on 11.04.2012

1. Water scarcity in nearby villages
2. Monetary Compensation, employment.
3. Issues due to blasting
4. Health concerns
5. Pollution control measures
6. Mine water utilization
7. Details of Hydrogeology study, Noise monitoring, Soil monitoring, etc.

The above issues were duly addressed and report has been submitted to State PCB.

(xxiv) The proposal for renewal of consent considered in the 8<sup>th</sup> Consent appraisal committee meeting of MPCB for 2017-18 held on 09.02.2018 at MPCB, Mumbai vide application no. MPCB

CONSENT 0000003099. Consent to Operate (CTO) for Kamptee deep project of 2.0 MTPA production capacity granted renewal up to 31.03.2020. Formal letter awaited.

(xxv) A nallah flowing in the mine boundary is proposed to be diverted.

(xxvi) The project report (Mining Plan including Mine closure plan) has approved by WCL board on dated 09.10.2018 for production capacity of 3.20 MTPA (1.20 + 2.0) in an area of 857.60 ha

(xxvii) Regular monitoring of ambient air quality is being carried out on fortnightly basis for both the mines. The documented report is submitted to MPCB with half yearly EC compliance report.

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

(xxix) Expansion of Kamptee deep OC-The project does not involve violation of the EIA Notification, 1994 and amendment issued thereunder. Annual Coal Production details vis-à-vis EC capacity (for last 5 years) is as follows:

Year	EC sanctioned capacity (MTPA)	Actual production (MTPA)	Excess production beyond the EC sanctioned capacity
2014-15	1.50	1.14	Nil
2015-16	2.0	0.92	Nil
2016-17	2.0	0.95	Nil
2017-18	2.0	0.52	Nil
2018-19	2.0	0.61	Nil

Inder UG to OC Expansion Mining project -The project does not involve violation of the EIA Notification, 1994 and amendment issued thereunder. Annual Coal Production details vis-à-vis EC capacity (for last 5 years) is as follows:

Year	EC sanctioned capacity (MTPA)	Actual production (MTPA)	Excess production beyond the EC sanctioned capacity
2014-15	1.20	0.13	Nil
2015-16	1.20	0.78	Nil
2016-17	1.20	0.80	Nil
2017-18	1.20	0.75	Nil
2018-19	1.20	0.72	Nil

(xxx) The project involves 549 nos. project affected families.

(xxxi) Total cost of the project is Rs.313.3418 crores. Cost of production is Rs.1381.36/- per tonne., CSR cost is Rs.2 per tonne, R&R cost is Rs 46.56 crores. Environment Management Cost is Rs. 200.0 lakhs.

(xxxii) The proposal for renewal of consent considered in the 8<sup>th</sup> Consent appraisal committee meeting of MPCB for 2017-18 held on 09.02.2018 at MPCB, Mumbai vide application no. MPCB CONSENT 0000003099. Consent to Operate (CTO) for Kamptee deep project of 2.0 MTPA production capacity granted renewal up to 31.03.2020. Formal letter awaited.

#### **46.7.3** During deliberations, the EAC noted the following

The Ministry has granted environmental clearances on 6<sup>th</sup> February, 2013 to Inder Opencast coal mining project of capacity 1.2 MTPA and on 11<sup>th</sup> May, 2015 to Kamptee Deep Opencast coal mining project of capacity 2 MTPA of M/s Western Coalfields Ltd located in an area of 463.80 ha & 661.65 ha respectively in village Tekadi, Tehsil Parseoni, District Nagpur (Maharashtra).

Now amalgamation of both the above projects has been envisaged with total capacity of 3.2 MTPA in mine lease area of 857.6 ha.

Project Report (including Mining Plan with built in Mine Closure Plan) has been approved by the WCL Board Vide its resolution no WCL/BD/SECTT/BM-304/2018/538 dated 9<sup>th</sup> October, 2018.

The existing land in Inder UG to OC Expansion mine and Kamptee Deep OC mine are 267.76 ha and 299.03 ha respectively. Thus total existing land in these two mines is 566.79 ha. Balance 290.81 ha land (857.60 ha – 566.79 ha) is proposed to be acquired. Out of 290.81 ha land proposed for acquisition, 280.96 ha is tenancy land and 9.85 ha is government land. The acquisition of this additional land is one of the most critical activities for development of this mine

**46.7.4** *The EAC, after deliberation, observed that the proposed amalgamation involves carving out some area of adjoining Gondegaon Opencast coal mining project and thus requiring amendment in its environmental clearance also. There being no proposal in this regard, the Committee was not inclined to take the proposal forward.*

*The Committee further observed that out of the total area of 1125.45 ha covered under the existing ECs for Inder Opencast coal mining project and Kamptee Deep Opencast coal mining project, only 566.79 ha has so far been acquired. Even for the proposed amalgamation covering an area of 857.6 ha, an area of 290.81 ha is still to be acquired. The same was not found to be convincing and requires proper justification and action plan to consider the present proposal.*

*The Committee was also concerned with the proposed final void depth and the permission for diversion of nallah from the concerned regulatory authority.*

*The proposal was deferred for the needful.*

#### **Agenda No.46.8**

**Argada-Sirka Group Mixed Mines with mine lease area of 907.74 Ha of M/s Central Coalfields Limited located in District Ramgarh (Jharkhand) - Amendment in Environmental Clearance**

**[IA/JH/CMIN/19287/2008 , J-11015/462/2008-IA-II(M) ]**

**46.8.1** The proposal is for amendment in the life of Sirka OCP (1/1.15 MTPA) as per the Environmental Clearance granted to Argada-Sirka Group Mixed Mines with mine lease area of 907.74 Ha of M/s Central Coalfields Limited located in District Ramgarh (Jharkhand).

**46.8.2** *The proposal was not considered by the EAC due to absence of the project proponent.*

#### **Agenda No.46.9**

**Expansion of Chirimiri OCP from 1 MTPA to 2 MTPA (normative)/2.70 MTPA (peak) in 544.046 ha of M/s South Eastern Coalfields Limited located in Tehsil Manendragarh, District Korea (Chhattisgarh) - Amendment in Environmental Clearance**

**[IA/CG/CMIN/19386/2009, J-11015/331/2009-IA-II(M)]**

**46.9.1** The proposal is for amendment in Environment Clearance accorded by the Ministry vide letter dated 12<sup>th</sup> May, 2015 to Chirimiri OCP of 2.0 MTPA (normative) and 2.70 MTPA (peak) in Mine Lease Area of 544.046 Ha of M/s South Eastern Coalfields Limited (SECL), located in Tehsil Manendragarh, District Korea (Chhattisgarh).

**46.9.2** The Committee, after deliberations noted as under:

The proposal is for amendment in Environment Clearance accorded by the Ministry vide letter dated 12<sup>th</sup> May, 2015 to Chirimiri OCP of 2.0 MTPA (normative) and 2.70 MTPA (peak) in Mine

Lease Area of 544.046 Ha of M/s South Eastern Coalfields Limited (SECL), located in Tehsil Manendragarh, District Korea, Chhattisgarh.

Total forest land involved in the project is 332.986 ha. Stage II clearance has been obtained from MOEF& CC vide letter F.No. 8-121/2005-FC Dated: 15th July, 2011 for an area of 989.4 ha. (247.290 ha for Opencast Mining and 742.110 ha. for Underground mining) with a validity period of 20 years or co-terminus with mining lease, whichever is less.

The proponent has sought for amendment in Environment Clearance of Chirimiri expansion Project seeking permission for dumping of overburden of Chirimiri OCP in the mine voids of closed Kurasia OC.

**46.9.3** *The EAC, after deliberations, observed that the present proposal is limited to amendment in environmental clearance for Chirmiri Opencast coal mining project. Whereas, the proposal involving dumping of overburden to Kurasia Opencast coal mining project would require revision of mining plans for both the projects and also amendment in the respective ECs. In absence of the requisite documents/needful, the proposal was deferred*

#### **Agenda No.46.10**

**Expansion of Kusmunda Opencast Coal Mine Project from 40 MTPA to 50 MTPA in an area of 1655.825 ha (Phase I) and with fresh forest land (Phase II) 3510.348 ha (including Phase I) of M/s South Eastern Coalfields Ltd, located in District Korba(Chhattisgarh) - For Environmental Clearance**

**[IA/CG/CMIN/95257/2016, F. No.J-11015/176/2014-IA-II(M)]**

**46.10.1** The proposal is for environmental clearance for expansion of Kusmunda Opencast Coal Mine Project from 40 MTPA to 50 MTPA in an area of 1655.825 ha (Phase I) and with fresh forest land (Phase II) 3510.348 ha (including Phase I) of M/s South Eastern Coalfields Ltd, located in District Korba (Chhattisgarh)

The proposal was last considered by the EAC in its last meeting held on 14th December, 2018, wherein the Committee, in the first instance, was not convinced with the compliance status and desired for action taken report on different observations of the Regional Office to examine adequacy and efficacy of pollution control measures and its impact on ambient air quality.

During the meeting, the Member Secretary informed the Committee that in view of shortage of coal in the country to meet the requirements of linked critical and super-critical thermal power plants, there is a pressing demand for environmental clearance to the proposed expansion of the project beyond 40 MTPA. He requested the Committee for consideration of the proposal for further expansion to a smaller extent for the present, and that too for a limited period, subject to submission of Consent to Operate, coal production plan for the year 2018-19 and compliance status of the conditions stipulated in the EC dated 3rd July, 2018 to the satisfaction of the Ministry/Regional Office.

In view of suggestions of majority of its members, the project was recommended for grant of environmental clearance for further expansion up to 40 MTPA for a period of one year only, subject to terms and conditions stipulated in the environmental clearance dated 3rd July, 2018, along with the 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.
- Third party monitoring (by NEERI/CIMFR/IIT) for air quality shall be carried out at

identified locations, both ambient and the process area, to arrive at the impact of the proposed expansions in phases (26-36 MTPA 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/ISM, shall be submitted regarding mitigating measures and the infrastructure available for the proposed coal production capacity of 40 MTPA.
- Coal production shall be consistent with that given in the approved Mining Plan.

**46.10.2** During discussions, the EAC first took note of the chronology of events as under:-

The proposal was originally submitted for grant of environmental clearance to the expansion of Kusmunda Opencast Coal Mining project from 15 MTPA (normative) / 18.75 MTPA (peak) to 50 MTPA (normative) / 62.50 MTPA (peak) by M/s South Eastern Coalfields Ltd in mine lease area of 3510.348 ha in District Korba (Chhattisgarh). Public hearing for the project was conducted by the SPCB on 11th February, 2015.

Mining Plan for the proposed expansion was earlier approved by the Board of M/s Coal India Ltd in its 300<sup>th</sup> meeting held on 28th October, 2013. Mine Closure Plan is an integral part of the Mining Plan.

The EAC in its meeting held on 7-8 January, 2016 recommended the project for grant of environmental clearance for a production level of 26 MTPA (peak), subject to compliance of certain specific conditions and adopting mitigating measures. As per the recommendations, the project for expansion from 18.75 to 26 MTPA (peak) in mine lease area of 1449.864 ha, was granted EC by the Ministry on 3rd February, 2016.

The proposal for further expansion of the project from 26 to 50 MTPA (normative)/62.50MTPA (peak) was considered by the EAC in its meeting held on 27th February, 2018. During the meeting, the Committee took note of the observations of Ministry's Regional Office, contained in their monitoring report dated 13th June, 2017 (site visit on 22nd April, 2017), which mainly included the following:-

- Existing measures to check fugitive emissions while spilling, transportation, CHP area, appeared to be insufficient.
- Development of green belt is in nascent stage. The green belt of adequate width needs to be developed around the mine lease area, CHP, overburden dump sites, etc
- Management of garland and catch drains was observed to be in poor state.
- No action undertaken for restoration and stabilization of overburden.
- Roads within the mine lease area observed to be laden with coal dust having poor drainage system.
- No ETP for treatment of CHP waste water. Only siltation pond provided for settling and recycling of effluent from the CHP.

Taking cognizance of compliance status of the conditions stipulated in the EC dated 3<sup>rd</sup> February, 2016 and the additional control measures adopted by the project proponent, the sectoral EAC in its meeting held on 27th February, 2018, recommended the project for grant of EC to its expansion from 26 to 36 MTPA in an area of 1655.825 ha for a period of one year i.e. up to 31st March, 2019, subject to compliance of additional terms and conditions as under:-

The project proponent shall obtain prior clearances for regularization and/or diversion of the forest land of 205.961 ha from the concerned regulatory authority to enable its use for non-forestry purpose.

The project proponent shall collect and analyze one season baseline data for environmental parameters, preferably during April-June, 2018, and submit for consideration of the EAC before 31st December, 2018.

The project proponent shall also 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 recommendations for continuance of the project thereafter.

Based on above recommendations of the EAC and subsequent approval of the competent authority, the project for expansion from 26 to 36 MTPA in an area of 1655.825 ha, was granted environmental clearance by the Ministry on 3rd July, 2018 for a period up to 31<sup>st</sup> March, 2019, subject to compliance of certain terms and conditions.

The proposal for further expansion of the project from 36 to 50 MTPA (normative)/62.50 MTPA (peak) was considered by the EAC in its meeting held on 26th October, 2018. The EAC expressed its serious concerns over the prevailing environmental conditions, projected scenario even at the present production capacity of 36 MTPA and compliance status of its earlier recommendations. The Committee, took note of non-submission of compliance status for the conditions stipulated in the environmental clearance dated 3rd July, 2018 through the Regional Office of the Ministry. The committee also took note that Consent to Operate for coal production of 36 MTPA has not yet been obtained even after a lapse of 4 months of issuing EC.

In view of the differing opinion, the proposal could not be concluded and deferred for further deliberations during the next meeting.

The proposal was again considered by the EAC in its meeting held on 14th December, 2018. During deliberations it was noted by the committee that:-

- a) Consent to Operate under the Water Act, 1974 and the Air Act, 1981 for the last environmental clearance dated 3rd July, 2018 has been issued by the State Pollution Control Board vide their letter dated 10th December, 2018.
- b) In line with the conditions stipulated in the last EC, the Ministry's Regional Office has forwarded report on status of compliance of the EC conditions vide their letter dated 11<sup>th</sup> December, 2018 based on site inspection carried out on 30th November, 2018. The said report mentions about many of the conditions either being complied with or agreed to comply. Also, additional infrastructure required for the proposed expansion, has also been highlighted.
- c) Kusunda OCP is catering to most of the critical and super critical thermal power plants including State Power Generation Corporation Ltd, CSPGCL (West), NTPC Korba, NTPC Seepat, Adani Power, BALCO, LANCO, Bhilai TPS, etc. In view of shortage of coal in the country to meet the requirements of TPPs, there is a pressing demand for environmental clearance to the proposed expansion of the project beyond 36 MTPA.

The Committee, in the first instance, was not convinced with the compliance status and desired for action taken report on different observations of the Regional Office to examine adequacy and efficacy of pollution control measures and its impact on ambient air quality.

However, 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 project for grant of environmental clearance for further expansion up to 40 MTPA for a period of one year only, subject to terms and conditions stipulated in the environmental clearance dated 3rd July, 2018, along with the 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.

- Third party monitoring (by NEERI/CIMFR/IIT) for air quality shall be carried out at identified locations, both ambient and the process area, to arrive at the impact of the proposed expansions in phases (26-36 MTPA 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/ISM, shall be submitted regarding mitigating measures and the infrastructure available for the proposed coal production capacity of 40 MTPA.
- Coal production shall be consistent with that given in the approved Mining Plan.

**46.10.3** During deliberations on the present proposal, the EAC noted the following:-

The present proposal is for environmental clearance to further expansion of Kusmunda Opencast Coal Mining project from 40 MTPA to 50 MTPA (normative)/62.5 MTPA (peak) by M/s South Eastern Coalfields Ltd in mine lease area of 1655.825 ha (Phase I) and with fresh forest land (Phase II) 3510.348 ha (including Phase I) in District Korba (Chhattisgarh).

Total project area of 1655.825 ha includes forest land of 205.961 ha. The same has since been regularized under the Forest (Conservation) Act, 1980 by the Ministry vide letter dated 26<sup>th</sup> April, 2018, for diversion to non-forestry purposes.

Consent to Operate under the Water Act, 1974 and the Air Act, 1981, for the last environmental clearance dated 3rd July, 2018 has been issued by the State Pollution Control Board vide their letter dated 7<sup>th</sup> March, 2019.

In line with the conditions stipulated in the EC for 30 MTPA, the Ministry's Regional Office has forwarded report on status of compliance of the EC conditions vide their letter dated 11<sup>th</sup> December, 2018 based on site inspection carried out on 30<sup>th</sup> November, 2018. The said report mentions about many of the conditions either being complied with or agreed to comply. Also, additional infrastructure required for the proposed expansion, has also been highlighted.

**46.10.4** *The EAC, after deliberations observed that conditions stipulated in the environmental clearance dated 22<sup>nd</sup> January, 2019 are yet to be complied. The Committee insisted 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 other environmental parameters to consider the proposal. Also, third party monitoring and the undertaking in this regard are necessarily to be provided. State-I FC for 43.942 ha of revenue forest land which is included in Phase II of 3510.348 ha (including Phase I) to be submitted for any further appraisal at EAC.*

*The proposal was deferred on the above lines*

#### **Agenda No.46.11**

**Expansion of Gevra Opencast Coal Mine from 45 MTPA to 49 MTPA in ML area of 4184.486 ha of M/s South Eastern Coalfields Limited at district Korba (Chhattishgarh) - For EC**

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

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

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

- (i) Earlier, the Environmental Clearance of Gevra opencast was accorded vide MoEF&CC dated 3<sup>rd</sup> June, 2009 for expansion from 25 MTPA to 35 MTPA and in leasehold area of 4184.486Ha, under the provisions of the EIA Notification, 2006 with public hearing.
- (ii) The project was accorded Environmental Clearance dated 31<sup>st</sup> January, 2014 for expansion from 35 MTPA to 40 MTPA under clause 7(ii) of EIA Notification, 2006 and subsequent OM J-11015/30/2004.IA.II(M) dated 19.12.2012 issued to facilitate one time capacity expansion without public hearing, which inter-alia stipulated an upper limit of 5 MTPA.
- (iii) The project was accorded amendment in the environmental clearance on 6<sup>th</sup> February, 2015 for incremental difference in the production capacity from 40 MTPA to 41 MTPA in accordance to OM J-11015/30/2004.IA.II (M) dated 2.9.2014.
- (iv) Meanwhile MoEF&CC issued OM no. J-11015/224/2015-IA.II (M) dated 15.09.2017 for environmental clearance for expansion of coal mining projects upto 40% with exemption of public hearing.
- (v) On the basis of OM no. J-11015/224/2015-IA.II (M) dated 15.09.2017, a fresh application was submitted by PP for expansion of Gevra Opencast coalmine project from 41 MTPA to 49 MTPA without public hearing in mining lease area of 4184.486 ha vide his letter no. SECL/BSP/Env/Gevra OC\_49/17/6772 dated 20.10.2017.
- (vi) The project was accorded EC for production capacity from 41 MTPA to 45 MTPA in an area of 4184.486 ha vide File no. J-11015/85/2010-IA.II (M)pt dated 21<sup>st</sup> February, 2018 with validity upto 31<sup>st</sup> March, 2019.
- (vii) As per approved EC of 45 MTPA, para no 4(i), the continuance of the project thereafter at the increased capacity shall be based on the evaluation of the proposed control measures and its impact on the ambient air quality by the EAC in later half of the FY 2018-19.
- (viii) To verify the status of compliance of EC conditions for Gevra opencast expansion project 45 MTPA, the Regional Office of MoEF&CC, Nagpur has carried out the site inspection on 12<sup>th</sup> December, 2018. The compliance and monitoring reports forwarded to this Ministry vide their letter No. 3-28/2014(Env)pt /4793 dated 19<sup>th</sup> January, 2019.
- (ix) The latitude and longitude of the project site are 22°18'00" to 22°21'42" N and 82°32'00" to 82°39' 30" E respectively.
- (x) Joint Venture: No
- (xi) Coal Linkage : NTPC and Various thermal power plants
- (xii) Employment generated / to be generated: 4391 Persons
- (xiii) Benefits of the project: Project will considerably improve the socio-economic status of the adjoining areas. This will result in benefits such as improvements in physical infrastructure; improvements in social infrastructure, increase in employment potential, contribution to the exchequer, meet energy requirement and post-mining enhancement of green cover.
- (xiv) The land use pattern of the project will be as follows:

**Pre-Mining:**

SN.	Land use	Within Mining lease area (ha)	Outside Mining lease area (ha)	Total (ha)
1	Agricultural land	1273.426	1247.145	2520.571
2	Forest land	441.410	575.002	1016.412
3	Waste Land	0.000	0.000	0.000
4	Grazing Land	0.000	0.000	0.000
5	Surface Water Bodies	7.000	0.000	7.000
6	Settlements	0.000	0.000	0.000
7	Others (Specify); Govt. Land (including Waste Land and Grazing Land)	315.414	325.089	640.503
	<b>Total</b>	<b>2037.250</b>	<b>2147.236</b>	<b>4184.486</b>



**Post- Mining:**

S No	Pattern of utilization	Area (ha)
1.	Reclaimed External and Internal dumps	1858.00
2.	Green belt	5.670
3.	Final void /Water body	659.250
4.	Built up area (Infrastructure, colony, roads, R and R site)	1243.392
5.	Safety zone: Undisturbed area	418.174
	<b>Total</b>	<b>4184.486</b>

**Core area:**

S N	Particulars	Tenancy land (Ha)	Forest land (Ha)	Government Land (Ha)					Grand Total (Ha)
				Grazing land	Waste land	Water body	Others	Total	
1	Quarry area	1285.88	441.41	0	0	7	297.952	304.952	2032.25
2	Area for Top Soil in quarry	0	0	0	0	0	5	5	5
3	External dump	291.31	0	0	0	0	188.69	188.69	480
4	Infrastructure etc	504.59	509.434	0	0	0	88.839	88.839	1102.782
5	Roads	6	0	0	0	0	0	0	6
6	Residential Colony	65	0	0	0	0	0	0	65
7	R and R site	69.28	0	0	0	0	0	0	69.280
8	Explosive magazine	0	6	0	0	0	0	0	6
9	Nala Diversion, if any	0	0	0	0	0	0	0	0
10	Safety Zone	298.564	59.568	0	0	0	60.022	60.022	418.174
<b>Total</b>		<b>2520.571</b>	<b>1016.412</b>	<b>0</b>	<b>0</b>	<b>7</b>	<b>640.503</b>	<b>647.503</b>	<b>4184.486</b>

(xv) Total geological/ mineable reserve within mining lease area of 4184.486 ha is 486.427 MT and extractable reserve is 445.246 MT (as on 1.4.2019).

(xvi) The life of mine is 10 Years.

(xvii) The grade of the coal is G-10 and the stripping ratio is 1.62 Cum/tonne. The average gradient varies from 1 in 6 to 1 in 12 having 06 seams with thickness ranging from 3.14 mtrs to 57.86 mtrs.

(xviii) Total estimated water requirement of the project is 22560 KL/day. The level of ground water ranges from 2.30 m to 11.98 m in post-monsoon and 5.56 to 14.60 m in pre-monsoon season.

(xix) The method of mining would be opencast.

(xx) There are 7 external OB dumps in an area of 480 Ha with quantity of 147.60 Mcum and height of 90 m above the ground level, and 8 internal dumps with quantity of 1119.40 Mcum in an area of 1378 Ha.

- (xxi) The final mine void would be in 659.25 ha with depth of 40 m, which is proposed to be converted into water body.
- (xxii) External OB dump area 480 ha and backfilled quarry area of 1378 ha shall be reclaimed with plantation
- (xxiii) The transportation of coal: from face to in-pit crusher is by trucks, from in-pit crusher to surface Ground bunker is by conveyor system, from Ground Bunker to Silos is by belt conveyor & finally from Silos to consumers : By Rail & MGR.
- (xxiv) Rehabilitation and resettlement is involved in the project. There are 3428 PAFs
- (xxv) Total capital cost of the project is Rs. 11816.4 Crores.
- (xxvi) The CSR cost: According to new CSR policy the fund for the CSR should be allocated, 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 previous year, whichever is higher.
- (xxvii) R&R Cost Rs. 455.96 Crores and Environmental Management Cost Rs. 142.82 Crores.
- (xxviii) Hasdeo river is the main drainage of the area. The study area includes a number of seasonal nallah and tributaries of Hasdeo river like Ahiran, Kholar nallah. Lilagar river also flows through the study area of project.
- (xxix) The ground water clearance was obtained on 22.01.2019.
- (xxx) There are no national parks, wildlife sanctuary, biosphere reserves in the 10 km buffer zone of the study area.
- (xxxi) Total forest area involved is 1016.412 ha. The status of diversion of forest land for non - forestry purposes is as under:-

Area (in ha)	Stage-1 /Final FC issued vide letter no. and date	Validity period of FC
100.898	vide MoEF Clearance F no.8-33/2005-FC dated 05.05.2008	Co-terminus with the mining lease or 20 years
46.198	vide MoEF Clearance F no.8-81/ 2006-FC dated 20-04-2015	Co-terminus with the mining lease or 20 years
192.046	vide MoEF Clearance F no.8-77/2006 – FC, dated 20-04-2015	Co-terminus with the mining lease or 20 years
564.885	vide MoEF Clearance F no.8-79/2006 – FC, dated 20-04-2015	Co-terminus with the mining lease or 20 years
112.385	vide MoEF&CC Clearance F.No. 8-41/2017-FC dated 27.09.2017.	Co-terminus with the mining lease
1016.412	Total forest land for which Stage-1 Forestry Clearance obtained	

- (xxxii) Afforestation plan shall be implemented covering an area of 2438.672 ha at the end of the mining. Density of tree plantation shall be 2500 trees/ ha of plants.
- (xxxiii) There are court cases / violation pending with the project proponent as per the following details:- Appeal no. 78 of 2018 filed by the Shri. Laxmi Chauhan against the Project Proponent of Gevra Opencast Expansion Coal Mine (Respondent no. 4) for capacity expansion of 41-45 MTPA before the National Green Tribunal, Principal Bench, New Delhi.
- (xxxiv) Details of Court Cases

S N	Year of Violation	Production	Case No	Court	Parties	Brief	Present Status
1	2001-02 to 2004-05	More than 10 MTY	1217 /2007	JMC Class I Korba	CECB, Korba. Vs. CGM Dipka Extension Gevra area SECL	Regarding Cri. Complaint filed under Sec.15 & 17 of EP Act.	Pending for examination of proposed accused

2	31.7.2000	Consent not renewed and capacity expanded from 10 MTY	613/2007	HC of CG, BSP	CECB, Korba. Vs. SECL Gevra Project	Regarding Cri. Complaint filed under Sec.15 & 17 of EP, 1986. Criminal revision.	Pending
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#### **46.11.3** During deliberations, the EAC noted the following:-

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

Earlier, the Environmental Clearance of Gevra opencast was accorded by the Ministry on 03.06.2009 for expansion from 25 MTPA to 35 MTPA and in leasehold area of 4184.486 ha, under the provisions of the EIA Notification, 2006 with public hearing. Public hearing was held on 22.08.2008.

The project was accorded EC vide letter no. J-11015/85/2010-IA.II (M) dated 31.01.2014 for the expansion from 35 MTPA to 40 MTPA under clause 7(ii) of EIA Notification, 2006 and subsequent OM J-11015/30/2004.IA.II(M) dated 19.12.2012 issued to facilitate one time capacity expansion without public hearing.

The project was accorded amendment in the EC vide letter No. J-11015/85/2010-IA.II (M) dated 06.02.2015 for incremental difference in the production capacity from 40 MTPA to 41 MTPA in accordance to OM J-11015/30/2004.IA.II(M) dated 2.9.2014.

Meanwhile MoEF&CC issued OM no. J-11015/224/2015-IA.II (M) dated 15.09.2017 for environmental clearance for expansion of coal mining projects upto 40% with exemption of public hearing.

On the basis of OM no. J-11015/224/2015-IA.II (M) dated 15.09.2107, a fresh application was submitted by PP for expansion of Gevra Opencast coalmine project from 41 MTPA to 49 MTPA without public hearing in mining lease area of 4184.486ha vide his letter no. SECL/BSP/Env/Gevra OC\_49/17/6772 dated 20.10.2017.

The project was accorded EC for production capacity from 41 MTPA to 45 MTPA in an area of 4184.486 ha vide File no. J-11015/85/2010-IA.II (M)pt Dated: 21.02.2018 with validity up to 31.03.2019.

As per approved EC of 45 MTPA, para no 4(i), the continuance of the project thereafter at the increased capacity shall be based on the evaluation of the proposed control measures and its impact on the ambient air quality by the EAC in later half of the FY 2018-19.

To verify the status of compliance of EC conditions for Gevra opencast expansion project 45 MTPA, the Regional Office of MoEF&CC, Nagpur has carried out the site inspection on 12<sup>th</sup> December, 2018. The compliance and monitoring reports forwarded to this Ministry vide their letter No. 3-28/2014(Env)pt /4793 dated 19<sup>th</sup> January, 2019.

Impact assessment work on the ambient air quality at baseline stations for the period Dec

2018 to March 2019 carried out by CMPDIL and the report has been submitted along-with Six monthly EC compliance Status report to the RO, MoEFCC, Nagpur vide GM, Gevra letter no. SECL/GM/ GA/Environment/ 2019/50 dated 09.05.2019. Results are well within the permissible limits.

Stage-1 Forest Clearance have been obtained for entire forest land, 1016.412 Ha involved in the mining lease area of 4184.486 ha.

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

Expansion of Gevra Opencast Coal Mining Project from 41 MTPA to 45 MTPA of M/s South Eastern Coalfields Limited in mine lease area of 4184.486 ha in District Korba (Chhattisgarh) was further granted for one year 28<sup>th</sup> March, 2019 for a further period of 1 Year

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

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

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

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

*The proposal was deferred for the needful.*

#### **Agenda No.46.12**

**Expansion of Dipka Opencast Coal Mine from 35 MTPA to 40 MTPA in Mine Lease area 1999.386 ha of M/s South Eastern Coalfields Limited in District Korba (Chhattisgarh) – For Terms of Reference.**

**46.12.1** The proposal is for grant of ToR for Dipka Opencast expansion Project from 35MTPA to 40 MTPA in Mining lease area of 1999.386 Ha of M/s South Eastern Coalfield Limited at district Korba (Chhattisgarh).

**46.12.2** 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) Earlier, the Environmental Clearance of Dipka Opencast was accorded vide MoEF&CC letter no. J-11015/87/2003-IA.II (M) dated 04.10.2004 for production capacity of 20 MTPA in an area of 1461.51ha.

(ii) Further, the project was accorded Environmental Clearance vide letter no. J-11015/487/2007-IA.II (M) dated 03.06.2009 for expansion from 20 MTPA to 25 MTPA in lease areas of 1999.417ha, under the provision of the EIA Notification, 2006 with public hearing. Public hearing for 25 MTPA was held on 05.09.2008.

(iii) The project was accorded Environmental Clearance vide letter no. J-11015/487/2007-IA.II (M) dated 12.02.2013 for the expansion from 25 MTPA to 30 MTPA in an area of 1999.293 ha under clause 7(ii) of EIA Notification, 2006 and subsequent OM J-11015/30/2004-IA.II(M) dated 19.12.2012 issued to facilitate one time capacity expansion without public hearing which inter-alia stipulated an upper limit of 5 MTPA.

(iv) The project was accorded amendment in EC vide letter no. J-11015/487/2007-IA.II (M) dated 06.02.2015 for 30 MTPA to 31 MTPA in accordance to the OM J-11015/30/2004-IA.II (M) dated 19.12.2012, which inter-alia stipulated an upper limit of 5 MTPA, was further amended to 6 MTPA vide OM J-11015/30/2004-IA.II (M) dated 02.09.2014.

(v) Further to meet the country's demand of coal, a proposal was made for expansion of project from 31MTPA to 35 MTPA within the existing infrastructure and leasehold area. ToR was accorded vide letter no.J-11015/487/2007-IA-II(M) dated 28.02.2017 and the revised ToR was issued vide letter no.J-11015/487/2007-IA-II(M) dated 10.07.2017.

(vi) To verify the status of compliance of EC conditions for Dipka opencast expansion project 31 MTPA, the Regional Office of MoEF&CC, Nagpur has carried out the site inspection on 11.09.2016. The monitoring report was forwarded to this Ministry vide their letter No. 3-28/2014(Env) dated 04.11.2016, which was deliberated in the EAC meeting. The project proponent presented the action taken on each of the observations made by Regional Office during the site visit.

(vii) Meanwhile, OM No. J-11015/224/2015-IA.II, dated 15/09/2017, was issued for production capacity expansion up to 40% of PH capacity without Public Hearing with certain conditions.

(viii) On the basis of the above said OM No. J-11015/224/2015-IA.II, dated 15/09/2017, the proposal is submitted for grant of EC for expansion of Dipka opencast coal mine from 31MTPA to 35 MTPA without public hearing in the existing mine lease area of 1999.293 ha.

(ix) The project was accorded Environmental Clearance vide letter no. J-11015/487/2007-IA.II (M) dated 20.02.2018 for the expansion from 31 MTPA to 35 MTPA in an area of 1999.293 ha under clause 7(ii) of EIA Notification, 2006 and subsequent OM J-11015/224/2015-IA.II, dated 15/09/2017 issued for production capacity expansion up to 40% of PH capacity without Public Hearing with certain conditions

(x) As per Environmental Clearance condition No.4(i) The EC for the increased capacity is valid up to 31<sup>st</sup> March 2019. Further continuance of the project shall be based on evaluation of the proposed control measures and its impact on the ambient air quality by the EAC in the later half of the FY 2018-19.

(xi) On the basis of the above EC condition No.4(i), the proposal is submitted for continuance of the project and amendment in EC for expansion of Dipka opencast coal mine from 31 MTPA to 35 MTPA in the existing mine lease area of 1999.293 ha.

(xii) To verify the status of compliance of EC conditions for Dipka opencast expansion project 31 MTPA to 35 MTPA, the Regional Office of MoEF&CC, Nagpur has carried out the site inspection on 01.12.2018. The monitoring report was forwarded to this Ministry vide their letter No. 3-56/2009(Env)/4794 dated 19.01.2019, which was deliberated in the EAC meeting.

(xiii) The latitude and longitude of the project are 22°18'59" to 22°19'43" N and 82°30'47" to 82°33'34"E respectively.

(xiv) Joint Venture: No

(xv) Coal Linkage: NTPC Seepat and various other power plants

(xvi) Employment generated / to be generated: 2594 persons

(xvii) Benefits of the project: Project will considerably improve the socio-economic status of the adjoining areas. This will result in following benefits:

- Contribution to the Exchequer
- Meet energy requirement
- Post-mining Enhancement of Green Cover

(xviii) The land usage of the project will be as follows:

#### Pre-Mining Land Use

Types of Land (Ha)			Total Land
Forest	Tenancy/Agricultural	Govt.	
409.149	1409.244	180.993	<b>1999.386</b>

#### Core Area Land Use: (During Mining)

Sr. No	Activity	Types of Land area (Ha)			Total Land Area (Ha)
		Forest	Tenancy/ Agricultural	Govt.	
1	Quarry Area*	52.982	858.314	90.850	<b>1002.146</b>
2	External OB Dump	54.718	125.212	26.070	<b>206</b>
3	Infrastructure, workshop, Administration Building etc.	279.242	313.518	41.114	<b>633.874</b>
4	Roads	0	4	0	<b>4</b>
5	Green belt	0	23	0	<b>23</b>
6	Safety Zone	22.207	85.2	22.959	<b>130.366</b>
<b>Total Land</b>		<b>409.149</b>	<b>1409.244</b>	<b>180.993</b>	<b>1999.386</b>
* Including 756.093 Ha internal dump, 24Ha for Top soil & 222.053 Ha for water body					

#### Land Details (Type of Land in Ha.)

S. No.	Land Use	Area in Ha
1	Agriculture Land	1266.328
2	Forest Land	409.149
3	Waste Land	0.000
4	Grazing Land	0.000
5	Surface water bodies	9.080
6	Settlements	142.916
7	Others (Govt. Land)	171.913
8	<b>Total</b>	<b>1999.386</b>

#### Conceptual Post Mining Land Use

Sr. No.	Land use during mining	Land Use (Ha)				
		Plantation	Water body	Public use	Undisturbed	Total
1	External OB Dump	206	0	0	0	206
2	Top soil dump	24	0	0	0	24
3	Excavation	756.093	222.053	0	0	978.146
4	Roads	4	0	0	0	4.000

5	Built up area	633.874	0	0	0	633.874
6	Green belt	23	0	0	0	23
7	Undisturbed area	130.366	0	0	0	130.366
		1777.333	222.053	0	0	1999.386

(xix) The total geological reserve is 617 MT. The mineable reserve 258.84 MT, extractable reserve is 258.84 MT. The percent of extraction would be 100 %.

(xx) The coal grade is E/G10. The stripping ratio is 1.20 Cum/tonne. The average Gradient is 3.37<sup>0</sup>-6.34<sup>0</sup>. There will be 3 seams with thickness ranging (E&F Seam- 12.70- 19.05 m; Upper Kusmunda-24.69 - 35.82 m; Lower Kusmunda (Top Split) - 34.70 - 44.85 m; Lower Kusmunda (Bottom Split) - 2.19 - 24.50 m).

(xxi) The total estimated water requirement is 8010 m<sup>3</sup>/day.

(xxii) The level of ground water ranges (CGM Office- Avg 8.275 m; Pragati Nagar- Shallow Avg-3.125 m Deep Avg-19.17 m).

(xxiii) The Method of mining would be Open cast mining.

(xxiv) There is 03 external OB dump with Quantity of 81.00 Mbcm in an area of 206.00 ha with height of 90 meters above the surface level and 03 internal dump with Quantity of 534.00 Mbcm in an area of 780.093 ha with height of 90 meters above the surface level

(xxv) The final mine void would be in 222.053 Ha with depth 80m and the total quarry area is 1002.146. Backfilled quarry area of 780.093 Ha shall be reclaimed with plantation. A void of 222.053 ha with depth upto 80 m which is proposed to be converted into a water body

(xxvi) The life of mine is 7 Years as on 01.04.2019.

(xxvii) Transportation: Coal transportation From face to In pit crusher: By Trucks. Surface to siding: By Trucks ; Siding to Consumer : Rail

(xxviii) There is R & R involved. There are 1690 PAFs.

(xxix) Total capital cost of the project is Rs. 1959.36 Crores. CSR Cost According to New CSR policy, the fund for the CSR should be allocated 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 previous year whichever is higher. R&R Cost Rs. 51.49 Crores. Environmental Management Cost Rs. 19813329.00 for the FY (2016- 17).

(xxx) Hasdeo river about 8 Kms, Lilagarh Nadi, Kholar Nalla & small channels joining Hasdeo river.

(xxxi) Ground water clearance issued on 14.03.2019.

(xxxii) Mining plan for 40 MTPA was approved by SECL Board on 23.10.2018 and mine closure plan is an integral part of mining plan.

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

(xxxiv) Total forest land 409.149 ha, Status of Forest clearance: In process. Stage-1 FC available for 409.056 Ha of forest land and 0.093 ha has been applied for stage -1 FC

(xxxv) Total afforestation plan shall be implemented covering an area of 1009.093 ha at the end of mining including green Belt over an area of 23 ha. Density of tree plantation 2500 trees/ ha of plants.

(xxxvi) There are court cases/violation pending with the project proponent as per the following details:-

Case No.	Court	Parties	Brief	Present status
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1217/ 2007	Judicial Magistrate Classl, Korba transferred to Bilaspur HC, criminal revision in the year 2010	Regional Officer, CGEPB Vs Gevra & CGM Dipka Area	Increase of production Without EC	Pending
CRMP 859/2009	HC of C.G	CGEPB, Korba Vs Debasis Chatterjee, Ex CGM Dipka.	Appeal preferred by CGEPB against the order	Pending
NGT court case appeal No. 79/2018	NGT –New Delhi	Laxmi Chouhan Vs U.O.I & Others (Dipka OCP is Respondent No. 4)	challenging the EC from 31 to 35 MTY	Pending

During deliberations, the EAC noted the following:-

The proposal is for grant of ToR to the expansion project of Dipka opencast coal mine from 35 to 40 MTPA of M/s South Eastern Coalfields Limited in the existing mine lease area of 1999.386 ha. Stage one Forest clearance has been obtained for forest land of 409.056 ha and 0.093 ha forest land has been applied for stage-1 FC

The project was accorded Environmental Clearance dated 20.02.2018 for the expansion from 31 MTPA to 35 MTPA in an area of 1999.293 ha under clause 7(ii) of EIA Notification, 2006 and subsequent OM J-11015/224/2015-IA.II, dated 15/09/2017 issued for production capacity expansion up to 40% of PH capacity without Public Hearing with certain conditions.

To verify the status of compliance of EC conditions for Dipka opencast expansion project from 31 MTPA to 35 MTPA, the Regional Office of MoEF&CC, Nagpur has carried out the site inspection and submitted the monitoring report to this Ministry vide their letter No. 3-56/2009(Env)/4794 dated 19.01.2019, which was deliberated in the EAC meeting.

For further continuance of the project Environmental Clearance was accorded dated 20.03.2019 for a further period of one year.

**46.12.4** *The EAC, after deliberations, observed that Pre-feasibility Report (PFR) submitted by the project proponent was not as per Ministry's guidelines 30<sup>th</sup> December, 2010. Therefore, it was requested to submit the PFR and deferred the proposal.*

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### 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 (PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>x</sub> and NO<sub>x</sub>, noise, water (surface and groundwater), soil be submitted.
- ix. The wet washery should generally utilize mine water only. In case mine water is not available, the option of storage of rain water and its use should be examined. Use of surface water and ground water should be avoided.
- x. Detailed water balance should be provided. The break-up of water requirement as per different activities in the mining operations vis-a-vis washery should be given. If the source of water is from surface water and/or ground water, the same may be justified besides obtaining approval of the Competent Authority for its drawl.
- xi. The entire sequence of mineral production, transportation, handling, transfer and storage of mineral and waste, if any, and their impacts on air quality should be shown in a flow chart with specific points where fugitive emissions can arise and specific pollution control/mitigative measures proposed to be put in place. The washed coal and rejects should be transport by train as far as possible. Road transport of washed coal and rejects should generally be avoided. In case, the TPP is within 10km radius, it should be through conveyer belt. If transport by rail is not feasible because of the topography of the area, the option for transport by road be examined in detail and its impacts along with the mitigation measures should be clearly brought out in EIA/EMP report.
- xii. Details of various facilities proposed to be provided in terms of parking, rest areas, canteen etc. to the personnel involved in mineral transportation, workshop and effluents/pollution load from these activities should be provided.
- xiii. Impacts of CHP, if any, on air and water quality should also be spelt out alongwith Action Plan.
- xiv. O.M.no.J-II0I3/25/2014-IA.I dated 11<sup>th</sup> August, 2014 to be followed with regard to CSR

activities.

- xv. Details of Public Hearing, Notice(s) issued in newspapers, proceedings/minutes of Public Hearing, points raised by the general public and response/commitments made by the proponent along with the Action Plan and budgetary provisions be submitted in tabular form. If the Public Hearing is in the regional language, an authenticated English translation of the same should be provided. Status of any litigations/ court cases filed/pending, if any, against the project should be mentioned in EIA.
- xvi. Analysis of samples indicating the following be submitted:
  - Characteristics of coal prior to washing (this includes grade of coal, other characteristics of ash, S and heavy levels of metals such as Hg, As, Pb, Cr etc).
  - Characteristics and quantum of coal after washing.
  - Characteristics and quantum of coal rejects.
- xvii. Details of management/disposal/use of coal rejects should be provided. The rejects should be used in TPP located close to the washery as far as possible. If TPP is within a reasonable distance (10 km), transportation should be by conveyor belt. If it is far away, the transportation should be by rail as far as possible.
- xviii. Copies of MOU/Agreement with linkages (for stand-alone washery) for the capacity for which EC is being sought should be submitted.
- xix. Corporate Environment Responsibility:
  - a) The Company must have a well laid down Environment Policy approved by the Board of Directors.
  - b) The Environment Policy must prescribe for standard operating process/procedures to bring into focus any infringements/deviation/violation of the environmental or forest norms/conditions.
  - c) The hierarchical system or Administrative Order of the company to deal with environmental issues and for ensuring compliance with the environmental clearance conditions must be furnished.
  - d) To have proper checks and balances, the company should have a well laid down system of reporting of non-compliances/violations of environmental norms to the Board of Directors of the company and/or shareholders or stakeholders at large.
- xx. A detailed action Plan for Corporate Social Responsibility for the project affected people and people living in and around the project area should be provided.
- xxi. Permission of drawl of water shall be pre-requisite for consideration of EC.
- xxii. Wastewater /effluent should 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.

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**GENERIC TOR FOR AN OPENCAST COALMINE PROJECT for EC**

- (i) An EIA-EMP Report shall be prepared for..... MTPA rated capacity in an ML/project area of.....ha based on the generic structure specified in Appendix III of the EIA Notification, 2006.
- (ii) An EIA-EMP Report would be prepared for..... MTPA rated capacity to cover the impacts and environment management plan for the project specific activities on the environment of the region, and the environmental quality encompassing air, water, land, biotic community, etc. through collection of data and information, generation of data on impacts including prediction modeling for..... MTPA of coal production based on approved project/Mining Plan for.....MTPA. Baseline data collection can be for any season (three months) except monsoon.
- (iii) A toposheet specifying locations of the State, District and Project site should be provided.
- (iv) A Study area map of the core zone (project area) and 10 km area of the buffer zone (1: 50,000 scale) clearly delineating the major topographical features such as the land use, surface drainage pattern including rivers/streams/nullahs/canals, locations of human habitations, major constructions including railways, roads, pipelines, major industries/mines and other polluting sources. In case of ecologically sensitive areas such as Biosphere Reserves/National Parks/WL Sanctuaries/ Elephant Reserves, forests (Reserved/Protected), migratory corridors of fauna, and areas where endangered fauna and plants of medicinal and economic importance found in the 15 km study area should be given.
- (v) Land use map (1: 50,000 scale) based on a recent satellite imagery of the study area may also be provided with explanatory note on the land use.
- (vi) Map showing the core zone delineating the agricultural land (irrigated and un-irrigated, uncultivable land as defined in the revenue records, forest areas (as per records), along with other physical features such as water bodies, etc should be furnished.
- (vii) A contour map showing the area drainage of the core zone and 25 km of the study area (where the water courses of the core zone ultimately join the major rivers/streams outside the lease/project area) should also be clearly indicated in the separate map.
- (viii) A detailed Site plan of the mine showing the proposed break-up of the land for mining operations such as the quarry area, OB dumps, green belt, safety zone, buildings, infrastructure, CHP, ETP, Stockyard, township/colony (within and adjacent to the ML), undisturbed area -if any, and landscape features such as existing roads, drains/natural water bodies to be left undisturbed along with any natural drainage adjoining the lease /project areas, and modification of thereof in terms of construction of embankments/bunds, proposed diversion/re-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.	Landuse	Within ML	Outside ML	Total
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No.		area (ha)	area (ha)	
1.	Agricultural land			
2.	Forest land			
3.	Wasteland			
4.	Grazing land			
5.	Surface water bodies			
6.	Settlements			
7.	Others (specify)			
	TOTAL			

- (xii) Break-up of lease/project area as per mining plan should be provided.
- (xiii) Impact of changes in the land use due to the project if the land is predominantly agricultural land/forestland/grazing land, should be provided.
- (xiv) One-season (other than monsoon) primary baseline data on environmental quality - air (PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>x</sub>, NO<sub>x</sub> and heavy metals such as Hg, Pb, Cr, As, etc), noise, water (surface and groundwater), soil - along with one-season met data coinciding with the same season for AAQ collection period should be provided.
- (xv) Map (1: 50, 000 scale) of the study area (core and buffer zone) showing the location of various sampling stations superimposed with location of habitats, other industries/mines, polluting sources, should be provided. The number and location of the sampling stations in both core and buffer zones should be selected on the basis of size of lease/project area, the proposed impacts in the downwind (air)/downstream (surface water)/groundwater regime (based on flow). One station should be in the upwind/upstream/non-impact/non-polluting area as a control station. The monitoring should be as per CPCB guidelines and parameters for water testing for both ground water and surface water as per ISI standards and CPCB classification wherever applicable. Observed values should be provided along with the specified standards.
- (xvi) Study on the existing flora and fauna in the study area (10km) should be carried out by an institution of relevant discipline. The list of flora and fauna duly authenticated separately for the core and study area and a statement clearly specifying whether the study area forms a part of the migratory corridor of any endangered fauna should be given. If the study area has endangered flora and fauna, or if the area is occasionally visited or used as a habitat by Schedule-I species, or if the project falls within 15 km of an ecologically sensitive area, or used as a migratory corridor then a Comprehensive Conservation Plan along with the appropriate budgetary provision should be prepared and submitted with EIA-EMP Report; and comments/observation from the CWLW of the State Govt. should also be obtained and furnished.
- (xvii) Details of mineral reserves, geological status of the study area and the seams to be worked, ultimate working depth and progressive stage-wise working scheme until the end of mine life should be provided on the basis of the approved rated capacity and calendar plans of production from the approved Mining Plan. Geological maps and sections should be included. The Progressive mine development and Conceptual Final Mine Closure Plan should also be shown in figures. Details of mine plan and mine closure plan approval of Competent Authority should be furnished for green field and expansion projects.
- (xviii) Details of mining methods, technology, equipment to be used, etc., rationale for selection of specified technology and equipment proposed to be used vis-à-vis the potential impacts should be provided.
- (xix) Impact of mining on hydrology, modification of natural drainage, diversion and channeling of the existing rivers/water courses flowing through the ML and adjoining the lease/project and the impact on the existing users and impacts of mining operations thereon.
- (xx) Detailed water balance should be provided. The break-up of water requirement for the various mine operations should be given separately.

(xxi) Source of water for use in mine, sanction of the Competent Authority in the State Govt. and impacts vis-à-vis the competing users in the upstream and downstream of the project site. should be given.

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

(xxiii) Impact of blasting, noise and vibrations should be given.

(xxiv) Impacts of mining on the AAQ and predictions based on modeling using the ISCST-3 (Revised) or latest model should be provided.

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

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

(xxvii) Details of waste OB and topsoil generated as per the approved calendar programme, and their management shown in figures as well explanatory notes tables giving progressive development and mine closure plan, green belt development, backfilling programme and conceptual post mining land use should be given. OB dump heights and terracing based on slope stability studies with a max of 28° angle as the ultimate slope should be given. Sections of final dumps (both longitudinal and cross section) with relation to the adjacent area should be shown.

(xxviii) Efforts be made for 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 <sup>st</sup> Year)	5 <sup>th</sup> Year	10 <sup>th</sup> Year	20 <sup>th</sup> Year	24 <sup>th</sup> Year (end of mine life)*
1.	Backfilled Area(Reclaimed with plantation)					
2.	Excavated Area (not reclaimed)/void					
3.	External OB dump Reclaimed with plantation)					
4.	Reclaimed Top soil dump					
5.	Green Built Area					

6.	Undisturbed area (brought under plantation)					
7.	Roads (avenue plantation)					
8.	Area around buildings and Infrastructure					
	TOTAL					

\* As a representative example

Table 2 : Stage Wise Cumulative Plantation

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

\* As a representative example

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

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

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

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

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

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

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

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

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

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

(xxxix) Corporate Environment Responsibility:

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

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

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

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

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

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

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

TOTAL	TOTAL	Date of	Extent of	Balance	Status of
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ML/PROJECT AREA (ha)	FORESTLAND (ha)	FC	forestland	area for which FC is yet to be obtained	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 (PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>x</sub>, NO<sub>x</sub> and heavy metals such as Hg, Pb, Cr, As, etc), noise, water (surface and groundwater), soil - along with one-season met data coinciding with the same season for AAQ collection period should be provided.
- (xiii) Map (1: 50, 000 scale) of the study area (core and buffer zone) showing the location of various sampling stations superimposed with location of habitats, other industries/mines, polluting sources, should be provided. The number and location of the sampling stations in both core and buffer zones should be selected on the basis of size of lease/project area, the proposed impacts in the downwind (air)/downstream (surface water)/groundwater regime (based on flow). One station should be in the upwind/upstream/non-impact/non-polluting area as a control station. The monitoring should be as per CPCB guidelines and parameters for water testing for both ground water and surface water as per ISI standards and CPCB classification wherever applicable. Observed values should be provided along with the specified standards.
- (xiv) Impact of mining and water abstraction from the mine on the hydrogeology and groundwater regime within the core zone and 10 km buffer zone including long-term monitoring measures should be provided. Details of rainwater harvesting and measures for recharge of groundwater should be reflected in case there is a declining

trend of groundwater availability and/or if the area falls within dark/grey zone.

- (xv) Study on subsidence including modeling for prediction, mitigation/prevention of subsidence, continuous monitoring measures, and safety issues should be carried out.
- (xvi) Detailed water balance should be provided. The 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			



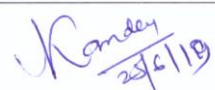

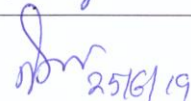

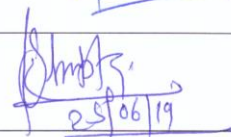


**GENERIC TORs FOR AN OPENCAST-CUM-UNDERGROUND COALMINE PROJECT**

- (i) An EIA-EMP Report would be prepared for a combined peak capacity of .....MTPA for OC-cum-UG project which consists of .... MTPA in an ML/project area of ..... ha for OC and .... MTPA for UG in an ML/project area of ..... ha based on the generic structure specified in Appendix III of the EIA Notification 2006.
- (ii) An EIA-EMP Report would be prepared for..... MTPA rated capacity to cover the impacts and environment management plan for the project specific activities on the environment of the region, and the environmental quality encompassing air, water, land, biotic community, etc. through collection of data and information, generation of data on impacts including prediction modeling for..... MTPA of coal production based on approved project/Mining Plan for.....MTPA. Baseline data collection can be for any season (three months) except monsoon.
- (iii) The ToRs prescribed for both opencast and underground mining are applicable for opencast – cum-underground mining.

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## ANNEXURE-5

**Participants in 46th Expert Appraisal Committee (EAC) (Thermal & Coal Mining) Meeting held on 25th June, 2019 on Coal Sector Projects**

Sr. No.	List of Participants Expert Appraisal Committee (Coal Mining)		Signature
1	Dr. Navin Chandra	Member	
2	Dr. N. P. Shukla	Member	 25.06.19
3	Dr. Jai Krishna Pandey	Member	 25/6/19
4	Dr. Sharachchandra Lele	Member	
5	Dr. G.P. Kundargi	Member	
6	Dr. N. S. Mondal	Member	 25/6/19
7	Dr. R.K. Giri	Member	
8	Dr. Manjari Srivastava	Member	
9	Dr. S.K. Paliwal	Member	
10	Dr. S.K. Gupta	Member	 25/06/19
11	Shri. N. Mohan Karnat	Member	
12	Shri. S. D. Vora	Member	
13	Shri S. K. Shrivastava	Member Secretary	

10/07/2019

[https://mail.gov.in/iwc\\_static/layout/shell.html?lang=en&3.0.1.2.0\\_15121607](https://mail.gov.in/iwc_static/layout/shell.html?lang=en&3.0.1.2.0_15121607)

Subject: Re: Draft MoM of 46th EAC Meeting held on 25th June,2019  
To: Munna Kumar Shah <munna.shah@gov.in>,  
"S.K. Srivastava" <sk.smree66@gov.in>

Date: 07/08/19 10:35 PM  
From: navin chandra <navinchandrari@yahoo.com>  
Reply-To: navin chandra <navinchandrari@yahoo.com>

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08/07/2019

Dear Dr. Srivastava/Dr. M.K. Shah Ji,

I have gone through the draft minutes of the June 2019 meeting sent by you. They are in order and ready for uploading on the website of the Ministry of Environment, Forest and Climate Change.

Regards,

(NAVIN CHANDRA)

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Dr. Navin Chandra,  
Chairman, Coal Mining & Thermal Power,  
MoEF&CC, GOI, New Delhi.  
Ex-Director General MPCST, Bhopal,  
Ex-Vice Chancellor, SSSUTM, Sehore (MP)  
(Retd.) Director (Actg.), CSIR-AMPRI, Bhopal  
Member, RC, CSIR-AMPRI, Bhopal.  
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