MINUTES OF THE 21st EAC (THERMAL & COAL MINING PROJECTS) MEETING HELD ON 18th -19th September, 2014 IN NEW DELHI

The 21st EAC (Thermal & Coal mining projects) Meeting was held on 18th -19th September, 2014 in New Delhi to consider the proposals in coal mining sector. The list of participants of EAC and the proponents are given at Annexure-1 and 2 respectively.

B. Confirmation of Minutes: The Committee confirmed the Minutes of the 19th EAC meeting held on 13th -14th August, 2014. However, clarity is required to be sought from the proponents on status of forest land for which the FC is under process with regard to Kusmunda Opencast expansion project of M/s South Eastern Coalfields Ltd and Coal Washery (4.0 MTPA in an ML area 13.706 ha) of M/s Vedanta Washery and Logistic Solutions Pvt. Ltd., Dist. Raigarh, Chhattisgarh.

C. The following proposals were considered:

21.1 Ghogha-Surka Lignite Mine (2.25 MTPA in 1355 ha) and Khadsaliya-I (1 MTPA in 711.42.47 ha) and Khadsaliya-II Lignite Mine (0.75 MTPA in 914.14.92 ha) of M/s Gujarat Power Corp. Ltd., Dist. Bhavnagar, Gujarat - EC based on TOR granted on 23.03.2011, amended on 30.05.2011 –Further Consideration.

21.1.1 The proposal is for Ghogha-Surka Lignite Mine (2.25 MTPA in 1355 ha) and Khadsaliya-I (1 MTPA in 711.42.47 ha) and Khadsaliya-II Lignite Mine (0.75 MTPA in 914.14.92 ha) of M/s Gujarat Power Corp. Ltd., Dist. Bhavnagar, Gujarat. The proposal was last considered in 12th EAC meeting held on 27th - 28th February, 2014. The Committee had sought following additional information for further consideration:

i. Necessary affidavit bearing testimony to the fact that the coal from this mine will be exclusively used for Padwa Power Plant would be submitted.
ii. The Clearances from CRZ angle should be submitted.
iii. The details of approved mine plan and mine closure plan be submitted.
iv. Flu gas De-Sulfurization (FGD) Plant be installed in the Power Plant for sulphur removal.
v. The feasibility of conveyor system for transport of lignite from mine CHP to Common delivery point of Ghogha be studied and details submitted.
vi. Details of issues raised in the Public Hearing along with the Commitment, Action Plan and Budgetary Provisions.
vii. A detailed CSR Action Plan along with budgetary provision be submitted.
viii. A detailed explanation on ingression of sea water to the mine be submitted along with the expert opinion from Roorkee University.
ix. The accreditation of BISAG be submitted along with the proof of evidence.
x. The details of disposal of brine after the treatment of saline water be submitted.
xi. The feasibility of providing housing to contractual labourers at mine site be examined and report submitted.
xii. The details on impact of mine on mangroves be submitted.
xiii. A sub EIA on the impact of mine activity on river /canal be prepared.
xiv. The details of internal dumping along with commitment from the top management for corrective action be submitted.
xv. The details of OB handling be given including refilling into the mine void and details of final state of internal dumps and mine voids..
xvi. The reason and source of increase in PM10 be examined & information submitted alongwith mitigatory measures.

xvii. A sturdy stonewall should be built around the toe wall.

xviii. Proper terracing of the dump slope, with maximum bench height of 30 meters

xix. Planting vegetation grass/creepers as early as possible on the overburden dump slopes.

xx. The vehicles must be maintained and checked thoroughly at least once a week by the competent/skilled technical personnel authorized for the purpose.

xxi. Road signals/signage should be provided at each and every turning point (haul roads) especially for the guidance of the drivers at the night.

xxii. Overburden and lignite should be placed in specifically designated dumps or stockpile sites.

21.1.2 The proponent made the presentation and further informed that:

i. **Lignite mine will be exclusively used from these mines to BECL pit head Padva power plant:** GPCL had submitted Irrevocable Indemnity bond on 22 December, 1997 to the Ministry of Coal, GoI. In response to this MoC vide letter no. 40024/1/94/-CML dated 15-10-1997 laid down the condition '*3(ii) The mining of lignite shall be undertake in by the applicant party themselves and the lignite to mined out shall be for exclusive generation of power* '' Industries & Mines Department ,Govt. of Gujarat Order No. MCR –(G-11)1318-CHH-1 dated 4 Ju,1998 condition No. 2.(j) '. *The lessee shall use all the Lignite excavated from the said area for captive use in its proposed Ghogha Thermal Power Plant in Bhavnagar District in Gujarat State*''.

ii. **CRZ Map:** CRZ Map Prepared by Space Application Centre (ISRO), Ahmadabad has been submitted

iii. The Mine plan & Mine Closure plan are approved by MoC for all the three mines as mentioned below:

a. Ghogha –Surka vide MoC letter no: 13016/3/2009-CA-1 dtd. 22.12.2009 (for mine closer plan kindly refer page no : 27/c of basic information)

b. Khadsaliya-I vide MoC letter No: 48024/2/94-CML/CA-1 dtd. 18.12.2009 (for mine closer plan kindly refer page no : 27/c of basic information)

c. Khadsaliya-II vide MoC letter No: 48024/8/2003-Lig/CA-1 dtd. 14.01.2010 (for mine closer plan kindly refer page no : 27/c of basic information)

iv. **Use of Circulating Fluidized Bed Combustion (CFBC) technology for de-sulphurization of SO_2 emission:** limestone will be injected in to the CFB boiler for sulphure capture. Bharat Heavy Electrical Limited (BHEL) has designed, CFB Boiler that can reduce SO2 up to 92-95%. FGD Technology reduces SO_2 emissions. Spray dry scrubber 85-92%, Wet limestone scrubber 92-98%, Seawater scrubbing 85-98%.

v. Transport by conveyor the possibility for opting Conveyor system for transporting lignite: GPCL has also worked out the estimated cost through Macmet Operation as mentioned below: Budgetary Price Rs. 92 crores + taxes, etc. Estimated transportation cost: Rs. 30 per ton.

vi. Compliance of Public Hearing held on19.07.2013:

a. **Mitigation measures for dust separation:** GPCL has requested from BECL to take appropriate precautionary measures to mitigate the pollution. BECL assured vide their letter no. BECL/GPCL/Lignite/Mining/4980 28-04-2014 dated that daily water sprinkling and MoEF directive will follow properly for suppression of dust pollution.

b. **Whether letter written in August 2012 is replied or not? :** This matter was referred to administrative department i.e. Energy & Petrochemicals Department, Government of Gujarat and EPD vide letter no.PRCH-1213-1095-K dated 23-02-2014 informed that GPCL acquired all 1415 hector of private land for the mining of lignite through consent award. As regards the contention in the representation about returning the land to the original land owner ,it may be mentioned that the existing land acquisition Act,1894, does not contain any such provision regarding returning of the land to the original land owners ,if the same is not utilized within 12 years.

c. **Reply to the queries of Shri Kanaksinh Lakhubha Gohil Village- Badi :** Regarding employment of local people in the BECL under developing project GPCL had inquired vide GPCL letter no. GPCL/MIN/PH/02/38136 dated 06-08-2014 keeping views of the villagers. In this regard BECL informed vide their letter dated 27--08-2014 that around 167 people from local area has been employed by BECL directly or indirectly in the project activities. In addition to empower local youth, BECL extended scholarship to the girls studying in secondary or higher secondary and candidates studying in ITI.

d. **Reply to the quarries of Shri Khodubha Kesubha Village- Badi:** This matter is not pertaining to GPCL because the said survey No. 52 has not been acquired by the GPCL.

e. **Corporate Social Responsibility CSR Action plan**: Phasing of activity wise capital investment has been submitted. The Corporation will adopt major strategies for implementing CSR, viz. Training to personnel by involving them in the local jobs Introducing eco-friendly technology; Prevention of hazardous incidents and has emergency preparedness plans ; Identification of priorities & advises for upliftement of the society; Divulge and publicize the company's policy; Involve and generate awareness among the local communities in and around project areas for participating in the development plan; Hierarchical System to deal with Health Issues; GPCL has already spent about Rs. 3 crores towards CSR Activities such as drainage, road construction, domestic provisions, for BPL families, plantation etc. before the mining started.

vii. **Expert opinion** has been submitted by National Institute of Hydrology, Roorkee which inferres that the level difference between the coast and mining area, presence of clay layers and concluded that the mining in the lease area (as per plan) should not induce any sea water intrusion in the area. NIH, Roorkee recommended that, as per the mining plan, Shatrunji canal has to be shifted towards the eastern border of the mining lease area. Further, the water discharge in the canal be maintained throughout the year (which is only during summer season presently). Also the access pumped groundwater from the mining area may be discharged into the canal for seepage and thereby recharge of the aquifer between the mining boundary and the sea coast. This measure will further reduce the chances of sea water ingress, if any.

viii. With regard to other Observations made by EAC, the proponent has submitted that :

a. The studies for Sub-EIA for river, Mangroves, brine water treatment etc. are in progress.
b. The work has been entrusted to M/s Kadam consultant alongwith Anna University and survey of India, the work is in progress Reports will be submitted shortly.
c. Proper management of internal dumping.
d. Sturdy Stonewall will be built around the toe wall.
e. Proper terracing of the dump slops ,with maximum bench height of 30 meters will be carried out.
f. Vegetation grass/creepers as early as possible on the overburden dump slop will be grown
g. The Vehicles will be maintained and checked thoroughly at least once a week by the competent person authorized for the purpose by the Management
h. Road signs should be provided at each and every turning point especially for the guidance of the drivers at the night.
i. Overburden & Lignite will be kept at a proper placed with management and monitoring at a specially designated dumps and stockpiles respectively at the site.

21.1.3 The EAC has received a representation from one of the NGOs which raised issues with regard to (i) one EIA report for three mines; (ii) Cumulative impact assessment; (iii) Consideration of Issues Raised at Public Consultation; (iv) GPCL did not inform of mining at the time public hearing for TPP; (v) Air, Water & Noise Pollution and Court Case. The proponent has responded to the observations and further submitted that:

i. GPCL prepared the combined EIA/EMP report as per the ToR approved by MoEF vide letter no : J-11015-202-2010-IA.II(M) dated 23.03.2011

ii. The cumulative impact assessment has been carried out and incorporated in the combined EIA/EMP report.

iii. All the issues raised during the Public Hearing held under the chairmanship of Collector Bhavnagar on 19-07-2013 has been addressed and deliberated in length during the Public Hearing.

iv. In the Minutes of the Meeting of the Public Hearing held on 26-07-2009 for Thermal Power Plant (placed at Annexure-III, page no. 36 to 91), in the statement showing participants present during the public hearing signed by the villagers it is clearly mentioned that " Public hearing has been fixed for the Project covered under category A, M/s Bhavnagar Energy company Ltd; for their proposal of upcoming new 500 MW Lignite Based Power Plant ". In addition to this the Paryavaran Mitra has raised issued for using lignite for the power plant vide mail dated 25-07-2009, 1:53 pm and same was replied by BECL on 28-07-2009 (Annexure E1 of the Public Hearing, page no: 88 to 91), It is further stated that as per the details given by the power plant project proponent i.e. M/s BECL and information included in power plant EIA report with respect to fuel resource i.e. lignite mines as pit head power plant etc. are extracted from the BECL EIA report of 500 MW capacity and has been enclosed (Ref: page no.2.4 section 2.2.4, fig 2.2 & 2.3,Section 2.7 to 2.8, placed at Annexure-IV, page no. 92 to 98) for kind consideration as a confirmation towards the proposed lignite mines are purely for captive use for the pit head power plant. Thus in view of the details as mentioned above, the matter pertaining to mining at the time of Public Hearing was well informed.

v. The details pertaining to Air, Water & Noise Pollution are covered under the EIA/EMP prepared by NEERI & M/s. Kadam Consultant as per the guidelines of MoEF as per the ToR, the details are already uploaded on the MoEF website. The study for the reason and source of increase in PM10 is in progress by M/s. kadam consultant. The report will be submitted in 2 to 3 months.

vi. There is no Court Case pending before any Court in the country, GPCL and BECL has submitted the fact in writing before the EAC during the meeting. A certified copy of the judgment between the BECL and its contractor disposed by Hon'ble High Court of Gujarat vide judgment dated 25-08-2014 for special civil petition no: 10443 of 2014 is placed at Annexure **- V** , page no: 99 to 103.

vii. The proposed pit head power plant of M/s BECL will adopt CFBC technology which will have efficiency to control SO2 emission to the order of 92 to 95 percent from the flue gas (as per the details provided by BHEL). However, NEERI in its study for power plant had considered about 90% control of SO2 on conservative side. With CFBC technology and the balance 10% SO2 works out to be 756gm/s emission rate which was considered for prediction of SO2 impact from power plant on the surrounding air quality. Based on this emission rate, the maximum ground level concentration of SO2 has been predicted as 19.8 micro gram per cubic meter in 24 hrs which is well within the prescribed NAAQ standards. The relevant details corresponding to SO2 extracted emission made as well as the impact prediction from BECL power plant EIA report are attached as Appendix-I (Ref: BECL power plant EMP report, Chapter 4, Section 4.2.1,Section 4.2.1.2,Table 4.2.1.1 to 4.2.1.3,Fig 4.2.1.1,4.2.1.3,Secton 4.2.1.4, placed at Annexure - VI, page no: 104 to 116) for kind consideration in substantiations to above statement. Based on these details, Ministry of Environment and Forest had accorded environmental clearance for establishing 2x250 MW lignite based thermal power plant at Padva, in Bhavnagar Distt; in Gujarat using CFBC boiler (kindly refer point no : 2 of MoEF clearance letter no: J-13011/39/2008-IA.II(T) dated 10.02.2010 placed at Annexure - VII page no. 117 to 122). In pursuance to the condition of the approval letter 10.02.2010, BECL had entered into an agreement with BHEL on 03-02-2011 placed at Annexure - VIII, page no: 123 to 158 as per the schedule of performance guarantee the values inclusive of design, manufacturing and all other

tolerances including measurement uncertainty for SO_x , CO and NO_x as well as ESP outlet. As on August, 2014 overall 84 % erection work has been completed and synchronization of unit-1 is scheduled by end December, 2014 from of the power plant will commissioned.

viii. The name of local persons, the details of services/ activities and name of the village giving details of 181 local people has been submitted.

ix. GPCL accepts the suggestion made by the EAC with respect to the use of a closed belt conveyor system for transport of lignite from Ghogha - Surka to the TPP. This has been done considering environmental / health costs of dust suppression due to the movement / emissions of air pollutants in the Study Area due to the use of dumper trucks (which was originally proposed in the project documents) for conveying coal from mine to Common point of delivery (GPCL).

x. The detailed report prepared by M/s. Kadam will be submitted in two to three months, however, the budgetary provision kept for CSR has been submitted. GPCL had already spent Rs. 3 crores for drainage and road work in Bhavnagar district. However, a budgetary provision of Rs. 1.0 Crore has been made for girl's toilet/sanitation. Further, an additional suitable provision for the annual maintenance of the same as a part of CSR activity shall be made.

xi. The clarification on the recommendation of committee NIH, Head of the department, Hydrological Investigations Division has submitted. Further as suggested by the committee M/s Kadam Environmental Consultants (KEC) shall provide a report for providing suitable controls to be deployed in the unforeseen situation that that there could be sea water ingress. To the extent feasible and relevant to the subject mining leases. Such controls which could include: pumping of water into the soil and / or injecting water to maintain pezeometric pressure other suitable means of preventing sea water ingress. The report will be submitted with 2 to 3 month time.

xii. It is confirmed that in addition to the CRZ mapping already carried out by M/s Space Application Centre, ISRO, GoI (an accredited agency to undertake CRZ Mapping by the MoEF) and details of the map prepared were submitted during the EAC meeting. As suggested GPCL shall undertake and provide to the MoEF, within 3 months, details with respect to additional CRZ Mapping in 1:4000 scale (by IRS, Anna University or an equivalent MoEF accredited agency in co-ordination with our Consultants, namely Kadam Environmental Consultants). The additional outputs of such mapping will include the following:

    a. Details about mangroves within the study area
    b. Clear demarcation with respect to the applicability of the CRZ Notification or otherwise with respect to streams found in the study area along with spatial demarcation of the same, if any
    c. Distance of both, the nearest mangrove and the nearest CRZ area from the mining leases.

Further the proponent has also submitted on other issues as was raised by the EAC as following;

xiii. As per the EAC's directions, a study covering the feasibility / impacts of diversion of the Malesari, Ramdasiya Rivers, Shatrunji canal shall be studied thoroughly in the sub-EIA prepared by M/s. Kadam along with river diversion plan and said study will be submitted within 2-3 months.

xiv. There is no brine water is expected at proposed lignite mines. As per the hydrogeology of the area, mine waste water consists only mine pit water and acidic mine drainage. The details given with respect to the pH ,suspended solid and type of treatment required management of mine waste water are given in Ghogha - Surka, Khadsaliya-I & II lignite EIA/EMP report at page 4.14 to 4.22 of chapter 4 which are placed at Annexure - XII, page no: 170 to 178. However, GPCL will carry out the necessary feasibility work for the waste water treatment from mine and workshop. As apprised during the EAC meeting that the some of the work is already carried out by M/s. Kadam consultant and report preparation is in progress, however, the necessary tests viz. Toxicity Characteristics Leaching Procedure (TCLF) etc. will be carried out. The final report will be submitted within 2 to 3 months.

xv. GPCL hereby commits that the minimum possible voids will be created at end of mine closure. It will be GPCL's endeavor that as far as possible only one void (at Khadsaliya II) will be created. GPCL will explore the possibility of completely foregoing external OB dumps.

xvi. As suggested by the committee we agree that the external dumps will be filled in the voids and no external dump will be left. After reclaiming the land at the end of the mine life, the land leased by the Government of Gujarat will be handed over to the Govt. Thereafter, as per the policy of Government of Gujarat the land will be utilized for the activities for wellbeing of local inhabitants as per policy of Government.

21.1.4 The Committee after deliberations recommended the project for granting Environment Clearance subject to following specific conditions:

i. Coal will be transported through Conveyor belt.
ii. Land acquisition should be as per land acquisition Act.
iii. Water discharge in the canal be maintained throughout the year. Also the access pumped ground water from the mining area may be discharged into the canal for seepage and thereby recharge the aquifer between the mining boundary and the sea coast .
iv. Mine water should be treated with brine before discharged into sea.
v. The mine void should be backfilled to ground level which shall be used for agriculture purpose or may be used as per the outcome of consultation with the villagers and the state Government
vi. Out of the 107 Ha to be backfilled, 50 Ha should be left as external dump with an height of 10 m. All external O.B. dumps will be rehandled into the mine void and internal dump brought to the ground level. Only one final mine void will be left in Khadsaliya-II of depth of about 10 m. The PP shall submit the rehandling plan to the Ministry.
vii. There shall be no diversion of any rivers/natural water bodies/ nallahs etc. and should be protected.
viii. The issue of preparing sub-EIA, as discussed in the 12th EAC dated 27-28 February, 2014, is not required and the minutes of said meeting be amended amendment accordingly.
ix. An additional provision for the annual maintenance of girl's toilet/sanitation, as a part of CSR activity, shall be made.

21.2 Siarmal Opencast Project of (40.0 MTPA normative and 50.0 MTPA peak in an ML area of 2475.47 ha) M/s Mahanadi Coalfield Limited, located at District-Sundargarh, Orissa –TOR.

21.2.1 The proposal is for seeking TOR for Siarmal Open cast Project of (40.0 MTPA normative and 50.0 MTPA peak in a total Project area of 2475.47 ha (of which the ML area is 2185.47 Ha) of M/s Mahanadi Coalfield Limited**,** located at District-Sundargarh, Orissa.

21.2.2 The proponent made the presentation and informed that:

i. The title of the project requires correction with respect to land area i.e. "ML area" shall be replaced with "total Project area" of 2475.47 ha.
ii. Siarmal Opencast Project has been formulated within the geological blocks of Siarmal, Siarmal extension and Banapatra block. Siarmal OCP is located in south of Basundhara west OCP, an ongoing project of MCL in Sundergarh, Odisha.
iii. It is the new open cast mine project having total project area of 2475.47 ha and mining lease area 2185.47 Ha).
iv. The latitude and longitude of the project are 22^{o} 01' 19" to 22^{o} 03' 59.99" North and 83^{o} 37' 09" to 83^{o} 42' 59.58" East respectively.
v. There is no joint venture and there will be basket linkage.

vi. The land usage of the project will be as follows:

Pre-Mining:

Sl.	Item	Forest (Ha.)	Non-Forest (Ha.)	Total Area (Ha.)
1.	Quarry excavation	249.58	1296.74	1546.32
2.	External OB Dump	17.40	367.44	384.84
3.	Embankment	25.92	30.41	56.33
4.	Infrastructure	116.62	6.58	123.20
5.	Forest Safety zone (7.5 m around forest)	0.47	-	0.47
6.	Undisturbed Blasting Danger Zone	10.93*	74.31	74.31
	Mining lease area	**409.99**	**1775.48**	**2185.47**
7.	Residential colony	-	70.00	70.00
8.	Rehabilitation site	-	140.00	140.00
9.	Diversion of highway	-	28.00	28.00
10.	Rail link from project to Jharsuguda	-	52.00	52.00
	Total outside mine lease area	**-**	**290.00**	**290.00**
*not considered for diversion				

Post- Mining:

Post-mining land use :							
Sl.no	**Category**	**Land use (in ha)**					
		Plantation	**Water body**	**Dip side slope & haul road**	**Undisturbed**	**Built-up area**	**Total**
1	Quarry excavation	1234.00*	67.00	245.32	-	-	1546.32
2	External OB Dump	384.84*	-	-	-	-	384.84
3	Embankment	11.30	-	-	45.03	-	56.33
4	Infrastructure	24.70	-	-	-	98.50	123.20
5	Forest Safety zone (7.5 m around forest)	0.47	-	-	-	-	0.47
6	Undisturbed Blasting Danger Zone	**14.90**	**-**	**-**	**59.41**	**-**	**74.31**
	Mining Lease Area	**1670.21**	**67.00**	**245.32**	**104.44**	**98.50**	**2185.47**
7	Residential colony	14.00	-	-	-	56.00	70.00
8	Rehabilitation site	28.00	-	-	-	112.00	140.00
9	Diversion of highway	5.60	-	-	-	22.40	28.00

10	Rail link from project to Jharsuguda	10.40	-	-	-	41.60	52.00
	Total	**1728.21**	**67.00**	**245.32**	**104.44**	**330.50**	**2475.47**
*Plantation/grass carpeting will be done in some area which may be re-handled during mine closure.							

Core area:

Sl. No	Item	Forest (Ha.)	Non-Forest (Ha.)	Total Area (Ha.)
1.	Quarry excavation	249.58	1296.74	1546.32
2.	External OB Dump	17.40	367.44	384.84
3.	Embankment	25.92	30.41	56.33
4.	Infrastructure	116.62	6.58	123.20
5.	Forest Safety zone (7.5 m around forest)	0.47		0.47
6.	Undisturbed Blasting Danger Zone	10.93*	74.31	74.31
	Mining lease area	**409.99**	**1775.48**	**2185.47**

vii. The total geological reserve is 1895.43 MT. The mineable reserve 1616.22 MT, extractable reserve is 1547.82 MT. The per cent of extraction would be 82 %.

viii. The coal grade is B to G (mostly E,F,G (G4 to G17)).The stripping ratio is 1.47 cum/t. The average Gradient is 3.7deg to 4.4 deg. There will be 16 seam/sections (Ib Bottom to Lajkura-IV) with thickness ranging upto 1m -27 m.

ix. The total estimated water requirement is 9.11 MLD (2.19 MLD Potable + 6.92 MLD industrial) m^3/day. The level of ground water ranges from 2.2 m bgl to 5.12 m bgl (buffer zone during Pre-monsoon. - From 1.70 m bgl to 4.86 m bgl during Post- monsoon.

x. The Method of mining would be by Opencast mining with Shovel-dumper & Ripper dozer in coal/OB removal & Surface Miner, Front end loader, dumper in coal extraction.

xi. There are two external OB dump with Quantity of 184.72 MCum (incl. 1.51 MCum in embankment) in an area of 384.84 ha with height of 82 to 85 m above the surface level and two internal dump with Quantity of 2084.97 Mm3 (77.18 Mcu.m in void of Basundhara (West) OCP) in an area of 1234 Ha (597 Ha upto ground or above ground level) at post mining stage and 996.63 Ha upto ground level at post closure.

xii. The final mine void would be in 549.69 Ha at post- closure (partially filled left out void) with depth of 360 m at post- mining and 168m at post-closure and the total quarry area is 1546.32 Ha. Backfilled quarry area of 996.63 Ha shall be reclaimed with plantation. A void of 549.69 ha with depth of 155 m which is proposed to be converted into a water body.

xiii. The **life of mine** is 49 years including 4 years of construction.

xiv. **Transportation**: Coal transportation by dumpers within mining benches upto in pit receiving arrangement. In remaining quarry area transportation by in pit conveyors. Conveyor transport will be continued from pit top to Railway dispatch arrangement. Loading of coal onto rail wagons by high speed mechanized rapid loading system.

xv. There is **R & R** involved. There are 2454 PAFs.

xvi. **Cost**: Total capital cost of the project is Rs. 3756.36 Crores. CSR Cost Rs. 160.75 crores/year. R&R Cost 551.25 crores. Environmental Management Cost Rs. 624.92 crores,

xvii. **Water body**: Basundhara nala/river and Chaturdhara nala in northern boundary and Chattajhor nala in the eastern boundary of the block.

xviii. **Approvals**: Ground water clearance is not applicable as the area is not falling under critical area

as per CGWA. Board's approval obtained on 29.05.2014. Mining Plan submitted for approval.

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

xx. **Forestry issues**: Total forest area involved 409.99 Ha for mining. Applied for forest clearance. Forest clearance is in process (State Sl. No.:703/14 dt: 14/08/2014).

xxi. Total **afforestation** plan shall be implemented covering an area of 109.73 ha at the end of mining. With a density of tree plantation 2500 nos trees/ ha of plants.

xxii. There are no **court cases/violation** pending with the project proponent.

21.2.3 The EAC expressed its deep concern that the Proponent has not suo-motto revealed that the project was earlier under the consideration of the Hon'ble Supreme Court. Further, the proponent while furnishing information to the EAC has clearly stated that there are no court cases against the proponent. This construes as suppression of information. The Committee has desired that detailed written submission followed by the presentation be made by the proponent on the recommendations/directions and action taken on the directions of the Hon'ble Supreme Court. The EAC further requested the Member Secretary to bring this matter to knowledge of the CMD, MCL and the Ministry of Coal.

21.2.4 The Committee after deliberations has sought the following information for further consideration.

i. A letter from the Chief Wild Life Warden of Odisha stating that there is no Elephant Corridor in the project area.

ii. Certified copy stating that there are no irrigation projects in the vicinity and that the proposed project area grows only single crop.

iii. Details of embankment void and external OBD be submitted in the EIA/ EMP report .

iv. Details of the survey of land vis-a-vis compensation made as per the Supreme Court's Judgment be furnished.

v. Details of land management be submitted.

21.3 Kistaram Opencast Project of (2.00 MTPA in ML area of 435.68 Ha) M/s The Singareni Collieries co. Limited, located at dist. Khammam, Telangana.–TOR.

21.3.1 The proposal is for seeking TOR for Kistaram Opencast Project of (2.00 MTPA in ML area of 435.68 Ha) M/s The Singareni Collieries co. Limited, located at dist. Khammam, Telangana.

21.3.2 The proponent made the presentation and informed that:

i. The SCCL is a Government Company being a Joint undertaking of the Govt. of Telangana and Govt. of India having 51% and 49% equity respectively. The mining operations are spread over 4 district of Telangana viz., Adilabad, Karimnagar, Warangal and Khammam. The SCCL is operating 16 Opencast Mines and 32 Underground mines.

ii. MoEF issued the Terms of Reference (ToR) for Kistaram Opencast Project vide Lr. No. J-11015/295/2009-IA (M), Dated 23.11.2009 for Production capacity of 2.00 MTPA in the ML area of 435.68 Ha. The project did not progress due to socio-political issues in view of State bifurcation and non-availability of Compensatory Afforestation land for the diversion of forestland involved in the project

iii. Now, SCCL is proposing to take up the proposed Kistaram Opencast Project as the Forestland diversion application is under process at MoEF, New Delhi

iv. The prescribed ToR is valid for a period of four years i.e. up to 22.11.2013 as per O.M No J-11013/41/2006-IA.II(I) dt. 22.03.2010

v. The time limit for validity of ToR prescribed earlier is lapsed and there is no change in the project

parameters. Hence, it is proposed to obtain fresh ToR with production capacity of 2.00 MTPA in ML area of 435.68 Ha)

vi. It is a new opencast mine project.

vii. The latitude and longitude of the project are 17^0 13' 14" to 17^0 13' 57" and 80^0 46' 55" to 80^0 47' 28" respectively.

viii. There is no joint venture.

ix. Coal Linkage: TGENCO, APGENCO.

x. The land usage of the project will be as follows:

Land requirement – Activity wise:

Activity	Forest Land	Non-Forest Land	Total
Quarry area	200.72	27.30	228.02
External dump	57.73	94.25	151.98
Top soil dump (Temp)	13.98	0.78	14.76
Service Buildings	4.36	0.00	4.36
CHP & Stock yard	8.65	0.00	8.65
Safety Zone	0.00	27.91	27.91
Total	285.44	150.24	435.68

Pre-Mining:

Land Use Land Cover class		Area of Sub Class	
		Area in Ha	% of Usage
Forest Land		285.44	65.5
Agriculture		124.02	28.5
Single Crop land	59.22		
Fallow	38.20		
Plantation	26.59		
Surface Water		10.65	2.5
Built-Up Land		2.28	0.5
Waste Land		13.29	3.0
Total Area		**435.68**	**100**

Post- Mining:

Post Mining (Conceptual) Land use pattern of ML area (Ha.)					
Sl. No.	Description	Land Use Details (Ha.)			
		Plantation	water body	Other uses	Total
1	Top Soil dump	12.91	-	1.85	14.76
2	External OB dump	140.77	-	11.21	151.98
3(a)	Excavation (Backfilled area)	90.31	-	-	90.31
3(b)	Excavation (Void area)	-	137.71	-	137.71
4	Built up area / Infrastructure	2.35	-	2.01	4.36
5	CHP& Coal stock yard.	7.45	-	1.20	8.65

6.	Safety zone	18.66	9.25		27.91
	TOTAL	**272.45**	**146.96**	**16.27**	**435.68**

Core area:

SI. No	Description	Forest Land	Non-Forest Land	Total
1	Quarry including drain, bund etc., around Quarry	200.72	27.30	228.02
2	External Dumps including drain, toe wall etc around dumps: a) Top soil dump b) Hard OB dump	 13.98 57.73	 0.78 94.25	 14.76 151.98
3	Service Buildings	4.36	0.00	4.36
4	Coal Handling Plant & Coal stock yard	8.65	0.00	8.65
5	Safety Zone	0.00	27.91	27.91
	Total	285.44	150.24	435.68

xi. The total geological reserve is 24.05 MT. The mineable reserve 21.61 MT, extractable reserve is 21.61 MT. The per cent of extraction would be 89.85%.

xii. The coal grade is G-7 & G11. The stripping ratio is 6.00 Cum/tonne. The average Gradient is 1 in 3.9 to 1 in 12. There will be 7 seams with thickness ranging from 0.29m to 8.72 m.

xiii. The total estimated water requirement is 4200 m3/day. The level of ground water ranges from 0.85 m to 4.81 -m.

xiv. The Method of mining would be Opencast.

xv. There is two external OB dump with Quantity of 0.74 M.Cum (Top Soil) + 73.58 M .Cum (Hard OB) Mbcm in an area of 14.76 Ha.(Top Soil) + 151.98 Ha (Hard OB dump) with height of 120 meter above the surface level and One internal dump with Quantity of 0.27 M.Cum (Top Soil) + 54.99 M .Cum (Hard OB) in an area of 90.31 ha.

xvi. The final mine void would be in 137.71 Ha with depth of 35 m. and the Total quarry area is 228.02 Ha. Backfilled quarry area of 90.31 Ha shall be reclaimed with plantation. A void of 137.71 ha with depth of 35 m which is proposed to be converted into a water body

xvii. The **life of mine** is 13 Years.

xviii. **Transportation**: Coal transportation in pit by Dumpers, Surface to Siding by Trucks and loading at siding by SILO into wagon.

xix. There is **R & R** involved. There are 404 PAFs.

xx. **Cost**: Total capital cost of the project is Rs. 242.29 Crores. CSR Cost Rs. 5 per Tonne. R&R Cost 19.525 Crores. Environmental Management Cost (capital cost Rs.(Direct 1.42 Crores and Indirect 8.50 Crs), Revenue cost Rs. 18/Ton).

xxi. **Water body**: No river / Nallah flowing near or adjacent to the proposed mine.

xxii. **Approvals**: Ground water clearance shall be obtained. Board's approval: Feasibility report has been approved by the Board vide Minute No 499:5:10 of Board of Directors meeting held on 1.11.2010. Mining plan has been approved vide Lr No 13016/1/2012-CA-II dated 21st March, 2014. Mine closure plan is an integral part of mining plan.

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

xxiv. **Forestry issues**: Total forest area involved 285.44 ha for mining. Applied for forest clearance.

Regional office inspection completed and the application is forwarded to 'The Inspector General of Forests, GoI, MoEF, New Delhi vide Lr No 2373/FOR.I(1)/2014 dt 28.04.2014. Awaiting for FAC meeting.

xxv. Total **afforestation** plan shall be implemented covering an area of 272.45 ha at the end of mining. Green Belt over an area of 50.62 ha. Density of tree plantation 2500 trees/ ha of plants.

xxvi. There are no **court cases/violation** pending with the project proponent.

21.3.3 The Committee after deliberations has recommended for granting TOR with the following specific TORs in addition to other general and generic TORs.

i. Ensure water quality is maintained for drinking purpose.
ii. The mine void should be used for pisciculture purpose.
iii. The external OBD should be rehandled to the maximum and should be grown with the native species.

21.4 Cluster 12 comprising of 19 mixed mines of a combined production capacity of 27.16 MTPA with a peak production of 31.83 MTPA in a combined ML area of 11164 ha of M/s Eastern Coalfields Limited, located in Raniganj Coalfields, in Tehsil Haripur Block, dist. Burdwan, West Bengal - EC based on TOR granted on 15.06.2011 & Modified on 02.11.2011 - Further Consideration.

21.4.1 The proposal is for Cluster 12 comprising of 19 mixed mines of a combined production capacity of 27.16 MTPA with a peak production of 31.83 MTPA in a combined ML area of 11164 ha of M/s Eastern Coalfields Limited, located in Raniganj Coalfields, in Tehsil Haripur Block, dist. Burdwan, West Bengal. The proposal was last considered in 17th EAC meeting held on 23rd -25th July, 2014. The Committee had sought following additional information:

i. Action Plan for Issues raised during the Public Hearing such as Provision of Water Supply to Villages; Dust suppression; Spillage of coal during transit – obnoxious emissions from dumpers; Improvement of road condition; Damage to houses due to ground vibration generated from mine blasting in OC mines; Backfilling of OC voids after exhaustion and reclamation – fencing of quarries to prevent accidents; Intensive Plantation programme – plantation of fruit bearing trees.
ii. Arrangement of street lighting; Arrangement of solar lighting; Repairing of local village roads, schools; Providing transport facility for school students of villages; Proper utilization of CSR fund for development; Holding medical camps; Employment to local youth etc.
iii. Cluster Specific CSR Programme.
iv. Layout of existing OC mines.
v. Action plan for measures for improving soil fertility/acidity/alkalinity.
vi. Proponent need to correct the soil texture classification.
vii. Examine the feasibility of combine coal transportation among the clusters and also constructing a SILO.

21.4.2 The proponent made the presentation and further informed that:

i. Action plan for the issues raised during the PH are as follows:
    a) Capital provisions to be completed by end of FY 2016 – 17 for providing Water Supply to Villages.
    b) Capital provisions to be completed by end of FY 2018 – 19 for dust suppression.
    c) Immediate action shall be taken for Spillage of coal during transit or obnoxious emissions from dumpers.

d) Capital provisions to be completed by end of FY 2018 – 19 for improvement of road condition.
e) Latest technique shall be used for blasting to reduce ground vibration.
f) Committed to Backfilling of OC voids after exhaustion and reclamation, fencing of quarries to prevent accidents.
g) Committed to intensive Plantation programme /plantation of fruit bearing trees.
h) Committed to install street lighting.
i) Arrangement of solar lighting shall be completed within FY 2015 – 16.
j) Repairing of local village roads, schools and hospitals, transport facility for school students of villages are under progress.
k) Fund of Rs 2706.84 Lakh per annum has been earmarked for children's park.
l) Rs 1358 Lakh / annum have been earmarked for holding medical camps from CSR fund.
m) 5000 direct employments envisaged within next 5 years.
n) Compensations are speedily processed. Land losers are provided employment as per CIL's R & R Policy.
o) Rs 2150 Lakh has been earmarked for establishing sedimentation tanks in mines, STPs at Sonepur – Bazari OCP and Jhanjra UGP Colonies and for improving sanitation.

ii. A time-bound CSR plan has been chalked out in consultation with village level committees and expenditure will be made accordingly. The programme will also include issues raised by the public during Public Consultation process.
iii. Layout of existing OC mines has been submitted.
iv. Submitted action plan to increase the soil fertility: Plants that are grown in a sandy loam soil need frequent irrigation and fertilization & mix organic matter into the soil.
v. Incorporating a 2- to 4-inch layer of compost or peat moss over the area can significantly improve the ability of sandy loam soil to hold nutrients and water.
vi. Soil texture classification has been corrected: A loamy soil has 40% sand 20% clay and 4% silt. A sandy loam has 60% sand, 10% clay and 30% silt. Loamy sand contains 70 to 90 percent sand, 0 to 30 percent silt and 0 to 15 percent clay.
vii. With regard to feasibility of combine coal transportation among the clusters and also constructing a SILO: Silo loading was initially proposed at the 2 new upcoming railway sidings at SBOCP and Jhanjra UGP. However, upon further consideration, silo loading can be extended to 3 more Railway sidings at Dalurband UG & OC, Madhaipur UG and Kumardih B UG.

21.4.3 The Committee after deliberations recommended the project for granting Environment Clearance subject to following specific conditions:

i. Coal be transported by rail only.
ii. 3 tier green belts should be raised around the railway sidings and along road sides to prevent propagation of dust and noise.
iii. Stowing and depillaring shall be as per the recommendations of the DGMS.
iv. The proponent must comply with the Raniganj Action Plan.
v. Trees with deep rooted system should be planted so as to prevent soil erosion.
vi. River/nallahs should be desilted and restored back to functional state.
vii. Independent network of railway sidings inside cluster be developed. Railway sidings should be constructed at the earliest and till then proponent ay use mechanically covered trucks for transportation of coal.
viii. Wild life conservation plan be prepared and submitted with the approval of the State Govt.
ix. Proponent may use high resolution image of all clusters for evaluating land use, plantation etc.
x. No transportation of coal by road outside cluster boundary.
xi. Separate drainage pattern be provided.

xii. Sand stowing must be used as recommended by CMPDI.
xiii. With mining to be extended to seams below the present levels of workings, these areas can be subjected to further subsidence in future. Action plan for prevention and mitigation of subsidence be prepared for implementation.
xiv. The OC patches to be operated will be completely filled-up after exhaustion of reserves and reclaimed with plantation.
xv. There shall be no residual OB dump after the mining.
xvi. After completion of mining activities, the subsided areas shall be graded and planted upon.
xvii. Rehabilitation of the households falling within this cluster to be carried out in two phases within 10 years.
xviii. The unstable areas within the cluster will be brought under plantation after the population residing over these areas are rehabilitated under the Master plan for Raniganj Coalfield to be implemented by ADDA.
xix. The land excavated after mining must come back to original condition for agricultural purpose.
xx. A sub-Committee shall visit all the clusters.
xxi. The mine void should be used for pisciculture purpose.
xxii. Water discharged from the mine should be as good as surface drinking water.
xxiii. Acasia plants be interspersed with native species.
xxiv. Marketing strategies involving women work force be promoted.
xxv. Rs 1358 Lakh / annum shall be earmarked for holding medical camps from CSR fund .

21.5 Cluster no. 6 group of Mixed mines project (1.453 MTPA normative and 2.25 MTPA peak in an area of 4775 ha) of M/s Eastern Coalfield Limited, located at dist. Burdwan, West Bengal - EC based on TOR granted dated 09.02.2011, amended on 29.02.2012 - Further Consideration.

21.5.1 The proposal is for Cluster no. 6 group of mixed mines project (1.453 MTPA normative and 2.25 MTPA peak in an area of 4775 ha) of M/s Eastern Coalfield Limited, located at dist. Burdwan, West Bengal. The proposal was last considered in 17th EAC meeting held on 23rd -25th July, 2014. The Committee had sought following additional information:

i. Location of proposed OC patches with reference to seam outcrops.
ii. Action Plan for issues raised during the Public Hearing on Water supply arrangement to be made by laying pipelines; Mine discharge water to be diverted to surface ponds; Dust Pollution due to truck/dumper movement; Improvement of Road conditions; No entry for trucks/dumpers during school hours; Plantation over vacant land/subsided and settled land/backfilled quarries; Increase of production from UG mines;
iii. Allocation of funds under CSR.
iv. Details of backfilling of Quarries.
v. Strategies to manage illegal coal excavation.
vi. Provision of employment & livelihood.
vii. Cluster Specific CSR Programme.
viii. Ratification in post mining land use of the core zone.
ix. Stowing Arrangement details be submitted.
x. Approximate reduction in fugitive dust emission due to Control Measures.

21.5.2 The proponent made the presentation and further informed that:

i. Location of proposed OC patches with reference to seam outcrops Submitted.
ii. Action plan for the issues raised during the PH are as follows:

a. Work of pipeline laying has already started and filtered water supply will be ensured by end of FY 2015 – 16.
b. Work for connecting to nearest ponds from the mine pits will be taken up in first phase and completed before summer of 2015
c. To control Dust Pollution due to truck / dumper movement additional equipment will be ensured by end of FY 2015 – 16.
d. To improve of Road conditions tendering for all damaged roads to be initiated, work will be completed in 2015 – 16.
e. No entry has been imposed from 12.30 PM to 2.30 PM for trucks / dumpers during school hours.
f. Throughout mine life in phases. Total plantation over about 700 Ha. Plantation over backfilled quarries will be taken up immediately after exhaustion.
g. Regular FIRs being filed for stoppage of illegal mining

iii. There will be no residual external dump left at the mined site after exhaustion of the quarries. The OB will be dumped externally during initial period of working and backfilling will start after some progress has been made. After exhaustion of coal reserves, the OB lying externally will be completely re-handled and back-filled into the quarry. All the OC patches will be exhausted within 2 years.

iv. CISF, ECL security and police are conducting regular raids/checks and seize coal and other materials, coal loaded trucks and apprehend and hand over the miscreants to the police and FIRs are lodged. Dozing/filling/sealing of illegal mining sites by pay loaders/dozers under security cover provided by State Police on identification of illegal mining sites. However many times the filled up/dozed areas are re-dug by miscreants. ECL has provided 16 vehicles to District law and Administration Authorities involving an annual expenditure of about Rs. 50 lakhs to assist combating illegal mining and pilferage of coal. Engaging with the local community and carrying out development works. Providing avenues for vocational training for all willing persons

v. On the recommendations of Operation Research Group and Burdwan University, vocational training courses are being organized since 1995-96 from time to time to generate self-employment for locals.

vi. A time-bound CSR plan has been chalked out in consultation with village level committees and expenditure will be made accordingly. The programme will also include issues raised by the public during Public Consultation process.

vii. Ratification in post mining landuse of the core zone

S No.	**Description**	**Land-use (Ha)**						
		Plantation		**Water Body**	**Public use**	**Undisturbed**	**Total**	
		arlier figure	**Revised Figure**				**Earlier figure**	**Revised Figure**
1	Top-soil Dump	-	-					
2	External Waste Dump	15.0	-	-	-	-	15.0	-
3	Excavation	35.2	50.2	-	-	-	35.2	50.2
4	Rail /Road	20.0	20.0		302.0	-	322.0	322.0
5	Built-up	384.0	384.0	-	-	400.0	784.0	784.0
6	Mine Infrastructure	97.0	97.0	-	-	480.0	577.0	577.0
7	Barren/Vacant land				-	1185.8	1185.8	1185.8
8	Afforestation/Natural vegetation	146.0	146.0				146.0	146.0
10	Water bodies					245.0	245.0	245.0

11	Cultivable					1465.0	1465.0	1465.0
	Total	697.20	697.20	-	302.0	3775.8	4775.0	4775.0

The whole quarry area of proposed OC patches will be completely backfilled leaving no external dump and planted upon.

viii. Stowing arrangement is available in Sodepur UG; Chinakuri – III UG & Patmohana UG Rest of the mines which are having depillaring districts adopt caving method presently, for which 350 Ha land has been acquired. Joint Venture scheme has been proposed for Sheetalpur UG with EOI from R C Mittal and Jindal Group. Aquapack stowing method is proposed for this project.

ix. To control the fugitive emissions 90 % area with avenue plantation along the transport road; CHP and Railway Sidings will be covered.

21.5.3 The Committee after deliberation recommended the project for EC with the following specific conditions:

i. Coal be transported by rail only.
ii. 3 tier green belt should be raised around the railway sidings and along road sides to prevent propagation of dust and noise.
iii. Stowing and depillaring shall be as per the recommendations of the DGMS.
iv. The proponent must comply with the Raniganj Action Plan. Trees with deep rooted system should be planted so as to prevent soil erosion.
v. River/nallahs should be desilted and restored back to functional state.
vi. Independent network of railway sidings inside cluster be developed. Railway sidings should be constructed at the earliest and till then proponent ay use mechanically covered trucks for transportation of coal.
vii. Wild life conservation plan be prepared and submitted with the approval of the State Govt.
viii. Proponent may use high resolution image of all clusters for evaluating land use, plantation etc.
ix. No transportation of coal by road outside cluster boundary.
x. Separate drainage pattern be provided.
xi. Sand stowing must be used as recommended by CMPDI.
xii. With mining to be extended to seams below the present levels of workings, these areas can be subjected to further subsidence in future. Action plan for prevention and mitigation of subsidence be prepared for implementation.
xiii. The coal loading shall be by SILO.
xiv. The OC patches to be operated will be completely filled-up after exhaustion of reserves and reclaimed with plantation.
xv. There shall be no residual OB dump after the mining.
xvi. After completion of mining activities, the subsided areas shall be graded and planted upon.
xvii. The rehabilitation of the households falling within this cluster to be carried out in two phases within 10 years.
xviii. Proponent should plant additional 10 Ha/ year over the next 10 years at various locations in this cluster.
xix. The unstable areas within the cluster will be brought back under plantation after the population residing over these areas is rehabilitated under the Master plan for Raniganj Coalfield to be implemented by ADDA.
xx. The land excavated after mining must be brought back to original condition for agricultural purpose.
xxi. Coal transportation from mine to siding should be by conveyor belt.
xxii. The mine void should be used for pisciculture purpose. Water discharged from the mine should be as good as surface drinking water. Acasia plants be interspersed with native species. Marketing strategies involving women work force be promoted.

21.6 Cluster no. 2 group of Mixed mines project (0.36 MTPA with a peak prod. of 0.45 MTPA in a combined ML area of 1018 ha) of M/s Eastern Coalfield Limited, located at dist. Burdwan, West Bengal. - EC based on TOR granted dated 19.02.2011 - Further Consideration.

21.6.1 The proposal is for Cluster no. 2 group of Mixed mines project (0.36 MTPA with a peak prod. of 0.45 MTPA in a combined ML area of 1018 ha) of M/s Eastern Coalfield Limited, located at dist. Burdwan, West Bengal. The proposal was last considered in 17th EAC meeting held on 23rd -25th July, 2014. The Committee had sought following additional information:

i. Clarification on the issues raised during Public Hearing such as Provision of Water Supply to Villages, Dust suppression, Improvement of road condition, Cutting down of trees by villagers; Plantation over backfilled areas, Development of adjacent areas be provided.
ii. Layout of existing OC mines be also presented

21.6.2 The proponent made the presentation and further informed that:

i. Survey was conducted and few old pipes have been replaced with new steel pipes to ensure smooth water supply. This will be further augmented by FY 2015 – 16. Availability of additional equipment will be ensured by end of FY 2015 – 16. Tendering for all damaged roads to be initiated, work will be completed in 2015 – 16.
ii. Plantation over about 378 Ha plantation over backfilled quarries will be taken up throughout mine life in phases.
iii. Provision of funds has been made under CSR for taking up development works in consultation with local bodies. Action will be taken on any written demands by local or panchayat.
iv. Layout of Opencast Mines: Rajpura OC & Barmuri OC submitted.

21.6.3 The Committee after deliberation recommended the project for EC with the following specific conditions:

i. Coal be transported by rail only
ii. 3 tier green belts should be raised around the railway sidings and along road sides to prevent propagation of dust and noise.
iii. Stowing and depillaring shall be as per the recommendations of the DGMS
iv. The proponent must comply with the Raniganj Action Plan.
v. Trees with deep rooted system should be planted so as to prevent soil erosion.
vi. River/nallahs should be desilted and restored back to functional state
vii. Independent network of railway sidings inside cluster be developed. Railway sidings should be constructed at the earliest and till then proponent ay use mechanically covered trucks for transportation of coal.
viii. Wild life conservation plan be prepared and submitted with the approval of the State Govt.
ix. Proponent may use high resolution image of all clusters for evaluating land use, plantation etc
x. Separate drainage pattern be provided.
xi. Sand stowing must be used as recommended by CMPDI.
xii. With mining to be extended to seams below the present levels of workings, these areas can be subjected to further subsidence in future. Action plan for prevention and mitigation of subsidence be prepared for implementation.
xiii. The OC patches to be operated will be completely filled-up after exhaustion of reserves and reclaimed with plantation.
xiv. There shall be no residual OB dump after the mining.

xv. After completion of mining activities, the subsided areas shall be graded and planted upon.
xvi. An amount in excess of Rs. 533 Cr has been earmarked for the rehabilitation of the estimated no. of about 6818 households falling within this cluster to be carried out in two phases within 10 years.
xvii. Proponent should plant additional 10 Ha/ year over the next 10 years at various locations in this cluster.
xviii. The unstable areas within the cluster will be brought under plantation after the population residing over these areas is rehabilitated under the Master plan for Raniganj Coalfield to be implemented by ADDA.
xix. The land excavated after mining must be brought back to original condition for agricultural purpose.
xx. Coal transportation from mine to siding should be by conveyor belt.
xxi. The mine void should be used for pisciculture purpose.
xxii. Water discharged from the mine should be as good as surface drinking water.
xxiii. Acasia plants be interspersed with native species.
xxiv. Marketing strategies involving women work force be promoted.

21.7 Cluster 7 (4 mixed mines of a prod. capacity of 0.58 MTPA normative and 0.74 MTPA peak in a combined ML area of 2313 ha) M/s Eastern Coalfields Limited, located in Raniganj Coalfields, dist. Burdwan, West Bengal - EC based on TOR granted on 09.02.2011 & Modify on 25.02.2012 –Further Consideration.

21.7.1 The proposal is for Cluster 7 (4 mixed mines of a prod. capacity of 0.58 MTPA normative and 0.74 MTPA peak in a combined ML area of 2313 ha) M/s Eastern Coalfields Limited, located in Raniganj Coalfields, dist. Burdwan, West Bengal. The proposal was last considered in 17th EAC meeting held on 23rd -25th July, 2014. The Committee had sought following additional information:

i. Action Plan for Issues raised during the Public Hearing such as Condition of surface drainage system, Drinking water supply; Treated water from OCP to be supplied ; backfilled quarries; Plantation over vacant land/subsided and settled land/ Dust Pollution due to truck/ dumper movement and blasting/running of adjacent OCP.
ii. Effective utilization of CSR fund and formation of committee including locals for monitoring of CSR activities and expenditure.
iii. Development works to be taken up.
iv. Cluster Specific CSR Programme.

21.7.2 The proponent made the presentation and further informed that:

i. Action plan for the issues raised during the PH are as follows:
   a. Repair work of existing drains has already been started
   b. Installation work of hand pumps is scheduled to be completed by 2016-17
   c. Filtered water supply will be ensured by end of FY 2015-16
   d. Availability of additional equipment will be ensured by end of FY 2015 – 16 Dust Pollution due to truck / dumper movement and blasting / running of adjacent OCP
   e. Plantation over vacant land / subsided and settled land / backfilled quarries will be done throughout mine life in phases.
   f. Plantation over backfilled quarries will be taken up immediately after exhaustion.

ii. A time-bound CSR plan has been chalked out in consultation with village level committees and expenditure will be made accordingly. The programme will also include issues raised by the public during Public Consultation process

21.7.3 The Committee after deliberation recommended the project for EC with the following specific conditions:

i. Coal be transported by rail only.
ii. 3 tier green belt should be raised around the railway sidings and along road sides to prevent propagation of dust and noise.
iii. Stowing and depillaring shall be as per the recommendations of the DGMS.
iv. The proponent must comply with the Raniganj Action Plan.
v. Trees with deep rooted system should be planted so as to prevent soil erosion.
vi. River/nallahs should be desilted and restored back to functional state.
vii. Independent network of railway sidings inside cluster be developed. Railway sidings should be constructed at the earliest and till then proponent ay use mechanically covered trucks for transportation of coal.
viii. Wild life conservation plan be prepared and submitted with the approval of the State Govt.
ix. Proponent may use high resolution image of all clusters for evaluating land use, plantation etc.
x. No transportation of coal by road outside cluster boundary.
xi. Separate drainage pattern be provided.
xii. Sand stowing must be used as recommended by CMPDI.
xiii. With mining to be extended to seams below the present levels of workings, these areas can be subjected to further subsidence in future. Action plan for prevention and mitigation of subsidence be prepared for implementation.
xiv. The coal loading shall be by SILO.
xv. The OC patches to be operated will be completely filled-up after exhaustion of reserves and reclaimed with plantation.
xvi. There shall be no residual OB dump after the mining.
xvii. After completion of mining activities, the subsided areas shall be graded and planted upon.
xviii. The rehabilitation of households falling within this cluster to be carried out in two phases within 10 years.
xix. Proponent should plant additional 10 Ha/ year over the next 10 years at various locations in this cluster.
xx. The unstable areas within the cluster will be brought under plantation after the population residing over these areas are rehabilitated under the Master plan for Raniganj Coalfield to be implemented by ADDA.
xxi. The land excavated after mining must come back to original condition for agricultural purpose.
xxii. Coal transportation from mine to siding should be by conveyor belt.
xxiii. The mine void should be used for pisciculture purpose.
xxiv. Water discharged from the mine should be as good as surface drinking water.
xxv. Acasia plants be interspersed with native species.
xxvi. Marketing strategies involving women work force be promoted.

21.8 Expansion of Coal Beneficiation Plant (2 MTPA to 4 MTPA) of M/s Global Coal & Mining Pvt. Ltd., in village Tentulei, South Balanad, Tehsil Talcher, dist. Angul, Orissa - EC based on TOR granted on 31.12.2008 –EC Correction.

21.8.1 The proposal is for typographical correction in EC in project entitled Expansion of Coal Beneficiation Plant (2 MTPA to 4 MTPA) of **M/s Global Coal & Mining Pvt. Ltd.,** in village Tentulei, South Balanad, Tehsil Talcher, dist. Angul, Orissa. EC was granted to the project vide letter no. J-11015/484/2008-IA.II (M) dated 31st December, 2013. The proponent made the presentation and further informed that:

i. Point wise correction:

Sl. No.	As per EC letter	Proposed correction
1.	Para No. 2 (ii) It was informed that the EC was granted by MOEF on 15.07.2009 for expansion of the Coal Beneficiation Plant of 1.5 million tonnes per annum (MTPA) capacity of raw coal by wet process (Dense Media) to 4 MTPA capacity in a total area of 8.56 ha. (iii) As per the original proposal for which EC was granted, the expansion project of 2.5 MTPA would be by dry process involving pneumatic jigs (0.5 MTPA) and by wet process using Batac Jigs (2 MTPA). (iv)It was stated that an application was made on 26.07.2011 to the Odhisha SPCB and a request made to MOEF for modification of EC for change in technology from pneumatic jigs (dry process) to wet process. (v) It was clarified that the Pneumatic Jigs have not been installed. It was stated that a thickener would be added to the slurry which would be mixed with coal rejects or with clean coal for its utilisation, i.e. the slurry will not be discharged out of the premises.	Deleted
2.	Para 2 (xii) Coal is being received from 3 mines of MCL, Hingula at the distance of 22 km, Jagannath at the distance of 5 km and **Samleshwari** at the distance of 8 km. Washed coal 1.33MT send to APGENCO. The abandoned railway siding of FCI is being utilized for transportation. Presently, the loading is being done by pay loaders	Para 2 (xii) Coal is being received from 3 mines of MCL, Hingula at the distance of 22 km, Jagannath at the distance of 5 km and **Bhubaneshwari** at the distance of 8 km. Washed coal 1.33MT send to APGENCO. The abandoned railway siding of FCI is being utilized for transportation. Presently, the loading is being done by pay loaders
3.	Para 3 A (iii) Methods be explored for recovery of Mercury in fly ash.	Deleted
4.	Para 3 A (iv) As washery rejects goes to FBC Boiler of 35 MW Power Plant, till then M/s Navbharat which has FBC will take the rejects. A letter in this regard should be submitted to the Ministry for record.	As washery rejects goes to FBC Boiler of 35 MW Power Plant, till then M/s IMFA (MoU to be submitted to this effect by the proponent to the MoEFCC) which has FBC that will receive the rejects.

ii. Proponent submitted that M/s Nav Bharat is not in operation/commission till further notice. In light of this, washery rejects be supplied to any FBC/CFBC boiler.

21.8.2 The Committee after deliberation recommended for proposed deletions and correction in the EC. The Committee has emphasized that the proponent has to finalise the linkage to the washed coal which need to be mentioned in the EC. Therefore, the proponent has to submit the MoU with the proposed linkage/end user to the MoEFCC.

21.9 Nimbri-Chandwatan Lignite Mining Project (0.5 MTPA in an ML area of 350 ha) of M/s Binani Cements Ltd. located in village Nimbri, Tehsil Jayal-Degana, District Nagaur, Rajasthan - EC based on TOR granted on 22.08.2007 - Further Consideration

21.9.1 The proposal is for Nimbri-Chandwatan Lignite Mining Project (0.5 MTPA in an ML area of 350 ha) of M/s Binani Cements Ltd. located in village Nimbri, Tehsil Jayal-Degana, District Nagaur, Rajasthan. The proposal was earlier considered in 57th EAC meeting held on 28th –29th October, 2009; 67th EAC meeting held on 22-23 March, 2010; 31st EAC meeting held on 29th-30th August, 2011; 69th EAC meeting held on 25.03.2013 and 75th EAC meeting held on 3rd - 4th June, 2013. The Committee had suggested proponent to take up the matter with the Gram Panchayat members and resolve the issue on land acquisition.

21.9.2 The proponent made the presentation and further informed that the Gram Panchayat has passed a resolution unanimously on 22.07.14 in favour of the project and issued their consent vide a NOC dated 25.07.2014. This having being identified as the last requirement the EC now should be granted.

21.9.3 The EAC received a representation from one of the NGOs with regard to the following:

i. Grazing land and catchment area of wetlands involved –such areas cannot be allotted for private or commercial purposes as per the SC Judgment & State Order.
ii. Prime agriculture land involved.
iii. Loss of drinking water and water for domestic needs of people; loss of water for wildlife and livestock.
iv. People have cultural and religious association with the wetland.
v. Hundreds of *Khejri Prosopis,* cineraria trees, life line in the Thar Desert of Rajasthan that provides fodder and fuel wood, and large number of Neem trees
vi. Transportation of coal from mine to TPP 300 km away by road.
vii. Life of mine is 12 years only.
viii. Public Hearing conducted far from the project site.
ix. Very strong opposition of local people, Panchayat and Krishi Zila Parishad.
x. EAC's own sub group very important finds to local that people for the lively hood, water, food security, fuel wood, and is of cultural and religious importance. It is equally important for livestock and wildlife in the region.

21.9.4 The proponent has responded to the observations and further submitted that:

i. The alternative for grazing land has already been planned & an application dated 28.08.2007 has been made. As per the Rajasthan Tenancy Rules 1955 "the Collector has the power under the sub rule 1 to set apart an equal area of unoccupied cultivable Government land, if available, as pasture land in the same village". Relevant portion of the rules is annexed. Even in a case where the grazing land cannot be allotted for mining, the project can still go ahead and the EC should not be held for this reason.
ii. The catchment area is basically an undulated land with no significant catchment area for any water body. The run-off water does not percolate below the surface due to lithology (clay layers below the top soil) and evaporates slowly within a span of 2-3 months. This also means there is very limited recharge of the groundwater.
iii. The area being arid to semi-arid, the agriculture is largely dependent on the rainfall and in our opinion certainly not "prime agriculture land".
iv. During low rainfall, water is supplied though tube wells which are high in salinity. Over the period large use of this ground water has resulted in: (a) fall of water table which is around 2 mtr per year. (b) Low yield because of high salinity in land.

v. The drinking, irrigation, bathing and washing water requirements are met from tube wells in the region. The rain water collected in these undulated land carries silt from the area and is neither sufficient nor fit for consumption (as per specified IS norms) to meet the listed requirements.

vi. Commitments have already made for meeting the water requirement of villagers which are reiterated as under:

vii. To develop water reservoirs, wherein, the water shall be available in sufficient quantity all the year round. It will facilitate the drinking and domestic water requirement for villagers, where practically no adequate water source is available.

viii. Besides the above, these water reservoirs will also meet the irrigation, requirement of the local community.

ix. The quality of water will be maintained as per IS norms.

x. Water harvesting structures will be constructed in conjunction with local communities. This shall help is raising the water level over a period of time.

xi. Since potable drinking water will be supplied by us the villagers shall have an access to quality water to meet their drinking water requirements.

xii. As per SAC and WII these are small manmade tanks, non-ramsar sites without any unique habitats / important wetlands.

xiii. There are no religious structures of much significance within the mining lease area of 350 hectares.

xiv. Hundreds of *Khejri prosopis* cineraria trees life line in the Thar Desert of Rajasthan that provides fodder and fuel wood, and large number of neem trees.

xv. Local floral species (Prosopis, Neem) will be restored as an extensive greenbelt (at the rate of 14,000-15,000 trees/year) which is proposed to be developed by us during the course of the project. By the end of fifth year of mining, we would plant approx. 72,000 trees & approx. 1, 42,000 trees by the end of 10th year (details submitted in EIA Report & Approved Mine Plan).

xvi. With well-defined scientific methods of mining and subsequent reclamation plan there will be no shortage of fodder and fire wood for the community.

xvii. Environmental protection and development would go hand in hand and we would ensure to meet the legitimate requirements of the local community.

xviii. It is expect that with the rise of the livelihood of the villagers majority of the people will migrate from use of wood as means of cooking to other medium of cooking.

xix. The lignite currently used in the CPP is being transported from RSMM mines by road only.

xx. It is assured that the lignite transported from Nimbri lignite mine will be transported through road network using covered trucks.

xxi. The company will examine the possibility of transportation through rail once the project takes off & subsequently the reserves are augmented.

xxii. It was reiterated that after seeking EC for Phase-1 & later after augmentation of additional reserves as per the geological reports and superimposition of lignite deposits map of mineral reserves of nearby existing mines, indicate encouraging lignite deposits in the area. Hence, it is confident that with phase I & Phase II together, the project will certainly have mine life beyond 25 to 30 years.

xxiii. The Public Hearing was organised in accordance with the provisions of EIA notification, the advertisement to inform the public about the venue, date and time for PH, was published in two News Papers viz. “Indian Express” and “Jodhpur Sanskaran” on 18th May, 2008.Furthermore, as per norms, the venue of the meeting was decided by the Regional Officer of Rajasthan Pollution Control Board in consultation with the District Magistrate, Nagaur. During the public hearing, large number of villagers was present and participated actively in the proceedings and hence there is no issue of anything being done without taking local people into confidence.

xxiv. The Gram Panchayat has passed a resolution unanimously on 22.07.14 in favour of the project and issued their consent vide a NOC dated 25.07.2014. This having being identified as the last requirement the EC now should be granted.

xxv. The project will provide direct and indirect employment opportunities for their livelihood and further improvement in their lives will come from companies CSR activities like health care, education, potable water, infrastructure & sanitation. This has been enumerated in the CSR action plan submitted to MOEF vide letter dtd. 14.10.2011.

21.9.5 The Committee after hearing to the proponent requested the Member Secretary to prepare a detailed Note and place it in the next meeting for internal discussion.

21.10 Govindpur Phase-II OCP for a capacity of 2.20 MTPA (nominal) and 2.50 MTPA (Peak) M/s Central Coalfields Limited, dist. Hazaribag, Jharkhand - EC under 7(ii) of EIA Notification 2006.

21.10.1 The proposal is for Environment Clearance under 7(II) of EIA notification for Govindpur Phase-II OCP for a capacity of 2.20 MTPA (nominal) and 2.50 MTPA (Peak) M/s Central Coalfields Limited, dist. Hazaribag, Jharkhand. The proponent made the presentation and informed that:

i. Govindpur Ph-II Opencast Project is an operating coal mine under Kathara Area of Central Coalfields Limited, which was started after obtaining Environmental Clearance vide letter no J-11015/490/2008-IA.II(M) dated 18.01.2011 for a normative capacity of 1.20 MTPA & peak capacity of 1.50 MTPA within lease area of 274.95 Ha.

ii. Environment Clearance for Expansion (Under 7(ii) of EIA Notification, 2006) of Govindpur Ph-II OC Coal Mining Project of (from 1.5 MTPA to 1.875 MTPA in an ML area of 229.867 ha (274.95 ha - 45.083 ha = 229.867 ha; of M/s Central Coalfields Ltd. dist. Hazaribag, Jharkhand was granted vide letter no. J-11015/490/2008-IA.II (M) dated 20th May, 2014.

iii. Applied under one time production capacity expansion of upto 50% in the existing operation as per office memorandum No.J-11015/30/2004- IA.II (M) dated 07.01.2014.

iv. The latitude and longitude of the project are 23^0 48' 30'' to 23^0 49' 30'' N and 85^0 51' 15'' to 85^0 52' 45'' E respectively.

v. Joint Venture: There is no Joint venture.

vi. Coal Linkage: Coal will be supplied to Power houses and other miscellaneous consumers.

vii. The land usage of the project will be as follows:

Land use details:

S.N.	LAND USE	Within ML Area (ha)	Outside ML Area (ha)	TOTAL
1.	Agricultural land	0.00	0.00	0.00
2.	Forest land	148.167	0.00	148.167
3.	Wasteland	0.00	0.00	0.00
4.	Grazing land	0.00	0.00	0.00
5.	Surface water bodies	21.43	0.00	21.43
6.	Settlements	0.00	0.00	0.00
7.	Others (specify)	60.27	0.00	60.27
	TOTAL	229.87	0.00	229.87

Pre-Mining:

S.N	LAND USE	Within ML Area (ha)	Outside ML Area (ha)	TOTAL
1.	Agricultural land	0.00	0.00	0.00
2.	Forest land	148.167	0.00	148.167
3.	Wasteland	0.00	0.00	0.00
4.	Grazing land	0.00	0.00	0.00
5.	Surface water bodies	21.43	0.00	21.43
6.	Settlements	0.00	0.00	0.00
7.	Others (specify)	60.27	0.00	60.27
	TOTAL	229.87	0.00	229.87

Post- Mining:

S.No.	**Land use during Mining**	**Land Use (ha)**				
		Plantation	**Water Body**	**Public use**	**Undisturbed**	**Total**
1	External OB Dump+ Internal OB Dump	87.00+12.03	4.50	0.00	0.00	103.53
2	Excavation	6.00	35.21	0.00	18.68	59.89
3	Roads			19.30		19.30
4	Built up Area	3.12	0.00	0.00	0.00	3.12
5	Green Belt					
6	Undisturbed Area	44.03	14.00	0.00	0.00	89.11
	Total	197.26	39.71	19.30	18.68	229.87

Core area :

S No.	**Land use category**	**15th Year**	**20th Year**
1	Quarry & Internal Dump	76.42	Mine Lagoon 35.21
			Plantation On Internal Dump 12.03
			Lagoon at Internal Dump Lower Benches 4.50
			Plantation 6.0
			Batter 18.68
2	OB Dump	87.00	Plantation
3	Infrastructure/ Workshop/ CHP	3.12	Plantation after dismantling
4	Road	19.30	Public Use
5	Unworked Area & Safety Zone	44.03	Plantation
Total		229.87	-

iv. The total geological reserve is 29.62 MT. The mineable reserve 19.53 MT, extractable reserve is 19.53 MT. The per cent of extraction would be 65.93 %.

v. The coal grade is E .The stripping ratio is 1.47 m^3 /tonne. The average Gradient is 16 – 23 deg. There will be 7 seams with thickness ranging from 1 m to 23 m.

vi. The total estimated water requirement is 910 m^3/day. The level of ground water ranges from 3.77 m to 6.00 m.

vii. The Method of mining would be Opencast with shovel-dumper combination.

viii. There is one external OB dump with Quantity of 24.00 million m^3 out of total OB of 28.66 million m^3 in an area of 87 ha with height of 60 meter above the surface level and one internal dump with Quantity of 4.66 Mbcm in an area of 16.53 ha.
ix. The final mine void would be in 35.21 Ha with depth of 100 m and the Total quarry area is 76.42 Ha. Backfilled quarry area of 18.03 Ha shall be reclaimed with plantation. A void of 39.71 ha with depth of average 60-70 m which is proposed to be converted into a water body
x. The seasonal data for ambient air quality has been documented and all results at all stations are within prescribed limits.
xi. The **life of mine** is 13 years including 2013-14.
xii. **Transportation**: Coal transportation in pit by Dumpers, Surface to Siding by trucks and loading at siding into railway wagons.
xiii. There is R & R involved. However number of PAFs are nil as this an expansion proposal within same ML area.
xiv. **Cost**: Total capital cost of the project is Rs. 142.11 Crores. CSR Cost Rs. 5 per tonne of coal produced. R&R Cost Rs 252.52 lakh. Environmental Management Cost Rs. 4333.47 Lakhs.
xv. **Water body**: Konar River marks the western limit of mining area and also forms the main drainage of the area. It lies more than 400m away from mine edge. Montico nallah flowing from north to south marks the eastern limit of mine and joins Konar River towards South of the Project. It is 60-70 m away from mine edge.
xvi. **Approvals**: Board's approval obtained on 23.12.2009. Mining plan has been approved on 23.12.2009. Mine Closure Plan approval on 24.02.2012.
xvii. **Wildlife issues**: There are no national Parks, wildlife sanctuary, biosphere reserves found in the 10 km buffer zone.
xviii. **Forestry issues**: Total forest area involved 148.167 ha for mining. Stage –II FC obtained vide letter no. 8-28/2003-FC , dated 02.03.2009.
xix. Total **afforestation** plan shall be implemented covering an area of 197.26 ha at the end of mining. Green Belt over an area of 89.11 ha. Density of tree plantation 2500 saplings/ Ha. of plants.
xx. There are no **court cases/violation** pending with the project proponent.

21.10.2 EC Compliance report: The Compliance Monitoring Report for Govindpur Phase-II OCP project has been sent by the MoEF, Regional Office, Bhubaneshwar vide letter no.103-392/08/EPE dated 21.02.2014. The Committee has noted that EC conditions w.r.t no. of sprinklers; peizometers for monitoring of ground water; sewage treatment plant; satellite imagery; monitoring of heavy metals etc. were partly complied for which the proponent had submitted an Action Plan for compliance.

21.10.3 The proponent submitted the action taken report vis-à-vis the Compliance to the Commitment made during the Public Hearing, which was deliberated in the EAC meeting.

21.10.4 The Committee after deliberations recommended the project for granting Environment Clearance subject to following specific conditions:

i. The OBD to be rehandled. The depth of the void be reduced to 40 meter by reahndling the external OB dump. The proponent to submit the changed post mining land use to the Ministry and also a regular air quality monitoring be carried out.
ii. The commitment and action plan be complied within one year from the date of the issue of the EC and submit the report to the MoEF. The EAC shall review the compliance report.
iii. Fixed sprinkler system will become operational from June 2014.
iv. It should be ensured that colony people are supplied with treated drinking water.
v. Piezometers should be installed and made functional by June, 2014.
vi. The Sewage Treatment Plant shall be operational in 300 days.

vii. The baseline survey and evaluation of projects for CSR be completed within one year.
viii. Monitoring of land use pattern shall be carried out and report submitted within one year.
ix. Monitoring of AAQ shall be done every month and report be submitted to the SPCB and the RO, MoEF concerned.
x. $PM_{2.5}$ shall be monitored from April 2014.
xi. Environment Officers exclusively for environment related works be posted.
xii. All other conditions of earlier EC dated 20th May, 2014 shall also be stipulated.

21.11 Urimari Underground Coal Mining Project for (0.36 MTPA Normative and 0.41 MTPA Peak in an ML area of 105.22 ha) of M/s Central Coalfields Limited, in District Ranchi Jharkhand –TOR.

21.11.1 Urimari Underground Coal Mining Project for (0.36 MTPA Normative and 0.41 MTPA Peak in an Area (Total project area 105.22 Ha and ML area: 105.22 ha; Forest area involved 31.22 Ha) of M/s Central Coalfields Limited, in District Ranchi Jharkhand. The proponent made the presentation and informed that:

i. Urimari UGP is an existing project of CCL in Barka-Sayal Area. Project Report (PR) of 0.36 MTPA was prepared in March, 1990 and was approved on 26.06.1990. The Project was started in the year 1991-92. Urimari UGP proposes exploitation of Hathidari & Bansgarha seams. Presently, both the seams are being developed through two sets of independent inclines.
ii. TOR was issued in February, 2009. Draft EIA & EMP prepared in May, 2011. Public Hearing (PH) held in December, 2012. Minutes of PH received in February, 2013. Final EIA & EMP submitted in July, 2013. The TOR lapsed in the meantime. Online application for revalidation of TOR submitted in June 2014. In view of above, Form-I is put up for revalidation of TOR by EAC (T&C) with waiver of PH.
iii. There is no joint venture.
iv. Coal Linkage: Power houses and other miscellaneous consumers.
v. The latitude and longitude of the project are N 23^0 41' 04'' to 23^0 42' 52'' N and 85^0 16' 06'' to 85^0 19' 36'' E respectively.
vi. The land usage of the project will be as follows:

LANDUSE DETAILS

S.N	LANDUSE	Within ML Area (ha)	Outside ML Area (ha)	TOTAL
1.	Agricultural land	0.00	0.00	0.00
2.	Forest land	31.22	0.00	31.22
3.	Wasteland	17.66	0.00	17.66
4.	Grazing land	13.35	0.00	13.35
5.	Surface water bodies	1.05	0.00	1.05
6.	Settlements	34.66	0.00	34.66
7.	Others (industry)	7.27	0.00	7.27
	TOTAL	105.22	0.00	105.22

Pre-Mining:

Sl.No.	Particulars	Total land (in Ha)
1	GMK Land	74.00
2	Tenancy land	
3	Forest Land to be diverted for mining purpose	31.22

4	Forest Land in safety zone (undisturbed) not to be diverted	0.00
	GMK & Tenancy Land acquired earlier but not to be disturbed now	0.00
	TOTAL	105.22

Post- Mining:

S.NO	Land use during Mining	Land Use (ha)				
		Plantation	Water Body	Public use	Undisturbed	Total
1	Ext OB Dump	0.00	0.00	0.00	0.00	0.00
2	Excavation	42.85	0.00	0.00	0.00	42.85
3	Roads	0.00	0.00	3.12	0.00	3.12
4	Built up Area	0.00	0.00	10.88	0.00	10.88
5	Green Belt	0.00	0.00	0.00	0.00	0.00
6	Undisturbed Area	46.22	2.15	0.00	0.00	48.37
	Total	89.07	2.15	14.00	0.00	105.22

Core area:

S.N	LANDUSE	Within ML Area (ha)	Outside ML Area (ha)	TOTAL
1.	Agricultural land	0.00	0.00	0.00
2.	Forest land	31.22	0.00	31.22
3.	Wasteland	17.66	0.00	17.66
4.	Grazing land	13.35	0.00	13.35
5.	Surface water bodies	1.05	0.00	1.05
6.	Settlements	34.66	0.00	34.66
7.	Others (industry)	7.27	0.00	7.27
	TOTAL	105.22	0.00	105.22

vii. The total geological reserve is 12.71 MT. The mineable reserve 4.21 MT (3.072 MT Balance), extractable reserve is 4.21 MT. The per cent of extraction would be 33.12 %.

viii. The coal grade is B 'LF' & C'LF'. The stripping ratio is not applicable for UG mine. The average Gradient is 1 in 4.5. There will be 2 seams with thickness ranging from 2.30 m to 7.10 m.

ix. The total estimated water requirement is 1070 m3/day. The level of ground water ranges from 5.0 m to 9.40 m.

x. The Method of mining: UG mining by Bord & Pillar method using SDLs.

xi. There will be neither external nor internal OB dumps.

xii. The **life of mine** is 25 Years.

xiii. **Transportation**: Coal transportation is through conveyors. Coal from Urimari UGP is being dispatched by road to Saunda Railway Siding located at about 3 km from the mine for onward dispatch by rail to the consumers.

xiv. There is no R & R involved hence no PAFs.

xv. **Cost**: Total capital cost of the project is Rs. 16.33 Crores. CSR Cost Rs. 1.536 crores @ Rs 5 per tonne of coal produced. R&R Cost Nil. Environmental Management Cost Rs. 4.1129 crores.

xvi. **Water body**: Damodar river is flowing adjacent to the southern boundary of this project Potanga nala is flowing in the east of the project at a distance of about 100 m, which meets

Damodar river. A nala is flowing within the boundary of this project.

xvii. **Approvals**: Applied for Ground water clearance. Board's approval obtained on 26-06-1990. Mining plan has been approved on 26.06.1990. Mine Closure Plan approval on 01.10.2012.

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

xix. **Forestry issues**: Total forest area involved 31.22 ha. Stage-1 FC is available.

xx. Total **afforestation** plan shall be implemented covering an area of 89.07 ha at the end of mining. This will include 42.85 Ha of underground mine area and 46.22 Ha of undisturbed land

xxi. There are no **court cases/violation** pending with the project proponent.

xxii. **Public Hearing** was held on 15-12-2012. The issues raised in the PH includes priority to develop Fruit bearing trees; adequate facilities to rehabilitated people ; provision for building of Good schools; basic facilities such as Electricity, Road, School, drinking water & medical facilities; ambulance; Water spraying arrangement to prevent dust pollution etc.

21.11.2 **The Committee after deliberations recommended the project for granting ToR with the generic ToRs.**

21.12 K. D. Hesalong Extn. OCP (4.5 MTPA with a peak prod. of 5 MTPA) and expansion of ML area from 675.91 ha) of M/s Central Coalfields Limited, dist. Ranchi, Jharkhand –TOR.

21.11.1 The proposal is for seeking TOR for K. D. Hesalong Extn. OCP (4.5 MTPA normative & 5 MTPA Peak) and expansion of ML area from 470.76 Ha to 675.91 ha) of M/s Central Coalfields Limited**,** dist. Ranchi, Jharkhand. The proponent made the presentation and informed that:

i. Proponent applied a fresh application for TOR.

ii. The project was accorded TOR vide letter no. J-11015/311/2010-IA II (M) dated 23.12.2010 which got expired. The proponent submitted EIA/EMP for Environment Clearance on 08.03.2013. As per MOEF&CC OM J-11013/41/2006 dated 22nd August, 2014 proponent again requested for consideration for EC.

iii. The latitude and longitude of the project are 23° 39' 21'' to 23° 42' 0''N and 84° 59' 15'' to 85° 0' 24''E respectively.

iv. It is an expansion proposal. Details of capacity and land area is as follow:

Particulars	Existing	Proposed Extension		Proposed Total	
		Phase-I	Phase-II	Phase-I	Phase-II
Area (Ha)	470.76	18.54	186.61	489.30	675.91
Normative Capacity (MTPA)	4.50	4.50	4.50	4.50	4.50
Peak Capacity (MTPA)	4.50	5.00	5.00	5.00	5.00

v. The land usage of the project will be as follows:

S.No.	LANDUSE	Within ML Area (ha)	Outside ML Area (ha)	TOTAL
1.	Agricultural land	0.0		0.0
2.	Forest land	70.78		70.78
3.	Wasteland	47.02		47.02
4.	Grazing land	124.12		124.12
5.	Surface water bodies	26.88		26.88

6.	Settlements	0.0		0.0
7.	Others (specify)			
	TOTAL	675.91		675.91

Pre-Mining:

Agriculture	0.0
Forest	70.78
Waste land	47.02
Grazing	124.12
Surface Water Bodies	26.88
Others(Mining Area & Settlement)	407.11
Total	675.91

Post- Mining:

S.No	Land use during Mining	Land Use (ha)				
		Plantation	Water Body	Public use	Undisturbed	Total
1	Internal OB Dump	213.13	0.00	0.00	0.00	213.13
2	Excavation	0.00	191.45	0.00	91.88	283.33
3	Roads					
4	Built up Area	39.35	0.00	0.00	0.00	39.35
5	Green Belt					
6	Undisturbed Area	126.10	14.00	0.00	0.00	140.10
	Total	378.58	205.45	0.00	91.88	675.91

Core area :

Land Use Category	Present	30th Year
Quarry/Quarry Batter(30th year)	53.17	91.88
Mine Sump/Lagoon	10.00	191.45
Backfilled Area	183.98	0.00
Plantation On Backfilled Area	122.26	213.13
Infrastructure (WS,Store,Office)	31.35	0.00
Railway Siding	8.00	0.00
Waste Land	39.02	0.00
Water Body	16.88	14.00
Built up Area	9.38	0.00
Forest,Plantation & Safety Zone	201.87	165.45
Total	675.91	675.91

vi. The total geological reserve is 162.11 MT. The mineable reserve 6.08 MT for phase-I and 107.15 MT Total MT, extractable reserve is 6.08 MT for phase-I and 107.15 MT Total. The per cent of extraction would be 66.09 %.

vii. The coal grade is E grade coal. The stripping ratio is 1.55 for phase 1 and 1.54 total (Cum/Tonne). The average Gradient is 6-8 deg. There will be 9 seams with thickness ranging from 0.35 m to 21.37 m.

viii. The total estimated water requirement is 2905 m3/day. The level of ground water ranges Pre Monsoon- 8.93 M and Post monsoon -7.92 M.
ix. The Method of mining would be Open cast method of mining with shovel-dumper combination.
x. There is no external OB dump. There is one internal dump with Quantity of 164.99 Mbcm in an area of 213.13 Ha.
xi. The final mine void would be in 283.33 Ha with depth of +146m and the Total quarry area is 496.46 Ha. Backfilled quarry area of 213.13 Ha shall be reclaimed with plantation. A void of 283.33 ha with depth of 146 m which is proposed to be converted into a water body of 191.45 Ha & Quarry batter of 91.88 Ha
xii. The life of mine is 29 Years.
xiii. Transportation: Coal transportation in pit By Dumpers Surface to Siding By trucks and loading at siding INTO Rail WAGONS which is at a distance of 1.5 KM from project.
xiv. There is R & R involved. There are 800 PAFs.
xv. Cost: Total capital cost of the project is Rs. 475.30 Crores. CSR Cost Rs 5 per tonne of coal produced. R&R Cost 16.05 crore. Environmental Management Cost Rs. 29.9058 lakhs.
xvi. Water body: River: Damodar River is flowing in the north of the project. It lies 100m away from the mine edge. Nallha: The area is drained mainly by seasonal Kendua Nallha in the west of the block and Sonadoba jore in the east. It is 60-70 m away from the edge.
xvii. Approvals: Applied for ground water clearance. Board's approval obtained on 19.08.2010. Mine plan has been approved on 19.08.2010. Mine Closure Plan approval on 24.02.2012.
xviii. Wildlife issues: There are no national Parks, wildlife sanctuary, biosphere reserves found in the 10 km buffer zone.
xix. Forestry issues: Total forest area involved 101.06 ha for mining. Forest land over 142.12 Ha is to be acquired in extension part, for which application is to be submitted to DFO, Ranchi
xx. Total afforestation plan shall be implemented covering an area of 378.58 ha at the end of mining. Green Belt over an area of 165.45 ha. Density of tree plantation 2500 trees/ ha of plants.
xxi. There are no court cases/violation pending with the project proponent.
xxii. Public Hearing was held on 20.01.2012. The issues raised in the PH includes compensation; Employment; power supply; school facility; Pollution control etc.

21.12.2 The TOR was granted to the project, vide letter no. J-11015/311/2010-IA II (M) dated 23.12.2010. The TOR was valid upto 22.10.2013. The Proponent submitted the EIA/EMP report on 08.03.2013. The TOR expired as per the earlier OM dated 22.03.2010 and accordingly letter was issued on 19.05.2014 delisting the project from pending list. However, in accordance to the OM no. J-11013/41/2006-IA-II(I) (Part) dated 22.08.2014, the proponent requested for consideration of TOR validity and consideration for EC.

21.12.3 **The Committee has noted that in accordance to the OM dated 22.8.2014 the proponent has already submitted the EIA/EMP report and therefore suggested for consideration for EC.**

21.13 Proposed 2x2.4 MTPA Coal Washery Project of M/s Paras Power & Coal Beneficiation Limited, located at distt. Bilaspur, Chhattisgarh–TOR.

21.13.1 Project proponent vide email dated 15.09.2014 informed the Ministry that, due to unavoidable circumstances they are unable to attend the meeting. **The project was therefore deferred.**

21.14 Junad Deep Extension Project (0.60 MTPA (normative) and 1.5 MTPA (peak) and expansion in an ML area of 174.28 Ha to 449.63 Ha) M/s Western Coalfields Limited, located at district-Yavatmal, Maharashtra–TOR.

21.14.1.The proposal is for seeking TOR for Junad Deep Extension Project (0.6 MTPA normative & 1.5

MTPA Peak) and expansion of ML area of 174.28 Ha to 449.63 Ha) of M/s Western Coalfields Limited, located at district-Yavatmal, Maharashtra.

21.14.2 The proponent made the presentation and informed that:

i. The project was accorded earlier TOR vide letter no. J-11015/55/2008-IA.II(M) dated 11.07.2008.
ii. The latitude and longitude of the project are N 20^0 01'.05" to N 20^0 04'.10" and E 79^o03'.09" to E 79^o05'00" respectively.
iii. Coal Linkage: Linked to Thermal Power Plants of MAHAGENCO.
iv. The land usage of the project will be as follows:

Pre-Mining:

S.N.	**LAND USE**	**Within ML Area (ha)**	**Outside ML Area (ha)**	**Total**
1	Tenancy land	443.53	Nil	443.53
2	Forest land	Nil	Nil	Nil
3	Govt. land/Waste land	6.10	Nil	6.10
	Total	449.63	Nil	**449.63**

Post- Mining:

S. N.	Land use during mining	Land use (ha)				
		Plantation	Water Body	Public use	Undisturbed	Total
1	External OB Dump	175.00	-	-	-	175.00
2	Excavation	-	101.70	-	-	101.70
3	Infrastructure	3.00	-	7.00	-	10.00
4	Green belt	15	-	-	-	15.00
5	Diversion of roads including embankment	17.0	-	8.00	-	25.00
6	Danger zone and rationalization of area	-	-	-	122.93	122.93
	Total	210.0	101.70	15.0	122.93	449.63

v. The total geological reserve is 14.581 MT. The mineable reserve 6.13 MT, extractable reserve is 6.13 MT. The per cent of extraction would be 42.045 %.
vi. The coal grade is GCV 4748 k Cal/kg (Grade G-9). The stripping ratio is1:8.26 m^3/t. The average Gradient is 1 in 2.5 to 1 in 3.5. There will be one Composite seam with two sections top and bottom - seams with thickness ranging

Coal seam/ Parting	Thickness range (m)	
	Minimum	Maximum
Composite Seam	14.82	18.83
Parting	0.09	2.21

vii. The total estimated water requirement is 645 KL/day (Average Demand). The level of ground water ranges in pre monsoon from 3.90 m to12.65 m. bgl and 1.5m to 8.85 m bgl in post monsoon.
viii. The Method of mining would be opencast with shovel-dumper combination.
ix. There is 2 external OB dump with Quantity of 60.95 M3 an area of 175.00 ha with height of 60m above the surface level.

x. The final mine void would be in 101.70 ha with depth of 170 m. and the Total quarry area is 101.70 ha. Backfilled quarry area of 0.00 Ha shall be reclaimed with plantation. A void of 101.70 ha with depth of 170 m which is proposed to be converted into a water body.
xi. The seasonal data for ambient air quality has been documented and all results at all stations are within prescribed limits.
xii. The **life of mine** is 11 Years.
xiii. **Transportation**: Coal transportation from Surface to Siding by Dumpers and siding to loading by Dumpers & Pay loaders.
xiv. There is R & R involved. There are only land oustee families. To be determined at the time of acquisition.
xv. **Cost**: Total capital cost of the project is Rs. 57.784 Crores. CSR Cost Rs. 5 per tonne. R&R Cost 8.11. Environmental Management Cost (capital cost Rs. 37.16 Lakhs and Revenue- @ Rs 3.85/t).
xvi. **Water body**: Wardha river is flowing near the mine lease boundary of the project at distance 125 m north easterly.
xvii. **Approvals**: Ground water clearance obtained on 15.11.2007. Mining plan has been approved on 15.11.2007. Mine Closure Plan approval on 25.08.2012.
xviii. **Wildlife issues**: There are no national Parks, wildlife sanctuary, biosphere reserves found in the 10 km buffer zone.
xix. **Forestry issues**: there is no forest area involved.
xx. Total **afforestation** plan shall be implemented covering an area of 210 ha at the end of mining. Green Belt over an area of 15.00 ha. Density of tree plantation 2500 trees/ ha of plants.
xxi. There are no **court cases/violation** pending with the project proponent.
xxii. **Public Hearing** was held on 05.02.2013. The issues raised in the PH includes: Crop compensation; Acquisition of balance land beyond what has been notified.; Rehabilitation of Kolar, Pimpri, and Aheri village; Suppression of dust on Nilapur – Brahmni road; Venue of Public Hearing; Adequate Tree Plantation; Providing Street lights etc.

21.14.3 The Committee after deliberations recommended the project for granting ToR with the generic ToRs.

21.15 Chinchala-Chikalgaon Amalgamated OC Mine Project (3 MTPA normative and 3.9 MTPA peak in an area of 2344.88 ha) of M/s Western Coalfields Limited located at Dist. Yavatmal, Maharashtra. –TOR – Further Consideration.

21.15.1 The proposal is for seeking TOR for Chinchala-Chikalgaon Amalgamated OC Mine Project (3 MTPA normative and 3.9 MTPA peak in an area of 2344.88 ha) of M/s Western Coalfields Limited located at Dist. Yavatmal, Maharashtra. The proposal was last considered in 7th EAC meeting held on 12th -13th December, 2013. The Committee had sought following additional information:

i. Cost Benefit Analysis be carried out the report be submitted for further consideration.
ii. The proponent may explore the possibility of underground mining method.
iii. Examine as per the new Land Acquisition Rule, whether land having double crop/multiple crop can be used for mining purpose.
iv. The proponent may examine the cost benefit of the double/multiple crop vis-à-vis the single crop in the proposed mine area.

21.15.2 The proponent made the presentation and further informed that:

i. The proposed opencast coal mining project of WCL has been planned in Wardha Valley Coalfield and is located in Wani Tahsil in one end & extends upto block boundary of Chinchala & Pisgaon block in the Moregaon Tehsil of Yavatmal Distt in Maharashtra State.

ii. Land for the proposed Opencast Project will be acquired under relevant acts:

Sl. No.	Land Particulars	CBA (A&D) Act 1957(ha)	Forest Act 1980 (ha)	Total Land (ha)
1.	Agricultural Land	2130.00	-	2130.00
2.	Govt. Land	73.33	-	73.33
3.	Forest Land		90.00	90.00
4.	Other land (Grazing /Water Bodies/ Settlement etc.	36.00		36.00
	Total	**2240.00**	**90.00**	**2330.00**

xiii. In addition to the above, 14.88 ha land, which is already in possession of the company and is in use for operating the underground mine, will also be used for the proposed project. Thus the total involvement of land works out to 2344.88 ha. Now, considering the total area required for mining vis-a-vis geographical area of the Yavatmal District it is insignificant considering the net sown area.

xiv. The Total geographical area of Yavatmal District is 1352000 ha and the net sown area is 884000 ha which is 65.385 % of total geographical area and the land proposed for acquisition is only 0.24% of net sown area. Thus loss on agricultural production appears to be insignificant. However, This loss is of temporary in nature that is till the operation of the mining project. Thus there is absolute guarantee of income to the land owner and unlike agriculture, the income is in no way affected due to any natural consequences like drought / flood etc. Thus it can be concluded that loss in income from agriculture is more than compensated leading to overall improvement in Quality of Life (QoL) of the land owners who will become land losers once the project takes off.

xv. Due to seam thickness of major Seam varying from 7 to 10.5 m, the extraction by special methods like Gallery Blasting method with caving is however feasible. In this method the seam cannot be completely extracted and about 25 to 20 % of coal remains in the goaf. This coal seam being prone to spontaneous heating is liable to catch fire and thereby create unsafe conditions with the cascading result of further loss of coal, due to barrier formation / abandoning of panels midway. The overall % extraction with this method is not likely to be more than 35%. Moreover due to steep gradient towards Pisgaon, mechanization of U/G workings is not feasible and coal will have to be left out for manual mining only. Due to safety reasons , Presently, Rajur UG mine has discontinued its operations. Thus by adopting U/G mining method, in seam thicknesses of 7 – 10 m, the reserve that can be extracted gets significantly reduced i,e, 35% (Gallery Blasting) and 20% (Conventional Bord & Pillar) vis-à-vis extraction by opencast which is to the tune of 85 to 90 %. Moreover, while depillaring in U/G mines, DGMS is insisting on acquisition of overlying land for safety reasons.

xvi. The new land acquition rule entitled “The Right for Fair Compensation and transperancy in land acquisition, Rehabilitation & Resettlement Act 2013 (30 of 2013)” has been enacted in place of the age old “Land Acquisition Act 1894”. As incorporated in the Act, to ensure food security, multiple crop irrigated land shall be acquired only as a last resort measure. An equivalent area of cultivable wasteland shall be developed if multi-crop land is acquired. There is a central Act entitled “ The Coal bearing Areas Acquisition and Development Act 1957 (20 of 1957)” which is already in place & the the land for the proposed Coal Mining project will be acquired under this CBA (A&D) Act 1957. There is no such restriction on the acquisition of land depending on the crop yield pattern.

xvii. The proposed area (not entirely) is having some irrigational facilities yielding multicrop. As explained earlier, the land in the proposed mine area will be acquired under the provision of Coal Bearing Area (Acquisition & Development) Act 1957 (20 of 1957) wherein there is no such provision of restriction of land acquisition considering the crop yield / land use pattern. Thus it can be concluded that loss in income from agriculture is more than compensated leading to overall improvement in Quality of Life (QoL) of the land owners who will become land losers once the project takes off.

21.15.3 The Committee after deliberations recommended the project for granting ToR with the generic ToRs with the following specific ToRs:

i Integration of land management be done so as to minimize the land degradation
ii Re-examine to reduce the size of void and external OB dump which may be less than 60 meter in height.
iii Cost and benefit analysis may be carried out in the EIA/EMP report
iv Examine the sequential mining in the project to minimise land degradation and also keeping in mind for final mine void of below 40m.

21.16 Bander Opencast (1.2 MTPA)–cum–Underground (0.5 MTPA) Coalmine Project in an ML area of 1643.67 ha of M/s Bander Coal Company Limited, located in dist. Chandrapur, Maharashtra –TOR Modification & TOR Validity.

21.16.1 Project proponent did not attend the meeting. The project was deferred.

21.17 Kapuria UG Mine (2.4 MTPA normative with a peak capacity of 3.12 MTPA in an ML area of 809.60 ha) of M/s Bharat Coking Coal Limited, located in Jharia Coalfields, Dist-Dhanbad, Jharkhand- EC based on TOR granted on 26.12.2012 –Further Consideration.

21.17.1 The proposal is for Kapuria UG Mine (2.4 MTPA normative with a peak capacity of 3.12 MTPA in an ML area of 809.60 ha) of M/s Bharat Coking Coal Limited, located in Jharia Coalfields, Dist-Dhanbad, Jharkhand. The proposal was last considered in 15th EAC meeting held on 27th –28th JUNE, 2014 where in the Committee after detailed deliberations has recommended the project of granting EC with the following specific conditions:

i. The coal transportation from the mine to the siding shall be by conveyor belt and coal transportation from siding to the washery shall be by rail.
ii. Piezometers be installed upto the depth of borehole well to facilitate monitoring ground water.
iii. Water sprinkler be used for coal dust suppression along the haul roads.
iv. Thick green belt shall be developed around proposed washery within the Cluster-XII lease area and plantation shall be undertaken along NH-32.BCCL is also in process of instituting Source Apportionment Study which will clearly show sources of background pollution levels. Plantation shall be taken up under environmental head.
v. To monitor effect on groundwater, piezometers shall be installed in bore wells.
vi. Further subsidence study shall be taken up with reputed scientific agency like Central Institute of Mining and Fuel Research (CIMFR) Dhanbad as per stipulation by DGMS.
vii. Various CSR works that will be carried out shall include education, healthcare water supply etc.
viii. Adequate mitigation measures shall be taken so as to address the subsidence issues.
ix. The project should have ecologist/social scientists to monitor the project.
x. Factual Correction in the ToR letter at condition number may be corrected as (i) An EIA-

EMP report for cluster XII consisting of 1 UG Kapuria mine of production capacity of 2.4 MTPA with a peak capacity of 3.12 MTPA in a ML area of 809.60 Ha based on the generic structure specified in Appendix III of EIA Notification 2006.

21.17.2 The proponent submitted the approved mine plan vide letter no. BCCL/Dy-GM(Env.)/F-EMP/14/699 dated 19.08.2014 approved by the Competent Authority. The date of mine plan approval is 18.08.2014

21.17.3. The approved mine plan was discussed. **The Committee reiterated its earlier decision taken in 15th EAC meeting held on 27th –28th June, 2014 and recommended the project for granting EC.**

21.18 Begunia Underground Coalmine Project (0.33 MTPA in an ML area of 236 ha) of M/s SAIL, located at Dist. Bardwan, West Bengal - EC based on TOR granted on 19.05.2011. Correction in title.

21.18.1 The proposal is for Begunia Underground Coalmine Project (0.33 MTPA in an ML area of 236 ha) of M/s SAIL, located at Dist. Bardwan, West Bengal. The proposal was last considered in the 19th EAC meeting held on 13th -14th August, 2014. The proponent informed vide letter – dated that there are factual correction in the total project area/approved mine lease area and land use area table in the minutes of the meeting. To which the Committee agreed to.

21.18.2 . As per revised correction, the title of the project will be "Begunia Underground Coalmine Project (0.33 MTPA in a total project area of 236 Ha that includes approved ML area of 136 Ha.) of M/s SAIL, located at Dist. Bardwan, West Bengal"

Details of Land Use Pattern of Lease Area

Description	**Area (Ha)**
Forest Land	Nil
Govt. waste land	6.31
Residential Area	35.43
Pond/Tank	10.55
Company Land	24.65
Private Land (including Agr.)	159.05
Total	**235.99**

21.18.3 The Committee had deliberated the submissions of the proponent and recommended for the corrections.

21.19 Discussion & any other matters with the permission of the Chair.

21.19.1. Secretary, Ministry of Coal vide letter no. 43012/13/2011-CPAM dated 11th August, 2014 had requested the MoEFCC for exemption of Coal mines from stipulated condition of restricting the depth of final void to 35-45 m. MoEFCC has requested the EAC for its opinion.

21.19.2 The EAC has deliberated on the letter from Secretary, Ministry of Coal pertaining to rehandling of OBD and backfilling of mines. After discussions and detailed deliberations, the EAC did not accede to the suggestions made by Ministry of Coal, because of the following environmental and ecological concerns:

i. Land is a limited precious resource which provides livelihood for generations to come and ecosystem services essential for sustaining life and conservation of the same in paramount importance. Open Cast mining destroys not only the valuable resource but also creates huge overburden dumps of 90 to 120 m high spreading over hundreds of Hectares with a mine void depth up to 200 m or even more. It can as such be well appreciated that these man-made land forms are totally unproductive and render ecosystems dysfunctional and are avoidable. Ministry of Coal, in its mine plan & closer plan, has also emphasized on sequential mining

ii. Enough scientific literature are available to suggest that a deep void of 200 m cannot support biological productivity, as sunlight does not penetrate below the surface layers and also due to anoxic conditions. Back filling to the ground level, leaving behind small voids with a depth of about 35-40m would make land use ecologically and environmentally sustainable.

iii. The massive over burdens certainly cannot sustain either agriculture or a productive forest ecosystem. Further, there is an excess surface run of streams/nallahs leading to silting of natural water courses thus reducing considerably in recharging potential leading to depletion of ground water.

iv. There are well laid regulations as per MMDR Act. that in the mine closure plan, rehandling of OBDs and backfilling is a 'must' so that the land will become productive after the extraction of geo- resource.

v. During block allocations of adjacent blocks, sequential working needs to be kept in mind and provisions be made for subsequent mine O.B. to be filled into previous block void so as to restore most of the land to near original state. A look at the block location maps of North Karanpura, Talcher, Raigarh etc. Will indicate quantum of land that will get lost in external OB dumps and final mine voids if every mine is permitted to have own external OB dumps and mine voids.

The meeting ended with a vote of Thanks to the Chair.

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Annexure 1

LIST OF PARTICIPANTS IN 21st EXPERT APPRAISAL COMMITTEE (EAC) (THERMAL & COAL MINING) MEETING HELD ON 18th -19th September, 2014 IN NEW DELHI.

Sl. No.	List of Members	
1.	Prof. C.R. Babu	Member
2.	Shri Jawahar Lal Mehta	Member
3.	Shri N. K. Verma	Member
4.	Shri G. S. Dang	Member
5.	Dr. T. K .Dhar	Member
6.	Shri A. K. Bansal	Member
7.	Dr. G. R. Rathnavel	Member
8.	Dr. Manoranjan Hota	Director & Member Secretary
9.	Shri. P. R. Sakhare	Deputy Director/Scientist 'C'

Annexure 2

LIST OF PROPONENTS PARTICIPATED IN THE 21st EXPERT APPRAISAL COMMITTEE (EAC) (THERMAL & COAL MINING) MEETING HELD ON 18th -19th September, 2014 ON COAL SECTOR PROJECTS.

21.1 Ghogha-Surka Lignite Mine and Khadsaliya-II Lignite Mine of M/s Gujarat Power Corp. Ltd.

1. Shri S. A. Kadam
2. Shri R. K. Singhani
3. Shri R. B. Sare
4. Shri Bijoy Kumar Nayak
5. Shri M. Kalita
6. Md. Rahman
7. Shri Shaik pantu Sahib
8. Shri Rajkumar
9. Shri D. N. Dhoktia

21.2 Siarmal Opencast Project of M/s Mahanadi Coalfield Limited.

1. Shri J. P. Singh
2. Shri J. Singh
3. Shri A. K. Singh
4. Dr. A. K. Samantaray
5. Shri D. Bhattacharya
6. Shri S. K. Bhar
7. Shri C. Jayadev

21.3 Kistaram Opencast Project of) M/s The Singareni Collieries co. Limited.

1. Shri A. Manohar Rao
2. Shri Sharath Kumar
3. Dr. Durga
4. Shri N. Bhaskar

21.4 Cluster 12 of M/s Eastern Coalfield Limited.

1. Shri S. Chakravarty
2. Shri G. Prasad
3. Shri J. N. Biswal
4. Shri Sandeep Sharma
5. Shri S. Chakraborty
6. Shri Anand Shekhar
7. Shri S. Kundu

21.5 Cluster no. 6 of M/s Eastern Coalfield Limited.

1. Shri S. Chakravarty
2. Shri G. Prasad
3. Shri J. N. Biswal
4. Shri Sandeep Sharma
5. Shri S. Chakraborty

6. Shri Anand Shekhar
7. Shri S. Kundu

21.6 Cluster no. 2 of M/s Eastern Coalfield Limited.

1. Shri S. Chakravarty
2. Shri G. Prasad
3. Shri J. N. Biswal
4. Shri Sandeep Sharma
5. Shri S. Chakraborty
6. Shri Anand Shekhar
7. Shri S. Kundu

21.7 Cluster 7 of M/s Eastern Coalfields Limited.

1. Shri S. Chakravarty
2. Shri G. Prasad
3. Shri J. N. Biswal
4. Shri Sandeep Sharma
5. Shri S. Chakraborty
6. Shri Anand Shekhar
7. Shri S. Kundu

21.8 Expansion of Coal Beneficiation Plant of M/s Global Coal & Mining Pvt. Ltd.

1. Shri V. K. Shegal
2. Shri K. Patra
3. Shri Prakash Srivastava

21.9 Nimbri-Chandwatan Lignite Mining Project of M/s Binani Cements Ltd.

1. Shri Robin Bose
2. Shri Alok Sood
3. Shri Vikrant Saraf
4. Shri A Singha

21.10 Govindpur Phase-II OCP of M/s Central Coalfields Limited

1. Shri P. K. Sinha
2. Shri Alok Kumar
3. Dr. A. Sinha
4. Shri Pushkar
5. Shri J. Chakravarty
6. Shri S. Singh
7. Dr. Manoj Kumar

21.11 Urimari Underground Coal Mining Project of M/s Central Coalfields Limited.

1. Shri P. K. Sinha
2. Shri Alok Kumar
3. Dr. A. Sinha
4. Shri Pushkar

5. Shri J. Chakravarty
6. Shri S. Singh
7. Dr. Manoj Kumar

21.12 K. D. Hesalong Extn. OCP of M/s Central Coalfields Limited.

1. Shri P. K. Sinha
2. Shri Alok Kumar
3. Dr. A. Sinha
4. Shri Pushkar
5. Shri J. Chakravarty
6. Shri S. Singh
7. Dr. Manoj Kumar

21.13 Proposed 2x2.4 MTPA Coal Washery Project of M/s Paras Power & Coal Beneficiation Limited.

Absent

21.14 Junad Deep Extension Project of M/s Western Coalfields Limited.

1. Shri S. S. Malhi
2. Shri R. M. Wanare
3. Shri S. K. Sinha
4. Md. Noor Uddin
5. Shri K. Chakraborty

21.15 Chinchala-Chikalgaon Amalgamated OC Mine Project of M/s Western Coalfields Limited.

1. S. S. Malhi
2. Shri R. M. Wanare
3. Shri S. K. Sinha
4. Md. Noor Uddin
5. Shri K. Chakraborty

21.16 Bander Opencast of M/s Bander Coal Company Limited.

Absent

21.17 Kapuria UG Mine of M/s Bharat Coking Coal Limited.

1. Shri D. C. Jha
2. Shri V. K. Sinha
3. Dr. EVR. Raju

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21st EAC (THERMAL & COAL MINING PROJECTS) MEETING
SCHEDULED FOR 18th -19th September, 2014

AGENDA

Venue: Brahmaputra Conference Hall, Vayu Wing, Indira Paryavaran Bhawan, Jor Bagh, New Delhi-110003. Pl. check the MoEF website:
http://environmentclearance.nic.in/Report/Default3.aspx

Important Note:

i. **Please send the information-1"asby-mail,perinword"check format and also a signed & scanned copy, to the Member-Secretary at** hota@nic.in **at least one week prior to the EAC meeting.**
ii. **Without this information, EAC has discretion to invite the proponent for the meeting.**
iii. **Please also provide a copy to the EAC Members during the meeting.**
iv. **No consultant is permitted into the meeting who has no accreditation with Quality Council of India (QCI) /National Accreditation Board of Education and Training (NABET) as per the MoEF OM dated 2nd December, 2009.**

COAL MINING PROJECTS

Thursday, 18th September, 2014

10:00 AM -10:15 AM: Confirmation of Minutes

21.5 **10:15 AM –11:00 AM:** Ghogha-Surka Lignite Mine (2.25 MTPA in 1355 ha) and Khadsaliya-I (1 MTPA in 711.42.47 ha) and Khadsaliya-II Lignite Mine (0.75 MTPA in 914.14.92 ha) of **M/s Gujarat Power Corp. Ltd.,** Dist. Bhavnagar, Gujarat - **EC based on TOR granted on 23.03.2011, amended on 30.05.2011 –Further Consideration.**

21.6 **11:00 AM –11:45 AM:** Siarmal Opencast Project of (40.0 MTPA normative and 50.0 MTPA peak in an ML area of 2475.47 ha) **M/s Mahanadi Coalfield Limited,** located at District-Sundargarh, Orissa –**TOR.**

21.7 **11:45 AM –12:15 PM:** Kistaram Opencast Project of (2.00 MTPA in ML area of 435.68 Ha) **M/s The Singareni Collieries co. Limited,** located at dist. Khammam, Telangana.–**TOR.**

21.8 **12:15 PM –1:15 PM:** Cluster 12 comprising of 19 mixed mines of a combined prod. capacity of 27.16 MTPA with a peak production of 31.83 MTPA in a combined ML area of 11164 ha of **M/s Eastern Coalfields Limited,** located in Raniganj Coalfields, in Tehsil Haripur Block, dist. Burdwan, West Bengal **- EC based on TOR granted on 15.06.2011 & Modify on 02.11.2011 - Further Consideration.**

LUNCH

21.6 **2:00 PM - 3:00 PM:** Cluster no. 6 group of Mixed mines project (1.453 MTPA normative and 2.25 MTPA peak in an area of 4775 ha) of **M/s Eastern Coalfield Limited,** located at dist. Burdwan, West Bengal **- EC based on TOR granted dated 09.02.2011, amended on 29.02.2012 - Further Consideration.**

21.10 **3:00 PM –4:00 PM:** Cluster no. 2 group of Mixed mines project (0.36 MTPA with a peak prod. of 0.45 MTPA in a combined ML area of 1018 ha) of **M/s Eastern Coalfield Limited,** located at dist. Burdwan, West Bengal. **- EC based on TOR granted dated 19.02.2011 - Further Consideration.**

21.11 **4:00 PM -5:00 PM:** Cluster 7 (4 mixed mines of a prod. capacity of 0.58 MTPA normative and 0.74 MTPA peak in a combined ML area of 2313 ha) **M/s Eastern Coalfields Limited,** located in Raniganj Coalfields, dist. Burdwan, West Bengal **- EC based on TOR granted on 09.02.2011 & Modify on 25.02.2012 –Further Consideration.**

21.12 **5:00 PM - 5:30 PM:** Expansion of Coal Beneficiation Plant (2 MTPA to 4 MTPA) of **M/s Global Coal & Mining Pvt. Ltd.,** in village Tentulei, South Balanad, Tehsil Talcher, dist. Angul, Orissa - **EC based on TOR granted on 31.12.2008 –EC Correction.**

21.13 **5:30 PM - 6:00 PM:** Nimbri-Chandwatan Lignite Mining Project (0.5 MTPA in an ML area of 350 ha) of **M/s Binani Cements Ltd.** located in village Nimbri, Tehsil Jayal-Degana, District Nagaur, Rajasthan - **EC based on TOR granted on 22.08.2007** - **Further Consideration**

Friday, 19th September, 2014

21.11 **10:00 AM –11:00 AM:** Govindpur Phase-II OCP for a capacity of 2.20 MTPA (nominal) and 2.50 MTPA (Peak) **M/s Central Coalfields Limited, dist. Hazaribag, Jharkhand. - EC under**

7(ii) of EIA Notification 2006.

21.14 **11:00 AM - 11:45 AM:** Urimari Underground Coal Mining Project for (0.36 MTPA Normative and 0.41 MTPA Peak in an ML area of 105.22 ha) of **M/s Central Coalfields Limited,** in District Ranchi Jharkhand –**TOR.**

21.15 **11:45 AM - 12:30 PM:** K. D. Hesalong Extn. OCP (4.5 MTPA with a peak prod. of 5 MTPA) and expansion of ML area from 675.91 ha) of **M/s Central Coalfields Limited,** dist. Ranchi, Jharkhand –**TOR**.

21.16 **12:30 PM - 1:00 PM:** Proposed 2x2.4 MTPA Coal Washery Project of **M/s Paras Power & Coal Beneficiation Limited,** located at distt. Bilaspur, Chhattisgarh–**TOR.**

LUNCH

21.17 **2:00 PM –3:00 PM:** Junad Deep Extension Project (0.60 MTPA and expansion in an ML area of 174.28 Ha to 449.63 Ha) **M/s Western Coalfields Limited,** located at district-Yavatmal, Maharashtra–**TOR.**

21.18 **3:00 PM –4:00 PM:** Chinchala-Chikalgaon Amalgamated OC Mine Project (3 MTPA normative and 3.9 MTPA peak in an area of 2344.88 ha) of **M/s Western Coalfields Limited** located at Dist. Yavatmal, Maharashtra. –**TOR –Further Consideration.**

21.19 **4:00 PM - 5:00 PM**: Bander Opencast (1.2 MTPA)–cum–Underground (0.5 MTPA) Coalmine Project in an ML area of 1643.67 ha of **M/s Bander Coal Company Limited,** located in dist. Chandrapur, Maharashtra –**TOR Modification & TOR Validity**

21.20 **5:00 PM - 5:30 PM:** Kapuria UG Mine (2.4 MTPA normative with a peak capacity of 3.12

MTPA in an ML area of 809.60 ha) of **M/s Bharat Coking Coal Limited,** located in Jharia Coalfields, Dist- Dhanbad, Jharkhand- **EC based on TOR granted on 26.12.2012 –Further Consideration.**

21.20 5:30 PM onwards - Discussion & Any other matters with the permission of the Chair.

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ANNEXURE-4

GENERIC TOR FOR COAL WASHERY

Based on the presentation made and discussions held, the Committee prescribed the following TOR:

(i) A brief description of the plant, the technology used, the source of coal, the mode of transport of incoming unwashed coal and the outgoing washed coal. Specific pollution control and mitigative measures for the entire process.

(ii) The EIA-EMP report should cover the impacts and management plan for the project of the capacity for EC is sought and the impacts of specific activities on the environment of the region, and the environmental quality ?air, water, land, biotic community, etc. through collection of data and information, generation of data on impacts for the rated capacity. If the washery is captive to a coal mine/TPP/Plant the cumulative impacts on the environment and usage of water should be brought out along with the EMP.

(iii) A Study area map of the core zone and 10km area of the buffer showing major industries/mines and other polluting sources, which shall also indicate the migratory corridors of fauna, if any and the areas where endangered fauna and plants of medicinal and economic importance are found in the area. If there are any ecologically sensitive areas found within the 15km buffer zone, the shortest distance from the National Park/WL Sanctuary Tiger Reserve, etc should be shown and the comments of the Chief Wildlife Warden of the State Government should be furnished.

(iv) Collection of one-season (non-monsoon) primary base-line data on environmental quality ?air (PM_{10}, $PM_{2.5}$, SOx and NOx), noise, water (surface and groundwater), soil.

(v) Detailed water balance should be provided. The break-up of water requirement as per different activities in the mining operations vis-à-vis washery should be given separately. Source of water for use in mine, sanction of the competent authority in the State Govt..and examine if the unit can be zero discharge including recycling and reuse of the wastewater for other uses such as green belt, etc.

(vi) Impact of choice of the selected use of technology and impact on air quality and waste generation (emissions and effluents).

(vii) Impacts of mineral transportation - 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 the specific points where fugitive emissions can arise and the specific pollution control/mitigative measures proposed to be put in place.

(viii) Details of various facilities to be provided for the personnel involved in mineral transportation in terms of parking, rest areas, canteen, and effluents/pollution load from these activities. Examine whether existing roads are adequate to take care of the additional load of mineral [and rejects] transportation, their impacts. Details of workshop, if any, and treatment of workshop effluents.

(ix) Impacts of CHP, if any on air and water quality. A flow chart of water use and whether the unit can be made a zero-discharge unit.

(x) Details of green belt development.

(xi) Including cost of EMP (capital and recurring) in the project cost.

(xiv) Public Hearing details of the coal washery to include details of notices issued in the newspaper, proceedings/minutes of public hearing, the points raised by the general public and commitments made in a tabular form. If the Public Hearing is in the regional language, an authenticated English Translation of the same should be provided.

(xv) Status of any litigations/ court cases filed/pending on the project.

(xvi) Submission of sample test analysis of:

a. Characteristics of coal to be washed- this includes grade of coal and other characteristics ?ash, S and and heavy metals including levels of Hg, As, Pb, Cr etc.

b. Characteristics and quantum of washed coal.
c. Characteristics and quantum of coal waste rejects.

(xvii) Management/disposal/Use of coal waste rejects

(xviii) Copies of MOU/Agreement with linkages (for stand-alone washery) for the capacity for which EC has been sought.

(xxxvi) Submission of sample test analysis of:
Characteristics of coal to be washed- this includes grade of coal and other characteristics, ash, S

(xxxviii) 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.

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ANNEXURE -5

GENERIC TOR FOR AN OPENCAST COALMINE PROJECT

(i) An EIA-EMP Report would 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 cover the impacts and management plan for the project specific activities on the environment of the region, and the environmental quality ?air, water, land, biotic community, etc. through collection of data and information, generation of data on impacts including prediction modelling for **???. MTPA** of coal production based on approval of project/Mining Plan for ???MTPA. Baseline data collection can be for any season except monsoon.

(iii) A map specifying locations of the State, District and Project location.

(iv) A Study area map of the core zone and 10km area of the buffer zone (1: 50,000 scale) clearly delineating the major topographical features such as the land use, surface drainage of rivers/streams/nalas/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 area of the buffer zone 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 of the land use. Satellite imagery per se is not required.

(vi) Map showing the core zone delineating the agricultural land (irrigated and unirrigated, 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 2-5 km of the buffer zone (where the water courses of the core zone ultimately join the major rivers/streams outside the lease/project area) should also be clearly indicated as a separate map.

(viii) A detailed Site plan of the mine showing the various 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 and if any, in topography such as existing roads, drains/natural water bodies are to be left undisturbed along with any natural drainage adjoining the lease /project 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.

(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.

(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.

(xi) Break up of lease/project area as per different land uses and their stage of acquisition.

LANDUSE DETAILS FOR OPENCAST PROJECT

S.N.	LANDUSE	Within ML Area (ha)	Outside ML Area (ha)	TOTAL
1.	Agricultural land			
2.	Forest land			
3.	Wasteland			
4.	Grazing land			

5.	Surface water bodies			
6.	Settlements			
7.	Others (specify)			
	TOTAL			

(xii) Break-up of lease/project area as per mining operations.

(xiii) Impact of changes in the land use due to the start of the projects if much of the land being acquired is agricultural land/forestland/grazing land.

(xiv) Collection of one-season (non-monsoon) primary baseline data on environmental quality - air (PM_{10}, $PM_{2.5}$, SO_x, NO_x and heavy metals such as Hg, Pb, Cr, As, etc), noise, water (surface and groundwater), soil along with one-season met data coinciding with the same season for AAQ collection period.

(xv) Map of the study area (1: 50, 000 scale) (core and buffer zone clearly delineating the location of various stations superimposed with location of habitats, other industries/mines, polluting sources. The number and location of the stations in both core zone and buffer zone 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. Values should be provided based on desirable limits.

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

(xvii) Details of mineral reserves, geological status of the study are and the seams to be worked, ultimate working depth and progressive stage-wise working scheme until end of mine life should be reflected 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.

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

(xix) Impact of mining on hydrology, modification of natural drainage, diversion and channelling of the existing rivers/water courses flowing though the ML and adjoining the lease/project and the impact on the existing users and impacts of mining operations thereon.

(xx) Detailed water balance should be provided. The break up of water requirement for the various mine operations should be given separately.

(xxi) Source of water for use in mine, sanction of the competent authority in the State Govt. and impacts vis-à-vis the competing users.

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

(xxiii) Impact of blasting, noise and vibrations.

(xxiv) Impacts of mining on the AAQ, predictive modelling using the ISCST-3 (Revised) or latest model.

(xxv) Impacts of mineral transportation ?within and outside the lease/project along with flow-chart indicating the specific areas generating fugitive emissions. Impacts of transportation, handling, transfer of mineral and waste on air quality, generation of effluents from workshop, management plan for maintenance of HEMM, machinery, equipment. Details of various facilities to be provided in terms of parking, rest areas, canteen, and effluents/pollution load from these activities.

(xxvi) Details of waste generation ?OB, topsoil ? as per the approved calendar programme, and their management shown in figures as well explanatory chapter with tables giving progressive development and mine closure plan, green belt development, backfilling programme and conceptual post mining land use. OBdump heights and terracing should based on slope stability studies with a max of 28^{o} angle as the ultimate slope. Sections of dumps (ultimate) (both longitudinal and cross section) with relation to the adjacent area should be shown.

(xxvii) Progressive Green belt and afforestation plan (both in text, figures as well as in tables prepared by MOEF) and selection of species (local) for the afforestation/plantation programme based on original survey/landuse.

Table 1: Stage-wise Landuse and Reclamation Area (ha)

S.N.	**Land use Category**	**Present (1st Year)**	**5th Year**	**10th Year**	**20th year**	**24th Year (end of Mine life)***
1.	Backfilled Area(Reclaimed with plantation)					
2.	Excavated Area (not reclaimed)/void					
3.	External OB dump Reclaimed with plantation)					
4.	Reclaimed Top soil dump					
5.	Green Built Area					
6.	Undisturbed area (brought under plantation)					
7.	Roads (avenue plantation)					
8.	Area around buildings and Infrastructure					
	TOTAL	110*	110*	110*	110*	110*

* As a representative example

Table 2: Stage-wise Cumulative Plantation

S.N.	**YEAR***	**Green Belt**		**External Dump**		**Backfilled Area**		**Others (Undisturbed Area/etc)**		**TOTAL**	
		Area (ha)	No. of trees	Area (ha)	No. of Trees	Area (ha)	No. of Trees	Area (ha)	No. of Trees	Area (ha)	No. of Trees
1.	1st year										
2.	3rd year										
3.	5th year										
4.	10th year										
5.	15th year										
6.	20th year										

7.	25th year										
8.	30th year										
9.	34th year (end of mine life)										
10.	34-37th Year (Post-mining)									85	

* As a representative example

(xxviii) Conceptual Final Mine Closure Plan, post mining land use and restoration of land/habitat to pre- mining. A Plan for the ecological restoration of the area post mining and for land use should be prepared with detailed cost provisions. Impact and management of wastes and issues of rehandling (wherever applicable) and backfilling and progressive mine closure and reclamation.

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

S.N.	**Land use during Mining**	**Land Use (ha)**				
1.	External OB Dump	Plantation	Water Body	Public Use	Undisturbed	TOTAL
2.	Top soil Dump					
3.	Excavation					
4.	Roads					
4.	Built up area					
5.	Green Belt					
6.	Undisturbed Area					
	TOTAL	85				**110**

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

(xxx) 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 for the mine.

(xxxi) Risk Assessment and Disaster Preparedness and Management Plan.

(xxxii) Integrating in the Env. Management Plan with measures for minimising use of natural resources - water, land, energy, etc.

(xxxiii) Including cost of EMP (capital and recurring) in the project cost and for progressive and final mine closure plan.

(xxxiv) 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.

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

(xxxvi) Public Hearing should cover the details of notices issued in the newspaper, proceedings/minutes of public hearing, the points raised by the general public and commitments made by the proponent 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.

(xxxvii) In built mechanism of self-monitoring of compliance of environmental regulations.

(xxxx) Status of any litigations/ court cases filed/pending on the project.

(xxxxi) Submission of sample test analysis of:

Characteristics of coal - this includes grade of coal and other characteristics ?ash, S and heavy metals including levels of Hg, As, Pb, Cr etc.

(xxxxii) Copy of clearances/approvals ? such as Forestry clearances, Mining Plan Approval, NOC from Flood and Irrigation Dept. (if req.), etc. wherever applicable.

(A) FORESTRY CLEARANCE

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

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ANNEXURE -6

GENERIC TOR FOR AN UNDERGROUND COALMINE PROJECT

(i) An EIA-EMP Report should be prepared for a peak capacity of **????.. MTPA** over an area of ????.. ha addressing the impacts of the underground coalmine project including the aspects of mineral transportation and issues of impacts on hydrogeology, plan for conservation of flora/fauna and afforestation/plantation programme based on the generic structure specified in Appendix III of the EIA Notification 2006.. Baseline data collection can be for any season except monsoon.

(ii) The EIA-EMP report should also cover the impacts and management plan for the project specific activities on the environment of the region, and the environmental quality ?air, water, land, biotic community, etc. through collection of baseline data and information, generation of baseline data on impacts for ??. MTPA of coal production based on approval of project/Mining Plan.

(iii) A Study area map of the core zone and 10km area of the buffer zone (15 km of the buffer zone in case of ecologically sensitive areas) delineating the major topographical features such as the land use, drainage, locations of habitats, major construction including railways, roads, pipelines, major industries/mines and other polluting sources, which shall also indicate the migratory corridors of fauna, if any and the areas where endangered fauna and plants of medicinal and economic importance are found in the area.

(iv) Map showing the core zone along with 3-5 km of the buffer zone) delineating the agricultural land (irrigated and unirrigated, uncultivable land (as defined in the revenue records), forest areas (as per records) and grazing land and wasteland and water bodies.

(v) Contour map at 3m interval along with Site plan of the mine (lease/project area with about 3-5 km of the buffer zone) showing the various surface structures such as buildings, infrastructure, CHP, ETP, Stockyard, township/colony (within/adjacent to the ML), green belt and undisturbed area and if any existing roads, drains/natural water bodies are to be left undisturbed along with details of natural drainage adjoining the lease/project and modification of thereof in terms of construction of embankments/bunds, proposed diversion/rechannelling of the water courses, etc., highways, passing through the lease/project area.

(vi) Original land use (agricultural land/forestland/grazing land/wasteland/water bodies) of the area. Impacts of project, if any on the landuse, in particular, agricultural land/forestland/grazing land/water bodies falling within the lease/project and acquired for mining operations. Extent of area under surface rights and under mining rights.

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

(vii) Study on the existing flora and fauna in the study area carried out by an institution of relevant discipline and the list of flora and fauna duly authenticated separately for the core and buffer zone and a statement clearly specifying whether the study area forms a part of the migratory corridor of any endangered fauna. The flora and fauna details should be furnished separately for the core zone and buffer zone. The report and the list should be authenticated by the concerned institution carrying out the study and the names of the species scientific and common names) along with the classification under the Wild Life Protection Act, 1972 should be furnished.

(viii) Details of mineral reserves, geological status of the study area and the seams to be worked, ultimate working depth and progressive stage-wise working plan/scheme until end of mine life should be reflected on the basis of the approved rated capacity and calendar plans of production from the approved Mining Plan. Geological maps should also be included.

(ix) Impact of mining on hydrology, modification of natural drainage, diversion and channelling of the existing rivers/water courses flowing though the ML and adjoining the lease/project and the impact on the existing users and impacts of mining operations thereon.

(x) Collection of one-season (non-monsoon) primary baseline data on environmental quality ? air (PM_{10}, $PM_{2.5}$, SO_x, NO_x and heavy metals such as Hg, Pb, Cr, AS, etc), noise, water (surface and groundwater), soil along with one-season met data.

(xi) Map of the study area (core and buffer zone) clearly delineating the location of various monitoring stations (air/water/soil and noise ? each shown separately) superimposed with location of habitats, wind roses, other industries/mines, polluting sources. The number and location of the stations should be selected on the basis of the proposed impacts in the downwind/downstream/groundwater regime. One station should be in the upwind/upstream/non-impact non-polluting area as a control station. Wind roses to determine air pollutant dispersion and impacts thereof shall be determined. Monitoring should be as per CPCB guidelines and standards for air, water, noise notified under Environment Protection Rules. Parameters for water testing for both ground and surface water should be as per ISI standards and CPCB classification of surface water wherever applicable.

(xii) Impact of mining and water abstraction and mine water discharge in mine on the hydrogeology and groundwater regime within the core zone and 10km buffer zone including long?termmodelling studies on the impact of mining on the groundwater regime. Details of rainwater harvesting and measures for recharge of groundwater should be reflected wherever the areas are declared dark/grey from groundwater development.

(xiii) Study on subsidence, measures for mitigation/prevention of subsidence, modelling subsidence prediction and its use during mine operation, safety issues.

(xiv) 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.

(xv) 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.

(xvi) Impacts of mineral transportation ?within and outside the lease/project. The entire sequence of mineral production, transportation, handling, transfer and storage of mineral and waste, and their impacts on air quality should be shown in a flow chart with the specific points where fugitive emissions can arise and the specific pollution control/mitigative measures proposed to be put in place. Examine the adequacy of roads existing in the area and if new roads are proposed, the impact of their construction and use particularly if forestland is used.

(xvii) Details of various facilities to be provided in terms of parking, rest areas, canteen, and effluents/pollution load from these activities. Examine whether existing roads are adequate to take care of the additional load of mineral and their impacts.

(xviii) Examine the number and efficiency of mobile/static water sprinkling system along the main mineral transportation road within the mine, approach roads to the mine/stockyard/siding, and also the frequency of their use in impacting air quality.

(xix) Impacts of CHP, if any on air and water quality. A flow chart of water use and whether the unit can be made a zero-discharge unit.

(xx) Conceptual Final Mine Closure Plan along with the fund requirement for the detailed activities proposed there under. Impacts of change in land use for mining operations and whether the land can be restored for agricultural use post mining. \

Table 1 Stage-wise Cumulative Plantation

S.N.	YEAR*	Green Belt		External Dump		Backfilled Area		Others (Undisturbed Area/etc)		TOTAL	
		Area (ha)	No. of trees	Area (ha)	No. of Trees	Area (ha)	No. of Trees	Area (ha)	No. of Trees	Area (ha)	No. of Trees
1.	1st year										
2.	3rd year										
3.	5th year										
4.	10thyesr										
5.	15thyear										
6.	20th year										
7.	25th year										
8.	30th year										
9.	34th year (end of mine life)										
10.	34-37th Year (Post-mining)									85*	2,12,500

*As a representative example

(xxi) 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 for the mine should be furnished.

(xxii) Details of cost of EMP (capital and recurring) in the project cost and for final mine closure plan. The specific costs (capital and recurring) of each pollution control/mitigative measures proposed in the project until end of mine life and a statement that this is included in the project cost.

(xxiii) Integrating in the Env. Management Plan with measures for minimising use of natural resources ?water, land, energy, raw materials/mineral, etc.

(xxiv) R&R: Detailed project specific R&R Plan with data on the existing socio-economic status (including tribals, SC/ST) of the population 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.

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

(xxvi) Public Hearing should cover the details as specified in the EIA Notification 2006, and include notices issued in the newspaper, proceedings/minutes of public hearing, the points raised by the general public and commitments by the proponent made 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.

(xxvii) Status of any litigations/ court cases filed/pending in any Court/Tribunal on the project should be furnished.

(xxxvii) Submission of sample test analysis of:

(xxxvii) Characteristics of coal - this includes grade of coal and other characteristics ? ash, and heavy metals including levels of Hg, As, Pb, Cr etc.

(xxxviii) Copy of clearances/approvals ?such as Forestry clearances, Mining Plan Approval, NOC from Flood and Irrigation Dept. (if req.), etc.

FORESTRY CLEARANCE

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

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ANNEXURE-7

GENERIC TOR FOR AN OPENCAST-CUM-UNDERGROUND COALMINE PROJECT

(i) An EIA-EMP Report would be prepared for a combined rated capacity of**??..**MTPA for OC-cum-UG project which consists of ??. MTPA 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 cover the impacts and management plan for the project specific activities on the environment of the region, and the environmental quality ?air, water, land, biotic community, etc. through collection of data and information, generation of data on impacts including prediction modelling for ???. MTPA of coal production based on approval of project/Mining Plan for ??.. MTPA. Baseline data collection can be for any season except monsoon.

(iii) A map specifying locations of the State, District and Project location.

(iv) A Study area map of the core zone and 10km area of the buffer zone (1: 50,000 scale) clearly delineating the major topographical features such as the land use, surface drainage of rivers/streams/nalas/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 area of the buffer zone 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 of the land use. Satellite imagery per se is not required.

(vi) Map showing the core zone delineating the agricultural land (irrigated and unirrigated, 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 2-5 km of the buffer zone (where the water courses of the core zone ultimately join the major rivers/streams outside the lease/project area) should also be clearly indicated as a separate map.

(viii) A detailed Site plan of the mine showing the various 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 and if any, in topography such as existing roads, drains/natural water bodies are to be left undisturbed along with any natural drainage adjoining the lease /project and modification of thereof in terms of construction of embankments/bunds, proposed diversion/rechannelling of the water courses, etc., approach roads, major haul roads, etc.

(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.

(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.

(xi) Break up of lease/project area as per different land uses and their stage of acquisition.

LANDUSE DETAILS FOR OPENCAST PROJECT

S.N.	**LANDUSE**	**Within ML Area (ha)**	**Outside ML Area (ha)**	**TOTAL (ha)**
1.	Agricultural land			

2.	Forest land			
3.	Wasteland			
4.	Grazing land			
5.	Surface water bodies			
6.	Settlements			
7.	Others (specify)			
	TOTAL			

LANDUSE DETAILS FOR UNDERGROUND PROJECT

S.N.	ML/Project Land use	Area under Surface Rights (ha)	Area Under Mining Rights (ha)	Area under Both (ha)
1.	Agricultural land			
2.	ForestLand			
3.	Grazing Land			
4.	Wasteland			
5.	Water Bodies			
6.	Settlements			
7.	Others (specify)			
	TOTAL			

Area Under Surface Rights

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

(xii) Break-up of lease/project area as per mining operations.

(xiii) Impact of changes in the land use due to the start of the projects if much of the land being acquired is agricultural land/forestland/grazing land.

(xiv) Collection of one-season (non-monsoon) primary baseline data on environmental quality - air (PM_{10}, $PM_{2.5}$, SO_x, NO_x and heavy metals such as Hg, Pb, Cr, As, etc), noise, water (surface and groundwater), soil along with one-season met data.

(xv) Map of the study area (1: 50, 000 scale) (core and buffer zone clearly delineating the location of various stations superimposed with location of habitats, other industries/mines, polluting sources. The number and location of the stations in both core zone and buffer zone 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. Values should be presented in comparison to desirable limits.

(xvi) Study on the existing flora and fauna in the study area (10km) carried out by an institution of relevant discipline and the list of flora and fauna duly authenticated separately for the core and

buffer zone and a statement clearly specifying whether the study area forms a part of the migratory corridor of any endangered fauna. If the study area has endangered flora and fauna, or if the project falls within 15 km of an ecologically sensitive area, then a comprehensive Conservation Plan should be prepared and furnished along with comments from the CWLW of the State Govt.

(xvii) Details of mineral reserves, geological status of the study are and the seams to be worked, ultimate working depth and progressive stage-wise working scheme until end of mine life should be reflected 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 final mine closure plan should also be shown in figures.

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

(xix) Study on subsidence, measures for mitigation/prevention of subsidence, modelling subsidence prediction and its use during mine operation, safety issues.

(xx) Impact of mining on hydrology, modification of natural drainage, diversion and channelling of the existing rivers/water courses flowing though the ML and adjoining the lease/project and the impact on the existing users and impacts of mining operations thereon.

(xxi) Detailed water balance should be provided. The break up of water requirement for the various mine operations should be given separately.

(xxii) Source of water for use in mine, sanction of the competent authority in the State Govt. and impacts vis-à-vis the competing users.

(xxiii) Impact of mining and water abstraction use in mine on the hydrogeology and groundwater regime within the core zone and 10 km buffer zone including long?termmodelling studies on. Details of rainwater harvesting and measures for recharge of groundwater should be reflected in case there us a declining trend of groundwater availability and/or if the area falls within dark/grey zone.

(xxiv) Impact of blasting, noise and vibrations.

(xxv) Impacts of mining on the AAQ, predictive modelling using the ISCST-3 (Revised) or latest model.

(xxvi) Impacts of mineral transportation ?within and outside the lease/project along with flow-chart indicating the specific areas generating fugitive emissions. Impacts of transportation, handling, transfer of mineral and waste on air quality, generation of effluents from workshop, management plan for maintenance of HEMM, machinery, equipment. Details of various facilities to be provided in terms of parking, rest areas, canteen, and effluents/pollution load from these activities.

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

(xxviii) Impact and management of wastes and issues of rehandling and backfilling and progressive mine closure and reclamation.

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

(xxx) 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 for the mine.

(xxxi) Risk Assessment and Disaster Preparedness and Management Plan.

(xxxii) Integrating in the Env. Management Plan with measures for minimising use of natural resources - water, land, energy, etc.

(xxxiii) Progressive Green belt and afforestation plan (both in text, figures as well as in tables prepared by MOEF given below) and selection of species (local) for the afforestation/plantation programme based on original survey/landuse.

Table 1: Stage-wise Landuse and Reclamation Area (ha)

S.N.	Land use Category	Present (1st Year)	5th Year	10th Year	20th year	24th Year (end of Mine life)*
1.	Backfilled Area (Reclaimed with plantation)					
2.	Excavated Area (not reclaimed)/void					
3.	External OB dump Reclaimed with plantation)					
4.	Reclaimed Top soil dump					
5.	Green Built Area					
6.	Undisturbed area (brought under plantation)					
7.	Roads (avenue plantation)					
8.	Area around buildings and Infrastructure					
	TOTAL	110	110	110	110	110

* Representative case as an example

Table 2: Stage-wise Cumulative Plantation

S.N.	YEAR*	Green Belt		External Dump		Backfilled Area		Others (Undisturbed Area/etc)		TOTAL	
		Area (ha)	No. of trees	Area (ha)	No. of Trees	Area (ha)	No. of Trees	Area (ha)	No. of Trees	Area (ha)	No. of Trees
1.	1st year										
2.	3rd year										
3.	5th year										
4.	10th year										
5.	15th year										
6.	20th year										
7.	25th year										
8.	30th year										
9.	34th year (end of mine life)										
10.	34-37th Year (Post-mining)									85	

* Representative case as an example

(xxxiv) Conservation Plan for the endangered/endemic flora and fauna found in the study area and for safety of animals visiting/residing in the study area and also those using the study area as a migratory corridor.

(xxxv) Conceptual Final Mine Closure Plan, post mining land use and restoration of land/habitat to pre-mining. A Plan for the ecological restoration of the area post mining and for land use should be prepared with detailed cost provisions.

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

S.N.	**Land use during Mining**	**Land Use (ha)**				
1.	External OB Dump	Plantation	Water Body	Public Use	Undisturbed	TOTAL
2.	Top soil Dump					
3.	Excavation					
4.	Roads					
4.	Built up area					
5.	Green Belt					
6.	Undisturbed Area					
	TOTAL	85				**110**

(xxxvi) Including cost of EMP (capital and recurring) 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.

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

(xxxix) Public Hearing should cover the details of notices issued in the newspaper, proceedings/minutes of public hearing, the points raised by the general public and commitments made by the proponent 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.

(xxxx) In built mechanism of self-monitoring of compliance of environmental regulations.

(xxxxi) Status of any litigations/ court cases filed/pending on the project.

(xxxxii) Submission of sample test analysis of:

Characteristics of coal - this includes grade of coal and other characteristics ?ash, S and heavy metals including levels of Hg, As, Pb, Cr etc.

(xxxxiii) Copy of clearances/approvals ? such as Forestry clearances, Mining Plan Approval, NOC from Flood and Irrigation Dept. (if req.), etc.

(A) FORESTRY CLEARANCE

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

		details of each FC			

Copies of forestry clearance letters (all, if there are more than one)

(A) MINING PLAN APPROVAL
(B) MINING PLAN/PROJECT APPROVAL
Date of Approval of Mining Plan/Project Approval:
Copy of Letter of Approval of Mining Plan/Project Approval

(xxxxiv) Corporate Environment Responsibility:

b) The Company must have a well laid down Environment Policy approved by the Board of Directors.

c) 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.

d) 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.

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ANNEXURE-8

GENERAL CONDITIONS AND ADDITIONAL POINTS OF TOR

The following general points should be noted:

(i) All documents should be properly indexed, page numbered.
(ii) Period/date of data collection should be clearly indicated.
(iii) Authenticated English translation of all material provided in Regional languages.
(iv) After the preparation of the draft EIA-EMP Report as per the aforesaid TOR, the proponent shall get the Public Hearing conducted as prescribed in the EIA Notification 2006 and take necessary action for obtaining environmental clearance under the provisions of the EIA Notification 2006.
(v) The letter/application for EC should quote the MOEF file No. and also attach a copy of the letter prescribing the TOR.
(vi) The copy of the letter received from the Ministry on the TOR prescribed for the project should be attached as an annexure to the final EIA-EMP Report.
(vii) The final EIA-EMP report submitted to the Ministry must incorporate the issues in TOR and that raised in Public Hearing. The index of the final EIA-EMP report, must indicate the specific chapter and page no. of the EIA-EMP Report where the specific TOR prescribed by Ministry and the issue raised in the P.H. have been incorporated. Mining Questionnaire (posted on MOEF website) with all sections duly filled in shall also be submitted at the time of applying for EC.
(viii) General Instructions for the preparation and presentation before the EAC of TOR/EC projects of Coal Sector should be incorporated/followed.
(viii) The aforesaid TOR has a validity of two years only.

The following additional points are also to be noted:

(i) Grant of TOR does not necessarily mean grant of EC.
(ii) Grant of TOR/EC to the present project does not necessarily mean grant of TOR/EC to the captive/linked project.
(iii) Grant of TOR/EC to the present project does not necessarily mean grant of approvals in other regulations such as the Forest (Conservation) Act 1980 or the Wildlife (Protection) Act, 1972.
(iv) Grant of EC is also subject to Circulars issued under the EIA Notification 2006, which are available on the MOEF website: www.envfor.nic.in

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