MINUTES OF THE 57TH EXPERT APPRAISAL COMMITTEE (EAC) (THERMAL & COAL MINING) MEETING HELD ON 17TH-18TH SEPTEMBER 2012 IN ANNEXE I AND II, SCOPE CONVENTION CENTRE, SCOPE COMPLEX, LODI ROAD, NEW DELHI-110003.

COAL MINING PROJECTS

The 57th meeting of the reconstituted EAC (T&C) was held on 17th-18th September 2012 in Annexe- I & II, Scope Convention Centre, Scope Complex, New Delhi to consider the projects of coal mining sector. The list of participants of EAC and the proponents are given at Annexure-1 and 2 respectively.

The minutes of the 55th meeting of EAC (T&C) held on 27th-28th August 2012was confirmed.

MONDAY, 17th SEPTEMBER 2012

Item.1 : Ray Bachra underground mines (0.3 MTY in area of 1215.45 ha) of M/s Central Coalfields Ltd., located in located in Piparwar Area, dist. Chatra, Jharkhand (EC based on TOR granted on 18.11.2008).

1. The proposal is for underground mine of 0.30 MTPA over the area of 1215.45 ha.

2. The proposal was earlier considered in EAC meetings held on 22nd –23rd September 2009 and 28th –29th April 2010. The proponent had made the application for EC as required at the time of renewal of lease.

3. The proponent made a presentation and informed that out of the total 1215.45 ha, the surface rights is for 200 ha and out of which 84 ha is forestland. The balance life of mine is about 3 years. The mine was started in 1956. It was clarified that there are no abandoned coalmines of pre-nationalization era in the project area. At the time of mine closure, the colony would support the workers of Piparwar OCP. 84 ha of open area (forestland) would be afforested. The mine shaft sealing of incline face 3 and 4 and dismantling of haulage system would be ensured during mine closure including dismantling of equipment. The heavy metal concentration is within the prescribed limits. The environment quality of the mine water, plantation etc. would be monitored even after 3 years of mine closure. The production of the mine was 0.244 MT in 1993-94 and 0.056 MT in 2011-12. The peak production was 0.244 MT in 1993-94. The balance life of the mine is about 2 to 3 years only. The balance mineable reserve is 0.16 MT and approved capacity is 0.30 MTPA. The grade of the coal is "C". The method of mining is Board & Pillar and depillaring with caving. The coal seams are upper and lower Bachra. The depth of mining is about 300 mt. The Project Proponent had submitted clarifications sought by Committee in the EAC meeting of 22.09.2009.

4. The proponent informed that the Public Hearing was conducted on 13.04.2012.The Committee discussed the issues raised in the Public Hearing so also the responses of the project proponent. The major issues raised were about high dust pollution affecting village, plantation of trees, CHP water affecting agriculture, diseases among people including children in the vicinity, provision of medical facility such as hospital, hand pumps and fixed sprinklers, supply of drinking water, water sprinkling in area, filling of cracks developed by underground mines, provision of good

roads, avoidance of overloading of trucks, underground fire etc. The proponent has made a provision of Rs 15 Lakhs under the CSR activities during 2012-2013 for Ray Bachara and Rs 6.5 Crores for the year 2012-2013 for Piparwar Area.

5. The Committee after careful deliberation **recommended for granting Environmental Clearance** with the following specific conditions, in addition to the standard conditions that : (i) no mining should be carried out below the railway track; (ii) Mine closure should ensure that no illegal mining begins after mine is closed; (iii) If the water quality parameters such as F, pH, heavy metals, etc exceed the prescribed limits, suitable measures by the proponent be taken to ensure that the local communities are provided alternate source of water for their livelihood; (iv) detailed information be furnished to the Ministry for record with regard to the subsidence, extent of area under subsidence and measures taken therefore; (v) A provision of Rs. 10 lakhs/year be made for the balance life of 3 years of mine life; (vi) Green Belt/plantation should be provided on both side of road in Piper war area. CSR funds could be utilized for this purpose; (vii) Medical camps should be organized in the area for regular check up of workers/ villagers/population; (viii) Detailed prevalent disease pattern in the area should be documented and details of medical facilities provided for the same be made available to the MoEF; (ix) Details of extent of subsidence that has occurred and the extent of area under subsidence and measures to be taken therefore be furnished to the ministry for record; (x) Monitoring of drinking water should be carried out regularly; (xi)Cracks developed due to subsidence in underground mining should be filled with clay and sand. The area should be reclaimed back to the normal state.(xii) The Committee also recommended that the Proponent should make written submission on the compliances/clarifications to the MoEF on the above cited issues.

The Committee after deliberations recommended the project for granting Environmental Clearance.

Item 2. Kuju Open Cast Coal Mining project (production capacity 1.30 MTPA (Normative) and 1.50 (Peak) in an area of 189.6 ha of M/s Central Coalfields Ltd., Vill. Kuju Distt, Ramgarh Jharkhand (TOR)

The proponent made presentation. It was informed that Kuju opencast project is a new project with quarry in west of Bander Chua nala. The mine was planned in order to maximize the mining potential in a consolidated manner to exploit Kuju Geological Block. The project was approved by Central Coalfields Ltd.(CCL) Board on February 2012. Out of the total area, 64.77 ha is for quarry, 70.66 ha is for external OB Dump, 4.67 ha is for infra structures (W/S, CHP,S/S), 12.72 ha is for others e.g. vacant land/proposed green belt, 37.13 ha is for safety zone,(5.24 ha forest land not to be acquired, 184.71 ha total land is to be acquired. Mining would be done by using horizontal slicing method using a combination shovel –dumper methods. The target of 1.3 MTPA would be achieved in 3rd Year. The proposed mining area contains old underground working mine. The proponent would take suitable precautions during extraction. Mining would be done with suitable precaution while working near fire seam XII. Mineable reserve is 9.60 MT, Stripping Ratio 3.43 (cum/te), Seams X, XA, XI, XII, & XIII. The grade of coal is 'C' long flame. The length of the quarry along strike is 0.783 km. Average dip rise length 472-787 m (on floor), Avg. Seam gradient would be 10^0-19^0. The proponent has proposed to dump all OB of 32.95 Mm3 externally on the Mourpa sector. It is coal bearing area, it is further proposed to rehandle this dump to fill up the void created by worked out quarry. After filling the quarry, the land would be handed over to NHA I for NH-33 Corridor. Rest of the land would be biologically reclaimed. Life of mine is 8 years. The transportation of coal is proposed by belt conveyor to proposed washery. Proponent proposal of linked washery is for 4 MTPA Capacity. It was also informed that the proposal for underground mining in vacant area would be submitted later.

Presently proponent mining upper seams by OC and below seam XIII would be by underground method. The proponent informed that the application for Stage - I Forest Clearance is being submiited to the State Government. A copy of the application will be forwarded to the MoEF.

Chowtha nala, Bander nala and Mourpa nala are the drainage of the area. The water levels are 7.62 m bgl (pre-monsoon) and 4.22 m bgl (post-monsoon) season. The total water requirement would be 645 m3/day (305 m3 /day is industrial and 340 m^3/day domestic). The source of water would be the mine water. The land is proposed to be acquired from PAP but proponent has not proposed for shifting of 150 PAPs. The EMP capital cost is Rs 20 Crores, Revenue cost of EMP is Rs 26.56 Crores. The CSR would be @ Rs 5/Tonne of coal produced.

2. The Committee after careful deliberation specified the following TOR conditions:

(i) The proponent may carry out open cast mining to deal with the fire and subsistence issues; (ii) Technical justification be given that there is no option but to go for opencast mining;(iii) The cause of fire be enquired and plan for the prevention of such occurrence along with mitigative measures be made. (iv) The proponent shall submit the status report on mitigative measures suggested by Enquiry Committees and DGMS after subsidence of the NH and on fire; (iv) Copy of application for Stage-I Forest be given to the State Govt with a copy to the MoEF; (v) The proponent shall submit detailed breakup of land requirement (vi) The external OB dump shall be on the eastern side of coal bearing area and shall be rehandled fully in mine decoaled area; (vii) Details of underground working in the area be submitted.

3. The Committee has recommended for granting the ToR.

Item. 3: Laiyo underground mines (Production capacity 0.38 MTPA (Nominal) and 0.44 MTPA (Peak) in an area of 569.92 ha) M/s Central Coalfields Ltd., located in Hazaribagh dist. Ramgarh Jharkhand (EC based on TOR granted on 31.12. 2008)

1.. This is a proposal for Environmental Clearance for Laiyo underground Project (0.38 MTPA nominal and peak capacity of 0.44 MTPA) on account of lease renew allocated in South Karanpura Coalfields, Hazaribagh Area, Dist. Ramgarh, Jharkhand state.

2. The proponent made the presentation and informed that this is an old mine which was started in 1975. The coal production has been suspended, at present, since Dec 2005due to forests clearance of land. This proposal does not involve increase in lease hold area, change in technology or change in product mix. It was informed that the application has been made for renewal of lease of area of 569.92 ha for which the surface rights are 173 ha. Out of the total available land, 78.59 ha is forest land, 193.42 ha is GMK Land, 297.91 ha is tenancy land. The present pattern of land use has earmarked 101ha for staff colony, 21.00 ha for Pit office and 51.00 ha for stock yard, workshop, office and other activities. The proponent has obtained forest land Stage-I for 78.59 ha. The coal grade in the Block is W- IVwith19.30 to 27 % ash content. The nearest railway station is Danea at a distance of 8 km. The project report was approved in 1981. The main drainage is controlled by Bokaro River. RL varies from 300.00 m to 350.00 m above MSL. HFL of Chutuanala is 309.24 m. The coal seams are Seam X & Seam – XI. The thickness of seam ranges from Seam – X – 4.12m to 6.34, Seam – XI - 4.22m to 5.03 m. The geological reserve is 15.941 MT, mineable reserve7.17 MT,

balance reserve 6.57 MT. Avg. production in the last five years (2003-04 to 2007-08) 0.224 MT. The R.L. of incline no. 1 for seam XI is about 312.00 m. Depth of UG mine is 160 mt. maximum. The mode of entry would be by 4 nos. Incline. Method of Mining is Board& Pillar. The depillaring is proposed to be by caving. The barrier of coal pillars of width 60 m is proposed to be left un-extracted below the Chutua Nala. The project area lies within the catchment area of Chutua Nala, flowing towards south-east of the project. Chutua Nala runs across the mine property**.** Chutua Nala joins the master drainage Bokaro nadi, flowing towards east, in the east of the project at the mine lease boundary. The HFL of the Chutua Nala recorded in the vicinity of the project area is 309.24 m above MSL. The pre-monsoon ground water level has been observed to be in the range of 3.75-10.751 m bgl and 1.28 to 3.20 m bgl post-monsoon in core area. Total Water requirement would be 750 m3/day out of which 75 m^3/day would be industrial and 675 m3/day would be domestic requirements. The transport of coal would be by Haulage, Tippler & Hopper and the dispatch would be by road from the mine to Kedlawashery, which is 2 km. The proponent informed that Chutua nala and its HFL area will not likely to be affected by subsidence since a 60 m width barrier of coal pillars is proposed to be left un-extracted below the Chutuanala. The maximum subsidence would be 2.44 mm and maximum tensile strain 51.59(mm/m). Surface cracks, developed due to subsidence need to be filled up properly and regularly with clay and stone chips to achieve the original drainage pattern of the area and to prevent ingress of air and water into the underlying goaf. Plantation of native species has been envisaged in Laiyo and surrounding areas 167.61 ha with total Plantation 409279 saplings.

3. The Public Hearing was held on 03.02.2012. The Committee had also discussed the issues raised in the Public Hearing and the responses made by the project proponent. The major issues raised were regarding polluted water and slurry discharge into Chutua nala, provision of medical facilities, employments, overloading of trucks, supply of water, electricity and provision of roads and school etc. The PH also raised concern over the level of ground water, repairing of damaged road from Charhi to Laiyo.

4. There are no endangered species reported in the core zone area. No R&R is involved. A provision Rs 5 /T of Coal will be made by the project authority for CSR activity. The mine life is about 15 years. The EMP (Capital) cost is Rs 95 Lakh and revenue cost Rs.10 Lakh/year. The capital cost of the project is Rs. 968 Lakhs.

5. The Committee after careful deliberation sought the following information for further consideration:(i) A clear map of ML area be submitted; (ii) A copy of stage-I forest clearance should be submitted to the Ministry; (iii) The mine water after treatment should be supplied to villagers; (iv) The analysis and monitoring of water should be done for toxicity and other parameters as it is flowing out from coal seams; (v) A study should be carried on the impact of mining on ground water of the area; (vi) The road transportation from mine to Kedla washery should be reduced and transported to Kedla CHP and then from there it be transported by cross country belt conveyor to Kedla washery; (vii) The proponent should submit a clarification to the MoEF on the details of CSR which is being implemented in the area at the cost of Rs. 156.26 Lakhs; (viii) Plantation should be carried out in whole area; (ix) Thick green belt should be provided on both side of road (x) Garland drain should be provided; (xi) Depression developed due to subsidence should be filled up and reclaim the area; (xii) Clarification should be submitted for Stage-II Forestry Clearance; (xiii) Information on renewal of Mining Lease details and other issues be submitted to the Ministry for record.(xiii) All subsidence

area are to be filled up and no creation of water pond in subsided area is permitted as proposed by the proponent;

The Committee after discussion decided to further consider the project after receipt of the response on the aforesaid issues.

Item.4. Argada Open Cast Project (production capacity 1.70 MTPA(Normative) & 2.20 MTPA(Peak) in an area of 308.23 ha) of M/s Central Coalfields Ltd., Distt. Ramgarh, Jharkhand (TOR)

1. The proponent made presentation. It was informed that Argada OCP is a new mine and green field project planned in the Eastern part of Argada Block. Existing underground workings are located in Western part of Argada Block. The feasibility report was approved by CCL on February, 2012. The total requirement of land is 308.23 ha.viz. 176.70 ha is forest land, 13.15 ha is Govt. land, 118.38ha Tenancy land. Out of the total 308.23 ha, 117.20 has been earmarked for mining, 130 ha for external dump, 14.47 ha for mine periphery, 8.59 for infrastructure, 1.5 ha for approach road, 36.47is for safety zone &others. The mineable Reserves is 30.85 MT, Average Stripping Ratio is 1.87 Cum/t. The maximum depth of quarry would be 210 m, Argada 'O' seam would be considered. The grade of coal is E. Mining would be by Shovel Dumper Method. The production target would be achieved in the 7^{th} year. There would be one OB dump in an area of 130 ha with 90 m height and 21^0slope that will accommodate 57.73Mm3 OB. No internal dumping has been proposed. The area for external dumping has been planned beyond the in crop of bottommost seam over non-coal bearing area. Three decks of height 30m each leaving 40 m wide berns on each deck have been proposed. Coal handling ROM coal of (-) 1200 mm size will be fed into receiving hopper of twin shaft sizer. Crushed coal of (-)200 mm will be carried by a 1200 mm wide elevating cum tripper belt conveyor and discharged into 5x200 te hopper. Crushed coal from hoppers will be loaded into trucks for onward transportation to Gidi Washery by road. Total water requirement would be 865 m3/day, 410 m3/day industrial and 455 m3/day domestic. R&R issues are involved. The nos PAFs would be 35 and are from Chapri Village. For environmental control measures, the revenue expenditure would be Rs 24.68 Crore and Capital expenditure would be Rs 32.73 Crore. The mine closure cost would be Rs 18.50 Crore. The CSR expenditure has been estimated to be at the rate ofRs.5 per Tonne of coal produced.The life of the project is 23 years. The Proponent informed that application for Stage –I Forest Clearance is yet to be submitted.

2. The Committee after careful deliberation specified the following TOR conditions: (i) Copy of application for stage –I Forest Clearance be submitted to the MoEF; (ii) Two water bodies are observed in the area to which the Proponent has informed that these are old quarries beneath which the coal seams are available. The Committee desired that the details of these be provided alongwith a proposal of its future usage/back filling;(iii) The option of underground mining should also be examined and compared to the open cast mining as forest land is involved in project; (iv) The social cost-benefit analysis should be carried out as half of proposed land is under cultivation; (v). A study be made to quantify the drainage water from two drainage channels that are entering in to the Damodar River vis-a-vis its effect on the water quality of Damodar river; (vi) The two abandoned mines should be integrated with present mining.

The Committee recommended the Project for TOR

Item 5. Rajhara north open cast (Central and eastern coal block) Project for 0.75 MTPA in ML area of 117.85 ha) M/s Mukund Vini Minerals Pvt. Ltd. Dist: Palamou, Jharkhand. (EC based on TOR granted on 25.08.2009)

1. The project is for opening of an opencast coalmine for the linked Sponge Iron Plant located at a distance of 197 km and 250 km at Gola and Seraikela. The Rajhara North (Central & Eastern part) Coal Block was allotted to M/s Mukand Ltd and M/s Vini Iron & Steel Udyog Ltd for their captive use in their Sponge Iron Plant vide allotment letter No. 13016/52/2008-CA-I dated 20.11.08. The two companies have formed a JV company in the name of "MukandVini Minerals Pvt. Ltd." (MVMPL) in line with the allotment letter.the Directors of M/s Vini Iron & Steel Udyog Limited, Kolkata are Shri Sanjeev Kumar Tulsyan, Shri PrashantTulsyan, Shri VaibhavTulsyan, Ms. NishaTulsyan, ShriVimal Kumar Tulsyan, Ms. NirmalaTulsyan, Shri Hemant Kumar Aggarwal; Shri Navin Kumar Tulsyan.

2. It was informed that the project area has been reduced from 130.85 ha (for which TOR has been issued) to 117.80 ha with the intent of minimizing surface OB dumping and reduce impact on land. The area of the ML is 117.80 Ha. (Block area 105.65 Ha. + 12.15 Ha. non-coal bearing area). Out of the total area of 105.65 ha, 42.11 ha is Agriculture land, 43.31 ha is uncultivable land, 2.44 ha is homestead village area, 9.25 ha is river, 1.96 ha is road, 6.58 ha is abandoned CCL quarry land. Outside block boundary area, additional north side (agriculture land), 5.20 ha area is required for accommodating part of quarry batter, nalla diversion channel and highway diversion and 6.95 ha is required for adjoining to the eastern bloc boundary for settling pond, coal stack, road and other facilities. The land use of total 117 ha area, 28.97 ha is for excavation,12 ha for surface dump,1 ha is for Top soil,3.55 ha is for road,12.1 ha is for green belt,1 ha is for Bund/embankment.0.22 ha is for nala,0.7 ha is for coal stack yard,56.01 ha is undisturbed area. The opencast mining method proposes to use shovel dumper combination with loaders. The net mineable reserves in the block is 16.43 MT considering blockage of 0.386 MT reserves under 7.5m peripheral statutory barrier and 3.456 MT reserves in batter of the OC mine, while the extractable reserves are 15.60 MT considering 5% mining loss. The stripping ratio is 2.01:1 Cum: t. A total of 0.3 MT of Coal and 0.62 Mm^3 of OB will be excavated from the quarry during the 1st year. The overburden will be accommodated in the dump area of 4.41 Ha. The target production of 0.75 MTPA will be achieved during the 2nd year. During this year, the OB will be partly dumped into the surface dump and partly used for backfilling. A surface dump area of 12 Ha with ultimate height upto 40 m will be created in 5thyear that will be fully re-handled between 6th and 10th year. The maximum depth of mine will be 80 mt. mining. The transport of coal and OB will be fully mechanized. The mine will operate for 330 days in a year with 3 shifts per day and 8 hours per shift day and 8 hours per shift. The National Highway NH-75, connecting Daltonganj with Aurangabad passes through the eastern part of the allotted block that needs to be diverted after 2 years of mining. The approximate length of diversion would be 200mt. The mine Plan for diversion of NH-75 has been approved by MoC vide letter no 13016/52/2008-Ca Dated 16.12.2011. The Sadabaha river, a tributary to North Koel River, is usually a seasonal stream over-flooding its bank during monsoon season cuts across the western part of project area within and along the boundary, for smooth mining operation, the river needs to be diverted. The highest flood level of Sadabaha river varies between 204mRL and 191 m RL. The Sadabaha River and its one meander flowing respectively through the western block boundary and northern portion of the western part of the block need to be diverted in two stages. In 1st stage, the meander will be straightened and the flow will be aligned parallel to the northern boundary of the block at a distance

of about 80 m. The 2nd stage diversion is based on the diversion of the stretch of Sadabaha River which is flowing along the western boundary of the allotted block. 23 hutments of CCL located within the block boundary have to be relocated. The OB would be transported by 35 T.R.D trucks to external dumps till adequate decoaled area is available suitable for backfilling.

3.. The coal will be transported by 15/20 T.R.D. trucks to the pit head stockyard, from where the coal will be transported to the plant by the trucks. After the railway siding at Kajri is ready, the coal will be transported through overland closed conveyor to the railway siding. The total requirement of water for the project is 234 m3/day, out of which 30 m^3/day will be the drinking water abstracted from groundwater resource and the rest industrial water 204 m^3/day will be met from mine sump and surface water reservoir. Total life of the mine shall be 22 years.

4. There are 14 nos of Protected Forests in Rajhara Coal Block. There is no National Park/Wildlife Sanctuary present within the study area. Betla National Park is at a distance of 36 kms towards South Sothern Eastern direction which is nearest to the proposed mine. Forest type is Northern Tropical dry deciduous forests. Sal *(Shorea robusta)*,Asan*(Terminalia tomentosa),*Kahu*(Terminalia arjuna),* Palas *(Butea monosperma),* Bamboo (*Bambusa indica)* are the principal plants of this region.Fauna in core area are *Vulpes vulpes, Felisdomesticus, Cannisfamiliaris,Bubalus sp., Bosindica, Ovissp, Capra sp and Sus sp.*About 64.04 ha area would be covered under plantation by planting 160050 nos of trees of native sp.

5. The PH was held on 19.05.2012. The Committee had also discussed the issues raised in the Public Hearing and the responses made by the project proponent. The major issues raised were regarding polluted water, providing employment, compensation for acquired land, provision of education and health care facilities, drinking water facilities, civic amenities, Agriculture land acquisition issues, measures to be adopted to control pollution etc.

6. R& R issues are involved. 70 PAFs of Pandwa village will be displaced including 23 hutment of CCL colony falling within ML area. The initial CSR budget would be approximately Rs.15 lakhs of investment followed by Rs. 37.50 lakhs/ annum as recurring cost @ Rs. 5/tonne of coal production.EMP Capital cost Rs. 189.24 Lakh and recurring cost Rs. 139.84 Lakhs /annum .Mining Plan approved by MoC on 16.12.2011.Cost of Project is Rs.23 Crores.

7. The Committee after deliberation sought the following information for further consideration:
(i) The Proponent informed that Rajhara Block is under the present COALGATE scam, M/s VINI, the partner of the JV company is under the scanner of the CBI. M/S Mukund also got show cause notice in term of delay in mining.

8. The proponent was asked to submit copies of its correspondences in this matter with relevant agencies of the Govt. of India; (ii) The Committee was apprehensive for share holding of Vini & Mukund and asked for the details of CBI charges on Vini; (iii) Details of reason for abandoning the UG mine since 1982; (iv) The road should be diverted in integrated manner by all the neighboring companies; (v)Permission of National Highway Authority should be obtained.; (vi) The entire transportation of coal to the linked plants shall be by rail. The use of CCL's Rajhara railway of siding should also be investigated; (vii) Transportation of coal by road upto 200 km is not permitted; (viii) the transportation of coal from Rajhara siding should be by covered conveyor; although covered

truck may be used; (ix) The reliability and availability of power should be checked in the area and backup power arrangement should be made; (x) The depth of void should not be more than 40 mt. (xi) The Crown dump in 50 ha area with 30 m height is proposed. The crown dump be brought to ground level by rehandled and dumping in the mine void to reduce its depth.; (xii) The OB material should not be used for construction of bund /embankment. The same should be constructed by using impervious material; (xiii) Green Belt consisting of 3 tiers of avenue plantations of native species of about 2 m width shall be raised; (xiv) Detailed R& R and CSR Action Plans should be prepared and submitted to the MoEF for record; (xv) Details of funds for CSR activities undertaken should be provided; (xvi) the proponent had already spent Rs 30-40 Lakhs on CSR before the start of the coal mining project, the detail of same should be provided; (xvii) As 40 ha land is Adivasi land, details be provided; (xviii)A draft is required by committee on R&R Policy of Jharkhand state; (xix) Present status of accreditation of consultant Environmental Consultants-Min Mec Consultancy Pvt. Ltd., New Delhi should be provided; (xx) Details of plantation be provided ; (xxi) Proponent should involve local people for plantation and also may use the local plant species for plantation; (xxii) the proponent should provide the revised land use plan.

8. The Committee was of the view that till the case with the CBI is finalized, it would be difficult to consider the proposal for grant of the EC .The Committee, after discussion, decided to further consider the project after receipt of the response to the aforesaid issues.

Item.6. Proposed Gare Pelma Sector III Opencast-cum-Underground Coal Mine Project (5 MTPA normative and 6.5 MTPA peak) with pit head coal washery of 5 MTPA of M/s Goa Industrial Development Corp. located in dist. Raigarh, Chhattisgarh – (EC based on TOR granted on August, 2009 and modification of TOR dated 23.06.2011)- Further consideration

1. The project proposal was earlier considered in the EAC meeting held on 17th July 2012.The proponent presented clarifications to the issues raised by the Committee.

2.The proponent informed that coal produced by underground mining (1.0 MTPA) has higher GCV of 5190 KCal/Kg & low ash content (28 %). The Committee noted that although the mine would be operating on a peak capacity of 6.5 MTPA, the washery details indicate that the normative capacity of 5 MTPA. The break-up of peak production for OC and UG mining and extent of duration when the mine will be operating on this peak capacity has not been provided. The proponent informed that the coal produced from Seam-IX (0.5 MTPA) is amenable to open cast mining has also higher GCV of 4500 K Cal/Kg & low ash content (32%). No washing is envisaged for 1.5 MTPA of Coal produced from underground mine and seam-IX of opencast mine. Hence, only 5 MTPA out of the peak production of 6.5 MTPA will require washing for which the Washery has been proposed with a capacity of 5.0 MTPA. During the period of peak production, the contribution from OC will be 5.5MTPA and UG will be 1.0MTPA. The life of the mine will be as per approved mine plan which will be 45 years. The mine will be operated with the peak production of 6.5MTPA from 6th year to 18th year. The proponent has also informed that as per the present arrangement between Goa-IDC & KSK, KSK will set up the washery for upgrading the Coal Quality. The washery is necessitated because the coal produced by Open Cast mining has higher ash percentage and lower GCV, as compared to the design parameters of the Boiler. In view of this, KSK has informed that the washery with following 3 product separations is proposed. The Ash percentage of washed coal 34%,Middlings

is 51% .The Rejects (with 92.7% Ash) will be back-filled in the Internal/External Dump along with the Over Burden. With this washery specifications, KSK shall not give any rejects to SV Power and entire coal will be used in the 1800 MW End Use project being implemented by KSK Mahanadi Power Company Limited. Further, proponent also carried out accounting of material balance of each product – washed Coal, middling and rejects will be furnished and the records of every batch of washing will be maintained and uploaded on the company website.

3. The Public Hearing was held on 18.04.2012.The Committee had also discussed the issues raised in the Public Hearing and the responses made by the project proponent. The major issues raised were regarding providing suitable employment to local people, supply of electricity, water, road, health care etc. in the neighboring villages, measures to be taken for water crisis in area, work undertaken under the CSR, construction of school, Chabutra, school compound, culvert, and drinking water facility, Bore wells, pond, bathing place and regarding repair for hand pumps, tube well etc. Coal transportation by rail, compensation for the residential land in village Bajarmuda,the neighboring region be affected by the coal washery,pollution in the nearby areas, impact of coal washery discharge on Keloriver, presence of elephant in the area, livelihood of population dependent on agriculture, facilities to the Land less tribal and farmers of the Villages,PESA Act, impact of mining on Ground water level, adverse effect on the health of the People etc.

4. The Committee sought a copy of the forestry clearance for surface rights and mining rights for the forestland found in the total project area of 714.35 ha has been submitted the same has been provided as the clearance obtained vide letter no. F. No. 8-91/2010 –FC dated 11.04.2011.

5. The Committee noted that coal middling-cum-rejects are proposed to be given to M/s SV Power. The Committee desired that: (i) middling-cum-rejects should be utilized in their own power plant; (ii) Since the allocation of coal was made on Govt. dispensation, the coal cannot be used by/traded to private parties and any re-routing of coal for power generation should have the prior approval of the MOC. This may be obtained and details furnished to the MoEF; (iii) The Committee observed that as the linked Thermal Power Plant is at a distance of about 137 km, the requirement of a washery may not be necessary and this should be re-examined; (iv) Accounting of material balance of each product e.g. coal and middling (and also rejects if agreed after review) is required and should be furnished based on the normative (5 MTPA) and peak capacity (6.5MTPA) of the coal mine and the records of every batch of washing should be maintained and uploaded on the company website;(v) Since most of the issues raised in the Public Hearing have not been addressed properly, the issues raised in the PH should be brought out in a tabular form viz. name of complainant along with issues raised, issues addressed by the proponent along with specific budgetary provisions on these activities under CSR; (vi)A copy of the forestry clearance for surface rights and mining rights for the forestland found in the total project area of 714.35ha; (vii) Committee desired that the sale of power should be to Govt. dispensing route. The power produced by KSK can be sold to Govt. regulated tariff as per CRC; (viii) Committee informed that M/s Goa Industrial Development Corp. would be responsible for proper use of power by Govt. dispensing route; (ix) 'Cumulative Impact Assessment Study' should be done within proposed of mine and neighboring areas for adverse impact on air quality, water quality, noise level, ground water due to mining

The Committee after discussion decided to further consider the project after receipt of the responses from the proponent.

Item.7. Mahavir Coal Washery (5 MTPA) M/s Mahavir Coal Washeries Pvt. Ltd (MCWPL) District Raigarh, Chhattisgarh (Modification in TOR condition).

1. The proponent has requested the Committee for modification in conditions no viii granted for the TOR.

2. The proponent was granted ToR on 09.02.2012 and a modified ToR on 27 April, 2012. The proponent in its letters dated 17 July and 14 August, 2012 has requested for clarification on conditions no.(viii) stipulated in the ToR. The proponent has now sought clarification w..r.t. para (2) of the modified ToR which states that "…Committee *desired* that coal transport from mine to the washery should be by closed conveyor and not by road. The proponent shall in addition to the conditions stipulated in the ToR dated 9.2.2012 shall *examine* coal transport from mine to the washery by closed conveyor and not by road.

3. The proponent made the presentation. It was informed that M/s Mahavir Coal Washeries Pvt. Ltd proposed to set up a coal beneficiation plant of 5 MTPA capacity at village Bhengari, Dist. Raigarh based on Heavy Media Cyclone Technology was recommended by EAC (T&C) for grant of TOR in November, 2011 meeting. There are several mines in operation and only mode of transportation of coal is by road through Baroud-Gharghora-Chhal-Robertson/Bilaspur and Chhal-Robertson/Bilaspur–Ambikapur road until the mines get linked to be regional rail network irrespective of establishment of the proposed washery at Bhengari. The SECL is in the process of developing a rail network for these mines. The Govt. of Chhattisgarh has also proposed three rail corridors (East -180 Km,North-150 Km and North West -122 km) including one for proposes washery region. New projects, existing mines expansion and power plants granted EC would established their dedicated railway siding. Presently Chhhal and Baroud mines of SECL are not connected to the regional rail network, Coal from these mines are transported by road. It was proposes only the interception of coal on behalf of the client for beneficiation so such no additional impact on vehicular traffic is envisaged. Proponent informed that in November, 2011 EAC meeting ,committee agreed for coal interception for an initial period of 4-5 years till railway siding is in position and desired condition no. viii of TOR dated 09.02.2012 to examine whether existing roads are adequate take care of the additional load of mineral and rejects transportation ,their impact. It was informed that there would be controversy over transport of coal because of Modified TOR issued on 27.04.2012.Draft EIA/EMP has already been prepared for submission to CECB for conducting Public Hearing. Base line data of Air quality generated during December 2011–February 2012 indicates the level of Ambient Air Quality are well below the revised national AAQ standards of 2009. It was requested that initially for 5 years, the expected time by which the concerned SECL mines are connected to the main stream of regional rail network and TRN Energy Power Plant also gets linked, the proposed washery M/s Mahavir Coal Washeries Pvt. Ltd. at Bhengari would be allowed to intercept raw coal on its way to the client from Chhal and Baroud mines of SECL which are14-15 km from washery for beneficiation. Transportation of raw coal, clean coal middling and rejects would be by tarpaulin covered high capacity trucks of 25 T-30 T until the proposed rail link is established.

4. The Committee after deliberation sought the following information for further consideration: (i) The MOU signed with the potential mine owners for getting coal from Baroud & Chhal mines of SECL & TRN Energy Power Plant should be submitted; (ii) Details of survey by RITES and location

of railway siding should be provided; (iii) Details of Railway Plan with time frame, washery Plan, investment etc. should be provided; (iv) Details of coal end-user should be provided.

5. **The Committee after discussion decided to further consider the project after receipt of the response on the aforesaid issues in next EAC meeting.**

Item 8. Expansion of Lajkura OCP (Expn.from 1 MTPA to 2.5 MTPA (normative) and 3 MTPA (peak) production capacity in ML area of 641.36 ha) of M/s Mahanadi Coalfields Ltd. located in dist. Jharsuguda, Orissa (EC based on TOR granted on 29. 12.2008).

1. The proposal was earlier considered in EAC meeting held on 21st -22nd February 2012 and the Committee sought clarifications.

2. The Committee noted that TOR application was made for an ML area of 641.36 ha whereas the application for EC is 721.29 and the total project area is 778.24 ha. The Committee sought clarification whether the Public Hearing was held for 641.36 ha or for 778.24 ha. The Committee sought a list of flora/fauna authenticated by PCCF (WL) or any recognized institution that there are no Schedule-I fauna found in the study area. The Committee desired that the Final Mine Closure Plan reducing the final mine void to 35-40m should be prepared and details thereof be provided. The Committee desired that monitoring of impacts of additional mitigative measures undertaken for the expansion project should be collected and details thereof be furnished. The Committee also desired that the issue of increase in production without EC may be taken up by the MOEF with the Min. of Coal.

3. The proponent has made the presentation. It was informed that Public hearing was conducted on 22.01.2011 for ML area of 721.29 ha and total area is 778.24 ha. The study related to taxonomic enumeration of flora and fauna of core and buffer zone has been carried out by the Department of Environmental Sciences and Life Sciences, Sambalpur University, Orissa. The Study report shows of existence of Schedule-I fauna in the core and buffer zone of the project. The list of fauna under different schedules of the Wildlife (Protection) Act, 1972, found in the core and buffer zone of the project. This has been authenticated by Department of Environmental Sciences and Life Sciences Sambalpur University, Orissa and the list has been provided. A Broad plan for conservation of the fauna has also been included in the report which shall be implemented. The Schedule–I fauna are Monitor lizard (*Varanussalvator*), Python (*Python molurus*), Common Peafowl (*Pavocristatus*) and Schedule II fauna found in core and buffer area. The Final Mine Closure Plan for reducing the final mine void to 35-40m have been prepared and details of same was presented. In pre- mining land use, of the total 778.24 ha land, 156.67 ha is forest land, 621.57 ha is non-forest land (including 56.95 ha outside ML area). In post–mining land use of the total area 778.24 ha, 561.07 ha would be under plantation, 17.17 ha is water body, 55.17 ha is dip side haul road, 72.39 ha is undisturbed area. In the final Mine Closure Plan, the break-up of excavation or quarry area was presented. It was informed that of the total excavation area of 398.34 ha, 326 ha area of void would be backfilled with 106 Mm^3 OB with159 m maximum depth to 16 m minimum depth and water body will be in 17.17 ha area and dip side slope in 55.17 ha area accommodated 43.17 Mm^3 OB .The depth ranges from 159 maximum to 124 m minimum. The details of overburden is total volume of OB removed from inception of the mine would be 293.01 Mm^3 (volume of OB removed from inception of the mine as on 1.04.09 is 57.29 Mm^3 and OB to be

removed 235.72 Mm^3 for propose expansion).Similarly the volume of total Coal is removed from inception of the mine would be 58.50 Mm^3 (volume of coal removed as on 1.04.09 is 16.44 Mm^3 and coal to be removed as on 1.4.09 42.06 Mm^3). Volume of OB in the external dumps for the existing projects is 10.02 $Mm^3$and Volume of OB in the external dumps for expansion projects 47.50 Mm^3. Volume of excess OB in different tiers (with reference to 247.0 m) would be 54.07 Mm^3.It was informed that the Break-up of Excavation or Quarry area in the Post-mine Closure Period would be Backfilled area 398.34 ha with 293.01 Mm^3 OB backfilled with 159 m maximum depth. Left out void would be in 325.16 ha area with 37.65 Mm^3 volume of OB with 18 m maximum depth. There will be no external OB dump, all OB in external dump will be rehandled in the mine void. It was informed that transportation of coal (expn. from 3300 TPD to 8300 TPD) to CHP would be by trucks to 3 Railway Sidings located at varying distances of 1 to 3 km. A Silo Loading facility of a capacity of 10 MTPA would be established at Lajkura in 3 years time to take care of the loading of coal from Lajkura and Samleswari OCPs and thereafter transport 55% of the coal production by rail using existing line. The remaining 45% would continue to be transported to nearby consumers by road using about 200 trucks/day. It was informed that sufficient air control measures have been taken by providing addition measures for control of air pollution eg. 02 nos of Electric drill with dust extractor, 01 nos Electric drill with wet drilling,2 fixed sprinklers near crusher and transfer point trips of mobile tankers increase from 3-6 trips/day,221 KL/day additional water provided for sprinkling and dust control measures Green cover development etc., mechanical sweeper proposed,50% coal transportation of coal directly from CHP. Maintenance of road etc. additional water requirement 190m^3/day–potable and 280 m^3/day and industrial would be provided, 47 kld addition waste water treatment in ETP etc. for control of noise,26.28 ha has to be planted for expansion project. Additional avenue plantation in 2.0 ha of land has to be provided along road side for expansion project. Proper Land use management would be done in expansion project. In Biological reclamation of the expansion area about 371.31 ha of land will be biologically reclaimed. The remaining land will be converted into agricultural land.26.28 ha area covered in block plantation and greenbelt, 2 ha under avenue plantation. It was informed that R&R of existing project has been completed. In the expansion project two villages namely Chhauliberna village (near Chingriguda siding), Chhauliberna village (Baghachhapa nallah side) consisting of 96 families require R&R.228 Project affected persons have been provided employment. R&R of expansion project likely to be completed by 2016-17. R& R policy of Govt. of Odisha would be followed. Expenditure incurred and works executed at present rehabilitation colony Madhuban Nagar is Rs.20, 97,414 Lakh. One central hospital having 150 bed is located in Ib Valley area taking care medical facilities both for MCL surrounding area. A dispensary is working for the employee in Lajkura OCP. Educational facilities have also been provided. Drinking water facilities provided to nearby villages at the cost of Rs. 1,41,120 Lakh during 2012-13.Action Plan for CSR activities in the year 2012-13 has been prepared at the as per CIL policy @ Rs 5/Tonne of coal produce would be spent on CSR activity. Total cost of Rs.3043.50 Lakhs. It was informed that application for diversion of 156.67 ha submitted to CCF (nodal) / PCCF Bhubaneswar vide letter No.1036 dated 11/14.09.2010 and allotted State Sl.No. is 426/2010 dated 17.09.2010.Third Party evaluation of the environment quality data for the project was done through M/s. Richardson & Cruddas (1972) Ltd., Chennai, a Govt. of India U/T (it has an MOU with M/s Chennai Testing Laboratories Pvt. Ltd whose lab is accredited by NABL, and is valid from 08/12/10 to 07/12/12) for pre-monsoon season from March 2012 to May 2012.

4. The Committee after deliberation recommended for grant of Environmental Clearance with the following specific conditions with the standard conditions: (i) 30 meter width should be provided to green belt; (ii) Social audit should also be done through an Institute of repute and details of the report be submitted to Ministry; (iii) A letter should be submitted to MoEF for breakup of expenditure incurred on CSR activity in rupees; (iv) To plan urgently for mechanized loading of railway wagon at the railway siding to reduce dust generation from pay loader loading.

5. The Committee recommended for Environment Clearance subject to Forest Clearance.

Item.9. Cluster IX group of six mines (combined preproduction capacity of 6 MTPA with a pick capacity of 7.5 MTPA in a total combine ML area of 1942.12 ha) of M/S Bharat Coking Coal Limited located in Jharia Coal Field (EC based on TOR granted on 23. 12.2010)

1. The proponent made presentation. It was informed that there are 6 underground mines (5 operating and 1 UG mine closed for operation only) and 2 OCP mines. The operating underground mines are Lodna UG, North Tisra(UG), Joyrampur (UG), Barari UG, Jealgora (UG), one Jeenagora Underground mine(closed for operation, mine not closed) and two opencast mines are Jeenagora OCP & Proposed North Tisra/South Tisra Expansion OCP (NT/ST OCP). The production capacity of cluster IX is 6.548 MTPA (Normative) and 8.512 MTPA (Peak) in total lease area of 1942.12 ha. This proposal does not involve change in technology or change in product mix in the mines. The cluster IX is in East-Central part of Jharia Coalfield Nearest Railway station is Bhaga Railway station which is located at 4 Km from Lodna area. The mines of this cluster are about 11 Km to 18 KM from Dhanbad Railway stations. The project area is well connected by road with Dhanbad-Jharia-Sindri District Board Road, which runs along the western Boundary of Lodna Colliery. This cluster is severely affected by mine fires and unstable areas. 2.245 sq km of habitated surface area is affected by mine fires and instability consisting of 98 unstable sites as per the approved Jharia Action Plan. In order to deal with the severe problem of fires and unstable sites it is proposed to amalgamate/ merge some of the existing mines into one big OCP named NT/ST Expansion OCP. This proposed OCP, consisting of 755.15 ha. is for excavating out the mine fire and there by liquidating the fire in the cluster-IX. It will be formed by merging the following existing mines. 232.0 ha of North Tisra underground mine, 9.0 Ha. of Joyrampur underground mine,258.0 Ha. Of Jeenagora OCP and 256.15 Ha. of NT/ST OCP. It is proposed to acquire additional 676 ha. of land for temporary external dumping for this amalgamated NT/ST Expansion OCP outside the existing lease area of the cluster in the non-coal bearing area over barren land. However this external dumping is of temporary nature till some space is obtained in the quarry area, subsequently there shall not be any external dump at the end of the mine life. The area has undulating topography with south easterly slope. The general elevation is 163 m in the south-western part to 202 m in the north eastern part. Damodar River is located just to the south. The run-off from the area during monsoon drains into Damodar River through Chatkari (Kashi) Jore. It is originated in the north of cluster and flows towards south. Tisra jore and Sulungajore, both are seasonal nalas and tributaries of Chatkari jore. Catchment area of Chatkari Jore and Tisra jore is 65 sq. km and 13.26 sq. Km respectively.

EXISTING SCENARIO OF MINES IN CLUSTER-IX						PROPOSED SCENARIO OF MINES IN CLUSTER-IX (FROM 2016)					
Sl. No.	Name of the Mine	Normative Produc. Capacity (MTY)	Peak Produc. Capacity (MTY)	Lease Hold Area (Ha.)	Life (Years)	Sl. No.	Name of the Mine	Normative Produc. Capacity (MTY)	Peak Produc. Capacity (MTY)	Lease Hold Area (Ha.)	Life (Years)
1	Lodna Under ground	0.115	0.150	391.64	30	1	Lodna Under ground	0.115	0.150	391.64	30
2	North Tisra Under ground	0.150	0.195	246.24	5	2	-	-	-	14.24 (232.0 Ha. merged with NT/ST Expansion OCP	-
3	Bagdigi Under ground	0.110	0.143	61.00	30	2	Bagdigi Under ground	0.110	0.143	61.00	30
4	Joyrampur Under ground	0.153	0.199	98.04	30	3	Joyrampur Under ground	0.153	0.199	89.04 (9.0 Ha. merged with NT/ST Expansion OCP	30
5	Bararee Under ground	0.170	0.221	475.00	30	4	Bararee Under ground	0.170	0.221	475.00	30
6	Jealgora Under ground (Closed for operation, Mine not closed)	nil	nil	138.00	-	5	Jealgora Under ground (Closed for operation, Mine not closed)	nil	nil	138.00 Will be closed after fire dealing	-
7	Jeenagora OCP	0.700	0.910	276.05	05		-	-	-	18.05 (258.0 Ha. merged with NT/ST Expansion OCP	-
8	NT/ST OCP	1.65	2.145	256.15	5	6	NT/ST Expansion OCP	6.0	7.8	755.15 (Total of existing NTST OCP 256.15 Ha. merged with NT/ST Expansion OCP	30
	TOTAL	3.048	3.963	1942.12			TOTAL	6.548	8.512	1942.12	

LAND USE OF CLUSTER IX

S. No	Type Land Use	Present Mining Land Use (ha)	Proposed MiningLand Use (ha)	Post- MiningLand Use (ha)
1.	**Running quarry**			
	Backfilled	47.11	82.00	0.00
	Not Backfilled	35.00	35.75	0.00
2.	**Abandoned quarry**			32.11
	Backfilled	102.68	0.00	0.00
	Not Backfilled	119.38	63.86	0.00
3.	External OB dump	104.34	0.00	0.00
4.	Service building/mne infrastructure	29.87	28.87	0.00
5.	Coal dump	6.62	6.62	0.00
6.	road & rail	95.27	95.27	95.27
6.	Homestead land	232.58	232.58	232.58
7.	Agriculture land	45.63	45.63	45.63
8.	Forest land	0.00	0.00	0.00
9.	Plantation/reclamation	88.82	696.07	1058.77
10	Water body	29.67	85.19	118.59
11.	Barren land	1005.15	570.28	391.28
12.	Total	1942.12	1942.12	1942.12

	TECHNICAL PARAMETERS OF CLUSTER IX							
Name of Mines	Lodna (UG)	North Tisra (UG)	NT/ST (OCP)	Bagdigi (UG)	Joyrampur (UG)	Jeenagora (OC)	Bararee (UG)	NT/ST (Exp) OCP (Proposed)
Lease Area (Ha)	391.64	246.24	256.15	61.00	98.04	276.05	475.00	1431.00
Life (in years)	30	5	5	30	30	5	30	30
Method of Mining	Bord & Pillar	Bord & Pillar	Shovel Dumper Combination	Bord & Pillar	Bord & Pillar	Shovel Dumper Combination	Bord & Pillar	Shovel Dumper Combination
Production in 1993-94 (MTPA)	0.34	0.103	1.651	0.178	0.186	0.349	0.387	-
Production in 2011-12(MTPA)	0.055	0.094	0.872	0.016	0.093	1.057	0.085	-
Proposed peak Production (MTPA)	0.15	0.195	2.145	0.143	0.199	0.91	0.221	7.8

TECHNICAL PARAMETERS OF CLUSTER IX								
Name of Mines	Lodna (UG)	North Tisra (UG)	NT/ST (OCP)	Bagdigi (UG)	Joyrampur (UG)	Jeenagora (OC)	Bararee (UG)	NT/ST (Exp) OCP (Proposed)
Manpower	1007	760	1344	618	785	451	815	1708
Grade of Coal	W-III/W-III/W-II	D/ C	W-III, W-IV	W-III	W- III	W-I, W-II, W-IV, Gr-D	W-II	S-II to W-IV & C to G
Mineable Reserve (Mt)	34.61	51.27	43.253	28.2	33.0	3.4	7.66	150.37
Seams to be worked	VII, VIIIA, IX/X	III/IV	IVT,IVB, III,IIT,IIB & I	VIII, VII(T),VII(B).	IV (Top), VII, VIII & V/VI	IV Top, IV Bot, III	X(T), X(B), IX, VIII, VII(T), VII(B),	IX/X, VIIIA, VIII, VII & V/VI/VII, V/VI, IVT, IVB & L-5, III,IIT, IIB, I
Maximum Depth (m)	245	162	96	410	328	70	325	244

PRODUCTION PROGRAMME OF COAL & OB REMOVAL FOR LAST FIVE YEARS

Sl No	Name of Mine		Coal Production (MTY) &OB(M.CUM.)					
			Peak Capacity	2007-08	2008-09	2009-10	2010-11	2011-12
1	Lodna (UG)		0.15	0.091	0.072	0.077	0.072	0.055
2	North Tisra (UG)		0.195	0.097	0.099	0.106	0.11	0.094
3	NT/ST (OCP)	Coal	2.145	1.113	1.099	1.471	0.891	0.872
		OB	6.864	3.456	2.970	2.799	2.851	2.79

4	Jealgora (UG) Closed		Nil	Nil	Nil	Nil	Nil	Nil
5	Bagdigi (UG)		0.143	0.034	0.047	0.075	0.036	0.016
6	Joyrampur (UG)		0.199	0.093	0.088	0.087	0.081	0.093
7	Jeenagora (OC)	Coal	0.91	0.432	0.351	0.319	0.744	1.057
		OB	4.706	1.288	1.097	1.139	2.604	3.724
8.	Bararee (UG)		0.221	0.027	0.052	0.063	0.064	0.085

PRODUCTION PROGRAMME OF COAL & OB REMOVAL FOR NEXT FIVE YEARS

Coal / OB Production (MTPA/ Mm^3)											
Year	Lodna Colliery (UG)	North Tisra Colliery* (UG)	North Tisra-South Tisra Project* (Opencast Mine)		Bagdigi - Colliery (UG)	Joyrampur Colliery* (UG)	Jeenagora Colliery* (OC)		Bararee Colliery (UG)	Proposed North Tisra/South Tisra Expansion opencast.	
	Coal	Coal	Coal	OB	Coal	Coal	Coal	OB	Coal	Coal	OB
2012-13	0.085	0.128	1.400	4.480	0.1065	0.100	0.6	0.6	0.158	-	-
2013-14	0.085	0.147	1.500	4.800	0.1065	0.100	0.7	0.7	0.158	-	-
2014-15	0.115	0.147	1.550	4.960	0.11	0.100	0.7	0.7	0.158	-	-
2015-16	0.115	0.147	1.650	5.280	0.11	0.100	0.7	0.7	0.158	-	-
2016-17	0.115	0.147	-	-	0.11	0.100			0.158	3.0	11.55
	* The NT-ST OCP, Jeenagora OCP, part of North Tisra (UG) & part of Joyrampur UG will be dovetailed into the proposed North Tisra/South Tisra Expansion opencast.										

YEARWISE BACKFILLING PROGRAMME (IN M.CUM.) OF CLUSTER IX				
YEAR	NT/ST OCP)	Jeenagora OCP	Proposed North Tisra/South Tisra Expansion OCP	TOTAL

2012-13	3.13	2.52	---	5.65
2013-14	3.36	3.62	---	6.98
2014-15	3.47	3.62	---	7.09
2015-16	3.69	3.62	---	7.31
2016-17	This mine will be dovetailed in Proposed North Tisra/South Tisra Expansion OCP		6.12	6.12
2017 -18	-	-	9.42	9.42
This will continue for 23 years				216.66
2042-43	-	-	3.84	3.84
TOTAL	13.65	13.38	236.04	263.07

GROUPING OF FIRES INTO PROJECTS IN CLUSTER IX			
FIRE PROJECTS		FIRE	
SL. No.	CODE NAME OF FIRE PROJECTS	ORIGINAL FIRE NAME	
1	JCF-F/LODNA/RAIL/I/1 Excavation of rail road bed and backfill with structural fill (length 3.5 km) at Lodna Bagdigi & Bararee Collieries along with diversion of chatkarijore.	NS Lodna XIII, XIIA ,XIV seam	
		Baniahir XV, XIV, XIVA seam	
		Bhaga XV seam.	
		Bagdigi XIV,XIVA, XV seam	
		Bararee XV,XIV,XIVA seam	
		Bhulan Bararee XIII, XIV seam	
		Bhulan Bararee XV seam	
2	JCF -F / LODNA/NT, ST, JEENAGORA, JOYRAMPUR/I/8(SURFACE SEALING) Surface sealing for dealing with fire at North Tisra, South Tisra, Jeenagora & Joyrampur Collieries.	South Tisra VII, VIII, IX, X seam North Tisra VII, VIII, IX seam Jeenagora IX,X, XI, XII seam Joyrampur XI, XII,XIIA seam	
3	JCF-F / LODNA / BAGDIGI, BARAREE, B. BARAREE/I/11(SURFACE SEALING) Surface sealing for dealing with fire at Bagdigi, Bararee & Bhulan Bararee Collieries.	Bagdigi XIV,XIVA, XV seam	
		Bararee XV,XIV,XIVA seam	
		Bhulan Bararee XIII, XIV seam	
		Bhulan Bararee XV seam.	

4	JCF-F / LODNA / LODNA / I /12 (SURFACE SEALING) Surface sealing for dealing with fire at Lodna Colliery.	NS Lodna XIII, XIIA ,XIV seam
		Baniahir XV, XIV, XIVA seam
		Bhaga XV seam.

FIRE PROJECTS AS PER MASTER PLAN					
SL No.	**Name of the of Fire projects**	**Colliery**	**Seams on fire**	**UG or Surface fire**	**Technology of fire control**
1	**JCF-F/LODNA/RAIL/I/1**				
	Excavation of rail road bed and backfill with structural fill (length 3.5 km) at Lodna Bagdigi & Bararee Collieries along with diversion of chatkarijore.	Lodna	XVA,XV,XIVA XIV,XIIIB,XIIIA,XIII,XI/XII	Surface fire	Excavation and Back filling
		Bagdigi	XVA,XV,XIVA XIV,XIIIB,XIIIA,XIII,XI/XII	Surface & U/G	
		Bararee	XVA,XV,XIVA XIV,XIIIB,XIIIA,XIII,XI/XII	Surface & U/G	
2	**JCF -F / LODNA/NT, ST, JEENAGORA, JOYRAMPUR/I/8(SURFACE SEALING)**				
	Surface sealing for dealing with fire at North Tisra, South Tisra, Jeenagora & Joyrampur Collieries.	Bararee	XV, XIVA, XIV, XVI	Surface & U/G	Surface sealing with incombustible material and cohesive soil
		N.Tisra	X, IX, VIII & VII	Surface & U/G	
		S.Tisra	X, IX, VIII & VII	Surface & U/G	
3	**JCF-F / LODNA / BAGDIGI, BARAREE, B. BARAREE/I/11(SURFACE SEALING)**				
	Surface sealing for dealing with fire at Bagdigi, Bararee & Bhulan Bararee Collieries.	Bagdigi	XV,XIVA,XIV	Surface & U/G	Surface sealing with incombustible material & cohesive soil.
		Bararee	XV,XIVA,XIV, XVI	Surface & U/G	
4	**JCF-F / LODNA / LODNA / I /12 (SURFACE SEALING)**				
	Surface sealing for dealing with fire at Lodna Colliery.	Lodna `	XVA,XV,XIVA XIV,XIIIB,XIIIA	Surface fire	Surface sealing with incombustible material & cohesive soil.

THE DETAILS OF INTEGRATION WITH JHARIA ACTION PLAN		
S.N.	**Parameter**	**Details**
1.	Total Voids	12.371 Mm^3
2.	Total External OB	11.57 Mm^3
3.	Total Unstable Sites	98 no
4.	Total Affected Areas	2245600 m^2
5.	Fire affected Area	1584160 Km^2
6.	Fire affected Sites	56 nos
7.	Subsidence affected area	352800m^2
	Subsidence affected site	20 nos
8.	Mixed affected area	308640 m^2
	Mixed affected site	22 nos

9.	No. of Houses to be rehabilitated	12246 no. as per JAP
10	Land for Resettlement	83.184 ha (BCCL land) + 143.948 ha (Non-BCCL land)
11.	Total resettlement Cost	**Rs 126092.027 lakhs**

ENVIRONMENT ISSUES –MITIGATION & BENEFIT CLUSTER –IX	
Parameter	**Details**
Total Voids(154.38 ha)	65.46 ha backfilling and 88.92 ha water body
Total External OB(9104.34 ha)	Use for Backfilling
Fire /Unstable area	Dig out fire and stabillise at the cost of Rs 767.0 Crores
Loss of Coal (10% locked in barriers)	Recover 15.04 MT of coalfrom barrier
Reclamation /Mine Closure	Plantation in 937.84 ha.Rs. 10830.45 Lakhs (Fund allocated for mine closure as per MoCguidelinesadopted by BCCL @ Rs. 1 Lakh/ha in case of UG mines and Rs 6 Lakh/ha in case of OCP mines)

It was informed that the depth of the final mine void would be 15-20 m in an area of 139.23 ha at the end of mining. Water level in the cluster is in the range of 1.55 -9.33 m bgl (pre-monsoon) in core area and 0.95 -17.45 -m bgl post-monsoon) in buffer area. Total mine water inflow would be 12980 m3/day.The treated mine discharge water will be gainfully utilised for industrial (dust suppression, green belt development etc) and Domestic purposes. Excess mine water, after treatment will be discharged into local nala with check dam for artificial recharge to the groundwater system. With no processing activity involved, the ground water quality will not be affected. For Coal Transportation, in Phase-I(10+5 years)it is proposed to continue the existing Road-Rail transport net work system in view of the implementation of the Jharia Action Plan (for 10 years) and Another 5 years gestation period after the completion of Jharia Action Plan for consolidation of the backfilled dug out fire areas and unstable areas is required. Thus the period of 15 years make the Phase-I .All mitigation measures (like covered trucks, green belting on either sides of the roads, enhanced water sprinkling, strengthening and maintaining the roads etc.) shall be adopted up to 15 years with the existing road-rail transport system. Later in Phase –II (after 15 years) BCCL shallimplement conveyor-cum-rail transport to avoid movement of trucks within the cluster -IX for coal transportation in Phase-II which shall start after 15 years from now.It is proposed to carry all coal transport by Rail and Conveyor belt, minimizing the existing road transport system in about 5 mines with about 0.947 MTY that would continue after 15 years. Coal dispatch shall be done via RLS and suitably designed off-take points shall be provided. In cluster IX The proposed Coal transportation 0.947 MTPA peak production of coal from the mines at that time of operation (0.15MTPA of Lodna UG , 0.143 MTPA of Bagdigi UG, 0.199MTPA of Joyrampur UG ,0.221 MTPA of Bararee UG and 7.8 MTPA of proposed North Tisra /South Tisra Expansion OCP) of Cluster-IX after 15 years in Phase -II would be mainly transported by Conveyor to railway siding. Presently the transportation of coal is upto railway siding by road. Total 11.55 Mm^3 of OB will be generated from proposed north Tisra/South Tisra Expansion opencast.Only118.59Ha of the void area will continue as water body in post mining stage. Garland

drain shall be constructed and maintained to prevent the gushing of the surface runoff in the mine, Plantation and grassing shall be done on top and slope of the dump respectively, Top soil shall be spread at the top & face of the O.B. dump. This would enhance the bonding capacity of the particle and regular monitoring will be done for development of tension crack, gullies, movement of soil mass, stagnation of water and any other unusual occurrence. The anticipated maximum subsidence over the mining area due to extraction of upper most IV Top seam is 1.441 m, which is likely to occur over the panel NT-IVT-1. The maximum possible slope and tensile strain likely to occur are 36.95 mm/m and 19.40 mm/m respectively over the same panel. The anticipated maximum subsidence likely to occur over the mining area due to extraction of IV Bot, III Top section and III Bot section individually are 1.514m (over panel NT-IVB-A1 of seam-IV Bot), 2.297m (over panel NT-IIIT-1 of seam III Top section) and 2.432m (over panel NT-IIIB-1 of seam III Bot. section) respectively. The maximum possible slope and tensile strain likely to occur are 19.16 mm/m & 10.06 mm/m, 80.60 mm/m & 42.31 mm/m and 74.83 mm/m & 39.29 mm/m respectively over the same panels of respective seams.It was informed that measures would be taken to reclaim the area affected by subsidence etc filling the cracks, plantation, maintenance of water bodies created by subsidence, placing surface drains outside the subsidence area, precaution to be taken during depillaring, plantation on reclaimed subsidence area etc.It was informed that the control of fires and rehabilitation of affected families from fire and subsidence affected areas within Cluster-IX would be carried out in phased manner. It was informed that OB dump fires would be dealt with by cooling, quenching and removal, excavation of fire material and filling with cohesive soil and surface sealing. The flora and fauna of the Core and the Buffer Zone was surveyed by M/s CIMFR, Dhanbad in 2011. The Survey Report shows that there are no rare and endangered flora and fauna species in the Core Zone. The area is free from forest cover. As such mining activity will not affect the flora & fauna of the area. In addition, after proposed reclamation and afforestation of degraded land there will be a certain increase in the greenery of the core zone which is at present barren. With availability of greenery as host, guest flora and fauna will automatically come up which will improve the ecology and aesthetics of the area. BCCL is formulating a detailed Corporate Social Responsibility (CSR) Action Plan through Tata Institute of Social Sciences (TISS), Mumbai which will consist of need-based base-line survey, CSR Action Plan, CSR Auditing and monitoring mechanism etc. This job is expected to be completed by 2012. It was informed that is planned to take up plantation in an additional 937.88 ha with2344700 nos. of plants to be planted at the cost of Rs 516.78 Lakhs. It was informed that BCCL has formulated its Corporate Environment Policy. Out of 595 unstable sites identified in the Master Plan, 98 sites in 224.56 ha consisting of 12246 no. of houses are affected in this cluster. The affected families will be rehabilitated in adjacent non-coal bearing area at a cost of Rs 126092.027 lakhs. There is surface fire which would be controlled by trench cutting.

2. Public Hearing was held on 12.03.2012.The proponent has presented the issues raised during public hearing which included arrangements for water spraying on roads from Ghanudih to Bhaga, plantation, drinking water, proper utilization of welfare fund, overloading of vehicles ,converting the Jealgora water treatment plant, Health Centre, road construction & electricity supply, lowering Ground Water table. CSR would be Rs 5/per tonne of coal production. For the year 2012-13 the CSR proposed Rs.142.55 Lakh, the same would continue in future. EMP Capital cost Rs 868.00 Lakhs and recurring cost Rs 827.82 Lakh/annum. Mine closure cost would be Rs 12560 Lakh.

3. The Committee after deliberation asked the proponent to : (i) submit the mining plan and post mining closure plan for EC as in cluster IX maximum area under fire, so mining plan is very crucial in this area; (ii) Preventive measures should be taken for further spread of fire; (iii) Technical presentation is required for extinguishing fire and other issues related to fire in the cluster IX area; (iv) During the forthcoming visit of Committee in Dhanbad, Jharkhand in October 2012, a presentation should be arranged for methodology to be adopted to reduce/extinguish fire in cluster IX. The local expert in this field like DGMS, Academic Institute etc should be contacted; (v) BCCL may request ISRO to assist them to put a thermal imaging camera in satellite for monitoring of underground fire. (vi) The mining methodology should be adopted to prevent fire lower seams; (vii) Indira Gandhi Centre of Atomic Research, Kalpakam can be contacted as it may have some expertise in dealing fire; (viii) Committee desired that during the visit of Committee to Dhanbad, Jharkhand in October 2012, Dr C.B.S. Dutt, Member of the EAC and Dr. Mahapatra, Mr. Raghu ,G.M, Aerial photography may be invited by the BCCL for giving a detailed presentation; (ix) Safety aspect of the area and mines should be taken with utmost care; (x) Transportation of coal in cluster should also be looked into and information be provided to the Committee.

4. The Committee after discussion decided to further consider the project in next EAC meeting.

Item 10. Kerendari B&C Opencast Project, (40 MTPA in an area of 4500 ha) M/s Jharkhand Integrated Power Limited Located in North Karanpura Coalfield District Hazaribagh, Jharkhand (EC based on TOR granted on 28.10.2010).

1. The project was earlier considered in the meetings of the EAC held in April 2010 and July 2010

2. The proponent made a presentation and informed that the proposed Kerendari B&C OCP mining area lies in the North Karanpura.The coal block has been allotted to Power Finance Co-operation (a Govt. of India undertaking) which transferred 100% shareholding of JIPL to Reliance Power Ltd. on 7th August 2009, in pursuance of international bidding and this project is a captive plant to their Tilaya Ultra Mega Power plant located at a distance of 90 km, which has obtained EC on 07.04.2008.The main drainage of the area is through Ghaghra nalla that flows north to south, entering from the West Central side of the project area. The Basaria Nala flows from North to South on the western boundary of the block, where as the Khora Nala flows along the eastern boundary coalfield.. The total project area is 4500 ha of which ML area is 2400 ha. Out of the total area of 4500ha, 1742 ha is Forest Land, 2227 ha is Agriculture land, 273 ha is waste land, 190 ha is settlement area and 68 ha is water body. Land use during mining is 1946 ha is for excavation,2161 ha is for external dump(1581 +580),196 ha is for infrastructure,35 ha is for approach road,24 ha is for diversion, 12 ha is for nalla diversion,126 ha is for green belt. The 2161 ha area outside the ML is proposed for ext. OB dumps, except for 110 ha area to be used for infrastructure of which 90 ha is in the northern side and 20 ha is in southern side. The total forest land involved is 1742 ha which occurs mainly in the area outside the ML on the northern and southern sides. It was informed that the forestland would be used for dumping of OB. Net Geological Reserve 1,229 MT, Extractable Reserve (Estimated) 834.65 MT, Stripping Ratio 3.66 m3/MT, Grade of Coal C to F, E (Average) Ultimate Working Depth 435 m. There are 12 seams, Seam IV A,B ,C,D,E Seam III T,Seam III B,Seam II T, Seam IIB, Seam I T, Seam I M and Seam I B The total coal seam thickness is more or less around 35-40m in major part of the coalfield. The 40 MTPA productions would be achieved in 7th year to

19th year. Opencast mining by Shovel-dumper combination with fully mobile /semi-mobile IPCC for OB removal Shovel/loader & dumper with semi-mobile in pit coal crushing (IPCC) for coal extraction. Method of Working with Shovel dumper combination with horizontal slicing in top OB benches, in inter-burden partings, inclined slicing with horizontal platform Width & gradient of the haul road will be as per permissible limits. Coal extraction is proposed by shovel/loader & dumper combination. In order to minimize the external dumping, the minefield has been divided into four pits namely East pit, Central pit, Mid pit & West pit. It is proposed that pits are worked in sequence so that de-coaled pits can serve as dump space for subsequent pits. It is proposed to open the East pit (to be worked first) from Northern side by an entry to box cut located on the North-Eastern side. The waste from East pit will be dumped at external dump sites north of the minefield (both on West & East of the Ghagra Nala). Central pit will be opened later on and waste from this pit will be dumped partly at external dumps (both at Northern dump & Southern dump) and partly in the de-coaled East pit. Mid pit & West pit would be worked in succession and waste from the Mid pit will be dumped at decoaled. The mine will achieve its rated capacity of 40 MTPA in the 7th year and will continue till 19th year, after which the production tapers down to 16 MTPA which continue till 27th year of productive life. Reserves exhaust in 30th year. Central pit and that from West pit to decoaled Mid pit. The coal extraction will start from the East pit from the first year of mine operation and in the first year it is proposed to produce 2.50 MT of coal along with 8.95 Mm3 of O.B. removal. The mined out area of 1946 ha would be subjected to be reclaimed, 416 through Bio-reclamation,977 ha through Agro –reclamation, and remaining 553 ha by hydro reclamation with 45 mt depth. Against the loss of 1742.5ha of forest land, 2123 ha of project land would be planted. The external dump area is covered in three parts, namely north side external dump area, south side dump area and non mineralized area within the mining block. Of the total OB dump area of 2161 ha, the area of North side dump area is 1060 ha with 90 mt height, South side dump area - 580 ha, Area within block (contiguous to north) 521 ha. The 521 ha area within block on north side, total area would be reclaimed as plantation at R.L. of 550m in continuity with north side dump area. Thus the external dump of 2161 ground level. 2161 ha agriculture area, the excavated waste material covering an area of 1393 ha including batters. Khora Nala and Basaria Nalaremains undisturbed. Basaria Nala originates from North West side of the block &flows along the Western boundary of the block. Near Lochar village (after the southwest corner of the block) it meets Baledeori Nala coming from western side. The combined nalla is called Patra Nala which flows west to east, down south of the southern side of the project area and meets Hendraj Nadi further down south. Ghagra Nalais proposed to be re-routed. The proposed diversion will be done from a point north-west of Pandekuli village & will be joined to Khora Nala which is also coming from North West & flows eastward along the northern boundary and then along the eastern boundary of the block will be rerouted to Khora Nala Water channels of Ist & IInd order originating in the North side high lands in the buffer zone, combine to make Khora Nala. For some distance, this Nala flows easterly along Northern boundary of the block. Ground water level in mine area is 5 to 12m bgl in pre-monsoon and 1.6-6m bgl in post –monsoon season. Coal transportation would be from Face to semi-mobile receiving pits by dump trucks and after crushing by belt conveyors to stock yard. Finally to Power plant through OLC/Indian rail system Transportation divided into three sections 18 Km conveyor from mine to loading site at Nawada/Katkamsandi Railway line between Nawada/Katkamsandi station to Barhi station 3.22 Km Railway line from Barhi station to Power Plant. No endangered or endemic floral species were found in the study area, It was

informed that for the diversion of 1742.50 ha of forest land, application has reached from Nodal officer to PCCF.

3. The proponent has informed that there are no Schedule I mammals in the study area.

4. The Public Hearing was held on 16.05.2012.The issues raised during public hearing included compensation for land, Education, prevent soil, water & air pollution. cutting of trees rivers rivulets, hills, birds and animal would be affected cost of land per acre, R&R Plan detail, Cultivable land, source of employment, affect Ghaghara Dam, Flora and fauna affected. PAFS for Jamira villager, health, electricity within project area.It was informed that there are 20 villages (17 habitant and 3 non-habitant) in the area with R&R involved17 villages PAFs 8562 would be affected .R&R budget would be Rs 1345.60 Crores. R&R colony identified at the distance of 5 km from coal block area. CSR budget would be Rs 22 Crore. EMP COST Rs.33.74 Crore.

5. Shri Yogendra Saw, MLA, Hazaribagh, Jharkhand made a complaint to the MoEF regarding cancellation of Public Hearing which was held on 16.5.2012 this project. Centre of Science and Environment had also forwarded complaint against Public Hearing which held far away from the project site and demanded for cancellation of Public Hearing. Centre for Science and Environment, New Delhi also forwarded grievances received by them to the Ministry vide its letter no LF.L. 51.91/2012/1 dated 08.05.2012. The CSE informed that the resident of the project affected area of above cited project were against the Public Hearing of the Kerandari 'B'& 'Ç' which is being held in Hazaribagh at the distance of 44 km from project site and it is violation of EIA notification 2006.The distance would create difficulties for villagers for attending Public Hearing .The representation enclosed are from Shrimati Kalpana Devi, Head, Bariyat Vill. Kerandari, Shri Gautam Sagar Rana Ex MLA, Dr. K.P Sharma, Retd. Prof., Hazaribagh, Shri Yogendra Saw, MLA along with the clippings of news papers against the project. The letter of the CSE along with all the complaints were circulated in the Meeting to EAC members. A details discussion was held on these issues in EAC meeting. The proponent also made a presentation on the public hearing issues raised in above cited representations before Committee.

6. The Committee was of the view that (i) Each procedure should be meticulously followed as per clause 7.2 of EIA Notification 2006 otherwise it would be the violation of EIA notification 2006; (ii) Public Hearing is required to be conducted near the project site; (iii) The coal bock of M/s NTPC & M/S JIPL has common mining lease boundary and 300 MT coal would be lost 20% in batter and barrier. The Committee desired that the coal between the boundary of two blocks should be extracted jointly; (iv) Details of Mine Closure Plan should be provided; (v) Committee observed that at the end of mining, a void with 40 mt depth (v) the depth of the void should be reduced from 40 mt as no biological life would be survived in 40 mt depth; (vi) Mine closure, void issues should be taken care; (vii) No land should be acquired outside the block for OB dumping; (viii) The OB dump should be rehandled and no Ext. OB dump be left; (ix) Lung Function Test of 1800 People to be employed should be carried out for any possible disease due to dust pollution; (x) Occupational Health Issues should be taken care on priority basis; (xi) Best practices should be adopted to reduce dust pollution in the area; (xii) Precaution should be taken during blasting to avoid the development of cracks in the area; (xiii) Details of Socio Economic survey should be provided; (xiv) The procedural gap in holding Public Hearing should be checked and proponent should submit clarifications; (xv) R&R and CSR

Action Plan should be prepared and submitted to the MoEF; (xvi) The Committee desired that CSR budget should be Rs 50 Crores; (xvii) Detail of the commitment for providing employment to local people should be submitted to the MoEF; (xviii) Deliberations with local people are required;

The Committee after discussion decided to further consider the project after receipt of the response from the proponent.

Item.11. Environmental Clearance for 'Slurry Washery Projects' under the EIA Notification 2006. Internal Discussion

1.. An RTI application was received in the MoEF pertaining to Mahalaxmi washeries Pvt. Ltd seeking clarification that whether "slurry washery" attracts the provision of the EIA notification, 2006.MoEF had, in response, sought details of slurry washery units from the applicant and thereafter informed the applicant that the slurry washery is not listed in the EIA notification, 2006. However, the Jharkhand SPCB has sought a clarification from the MoEF whether the slurry washery comes within the ambit of the EIA notification

2. The Committee was informed that when coal is crushed and mixed with water, it forms slurry. Most processes in coal washeries use slurry as a medium for separation of coal from coal rejects. Coal rejects after washing are further washed to extract the coal fines and any left-over coal from coal rejects and also in the form of coal slurry. There was an interpretation that "slurry washeries" are also "coal washeries" and therefore "could" attract the EIA notification. 2006. It may also be mentioned that the applicant was informed that slurry washery is not listed in the EIA notification, 2006.

3. The Committee re-examined the issue and was of the view that as per notification, the coal slurry is within the ambit of the EIA notification.

Item.12. Dipka Opencast Project ((25.0 MTY (nominal & 33.75 MTY(Peak)in an area of 1999.417 Ha)of M/s South Eastern Coalfields Limited (SECL)Tehsil Katghora, District Korba, Chhattisgarh (EC u/s 7.2)

1. The proponent made presentation and informed that the Dipka opencast project is an expansion project for enhancement of production capacity from 25 MTPA to 33.75 MTPA in an existing area of 1999.417 ha. The project is located in Korba, which is one of the critically polluted areas in the country. A large number of high-capacity mines are situated in the vicinity of the project. Environmental Clearance from the MoEF for 25 MTY was accorded on 03-06-2009. The SECL Board has approved for securing environmental clearance for peak capacity i.e. 33.75 MTY on 24.08.2009. The proponent has requested to consider Environment Clearance for a Peak capacity of 33.75 MTY, under clause 7(ii), for relaxing conduct of public consultation. A large number of high-capacity mines are situated in the vicinity of the project eg. operating mines are Gevra OCP, Kusmunda OCP. The production will be achieved by improving utilization of existing equipments.

LAND USE OF DIPKA EXP. PROJECT

Stages of mining	**Activity**	**Types of land area (in Ha.)**			**Total Area (in Ha.)**
		Forest	**Tenancy/ Agricultural**	**Govt.**	

Pre-mining Phase	**Nil**	**409.180**	**1409.244**	**180.993**	**1999.417**
As on 01-04-2012	Quarry area	28.000	441.560	13.740	**483.300**
	External OB dump	49.320	110.000	23.080	**182.400**
	Infrastructure, Workshop, Administrative building etc.	53.640	146.360	10.500	**210.500**
	Roads	0.000	4.000	0.000	**4.000**
	Green Belt	0.000	23.000	0.000	**23.000**
	Safety zone	22.331	85.200	22.959	**130.490**
Total		**153.291**	**810.120**	**70.271**	**1033.690**
Balance		**255.889**	**599.124**	**110.722**	**965.727**

2. Total mineable reserve is 617.00 MT and balance mineable reserve 479.512 MT. Average grade of coal is E grade (4000 – 4300 kcal/kg), depth of the quarry is 250 m, surface area of quarry 1002 m. The total projected manpower would be 2594.The total volume of OB 615.00 Mm^3andthebalance volume of OB would be 526.164 $Mm^{3.}$ The bbackfilling would begin from 16th year of expansion project. Water table is in the range of 6.57-8.21 m bgl during pre-monsoon and 3.78-4.49m bgl during post-monsoon. Entire mineral transportation from coal mine pit to railway siding being established within the project area shall be by closed conveyor only from there by rail/MGR to consumers. Both conveyors and railway siding shall be established within 18 months of grant of the environmental clearance. Mechanized silo loading system shall be deployed for loading of coal at railway siding. Mining Plan of the project was approved by the Ministry of Coal on 20.12.2006. The proponent had presented the compliance of earlier environmental clearance before the Committee. The balance life of mine is 19 years. Capital cost of the project is Rs. 1943.66 Crores. It was informed that 60% coal goes to NTPC Power Plant at Seepat and 40% to Electricity Boards and private washeries. .

3.. There are no National Parks, Wildlife Sanctuary, Biosphere Reserves found in the 15 km buffer zone. Open and mixed forest is found in the core and buffer zoneIt was informed that 133.707 Ha (1st stage clearance obtained vide MOEF letter no.F.No.8-78/2006-FC, 20th October 2006). 197.255 Ha (1st stage clearance obtained vide MOEF letter no.F.No.8-80/2006-FC, 20th October 2006).33.84 Ha (Final clearance obtained vide MOEF letter no.F.No.8-171/92-FC, 31/07/1995 and 1st stage clearance for renewal has been obtained vide letter no. F.No 8-8/2006-FC, 3 rd March 2010.

4. The earlier Public Hearing was conducted on 05.09.2008 and details of same along with compliance of each issue were presented before the Committee. The Committee desired that (i) compliance report of earlier Environment Clearance granted to the project vide letter no.- J-11015 / 487/2007-IA-II(M), Dated 03/06/2009 should be submitted to MoEF for record; (ii) Details of additional equipment and machinery required for expansion project should be provided for record of the MoEF.

5. The Committee agreed to recommend for granting the EC. However, the proponent was asked to submit a written request for further consideration of exemption of the public hearing.

Item 13. Inder UG to OC Mine (0.6 MTPA to 1.5 MTPA in 402.07 ha area) of M/s Western Coalfields Ltd., located in district Nagpur, Maharashtra (EC u/s 7.2)

1. The project was earlier considered in the EAC meeting held in August 2012. The Committee sought the extent of outsourcing activities undertaken by the company to be shown in a tabular form. The Committee also desired on details sought include additional requirements in terms of additional manpower, water, transportation, equipment etc. which should be provided along with expected impacts of change in mining method on the land use and impacts on environment and socio-economic aspects and the proposed mitigative measures. The Committee desired that a fresh Public Hearing be conducted although the application has been made u/s 7.2 of EIA Notification 2006, as the earlier PH was held on 6.9.2005 (more than 5 years ago).

2. The proponent made presentation and informed that the AAQ data was agreed by Dr. Attri, the EAC member. The CD of the PH was played and the video of the proceedings were seen by the Committee. In response to the question of the Committee that why the ToR was not circulated in the PH, the proponent responded that the ToR was approved as per 7(ii) of the EIA notification, 2006. The proposal was approved before 1994 and as per new Rules, the Public Hearing is to be held.

3. **The Committee after discussions has recommended for the grant of the EC.**

Item. 14. Letter dated 16.04.2012 of M/s NMDC on Shahpur East (0.70 MTPA in 693 ha ML area) and Shahpur West (0.45 MTPA in 587.50ha ML area) Underground Coal Mining Projects of M/s National Mineral Development Corp. Ltd., Tehsil Sohagpur in dist. Shahdol and Tehsil Pali in dist. Umaria, M.P. (Modification sought on TOR granted on 29.10.2010) Internal Discussion.

The proposal was earlier considered in the EAC meeting held in the August 2012 and recommended for enhancement of production capacity from 1.105 MTPA to 1.30 MTPA but informed proponent that separate application should be submitted for extension of time. The Committee again heard the proponent and reiterated its recommendation for enhancement of production capacity from 1.105 MTPA to 1.30 MTPA but informed proponent that separate application should be submitted for extension of time. The applicant has not submitted the application as required in the last meeting.

The proponent was asked to submit the application in Form-1 for the extension of the ToR validity.

Item 15. Internal consideration of Letter dated 18.06.2012 from M/s Eastern Coalfields Ltd. on deleting Mohanpur OCP from Revised application for TOR for Cluster-4 Group of 4 mines located in Raniganj Coalfields, dist. Burdwan, W.B,

The EAC meeting of 21-22 Feb, 2012 M/S ECL had included Mohanpur OCP as a part of the cluster-4. M/O Coal has also intimated that the Mohanpur OCP would be expanding by 25% during the current year. The EAC desired earlier in case of Mohanpur OCP that in view of the expansion by 25% the proponent has to make a separate application as under clause 7(ii) of the EIA, notification 2006 and that the project be deleted from the ToR application submitted for clauster-4. The

Committee also desired for a clarification from M/s EIL in this regard. M/S EIL, in its letter dated 18 June, 2012 clarified that "…Mohanpur OCP which already has EC for 1.0 MTY, be removed from the cluster and a separate Form-1 application will be submitted for the expansion project for obtaining EC independently of the cluster under clause 7(ii) of the EIA notification, 2006. The above decision has been taken since the public hearing for the Mohanpur OCP for 1.0 MTY capacity was held recently in 2008 and the project may be placed before the EAC for consideration of grant of EC for its expansion to 1.5 MTY with increase in ML area from 164.91 ha to 210.0 ha under clause 7(ii) of the EIA notification, 2006. In light of the decision, M/S ECL would make a fresh application for clauster-4 by excluding Mohanpur OCP for which a separate independent application will be made. M/s ECL has, therefore, requested to withdraw the previous application made for clauster-4.

2. The Committee after consideration of the proposal has agreed to the proposition of M/S ECL for deletion of Mohanpur OCP from the revised application for TOR for Cluster-4 Group of 4 mines located in Raniganj Coalfields.

The meeting was ended with a vote of thanks to the Chair.

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PARTICIPANTS IN 57th EXPERT APPRAISAL COMMITTEE (EAC) (THERMAL & COAL MINING) MEETING HELD ON 17th-18th SEPTEMBER, 2012 ON COAL SECTORPROJECTS.

1.	Shri V.P. Raja		…	…	…	…	Chairman
2.	Prof. C.R.Babu	…	…	……	…		Member
3.	Shri T.K. Dhar		…	…	…	…	Member
4.	Shri J.L. Mehta		…	…	…	…	Member
5.	Prof. Roonwal		…	…	…	…	Member
7.	Dr.Manoranjan Hota		…	…	…		Director, MOEF & Member Secretary
8.	Dr. Rubab Jaffer	…	…	…	…	…	Scientist B, MOEF

Special Invitee:

Dr R.K.Garg, Advisor, Coal India Limited.

PARTICIPANTS IN 57th EXPERT APPRAISAL COMMITTEE (EAC) (THERMAL & COAL MINING)IN THE MEETING HELD ON 17th-18th SEPTEMBER, 2012 ON COAL SECTOR PROJECTS.

1. <u>M/s Central Coalfields Ltd</u>

1. Shri P K Sinha, GM (Env.), CCL
2. Shri B K Sharma, Chief Manger (Env.), CCL
3. Shri P.B. Prasad, Chief Manger CMPDI
4. Shri Prabhu Prasad, Chief Manger CMPDI
5. Dr Amindyas Sinha, Regional Director ,CMPDI
6. Shri Arun Kumar Pal ,Sr. Manager, CMPDI
7. Shri Pushkar, Sr. Manager (env.), CMPDI
8. Shri V. K. Pandey Manager (Env.), MPDI
9. Shri Ajoy Kumar Pati, Senior Manager (C) CMPDI
10. Shri Kanchan Sinha ,Senior Manager ,CMPDI

2. M/s MukundVini Minerals Pvt. Ltd.

1. Shri R.Sah,Vice President ,MVML
2. Shri V.K. Mittal ,Director , ,MVML
3. Shri R.P. Agwl, MVML
4. Shri B.D.Sharma, MINMAC
5. Ms. Marisha Sharma, Director, MINMAc

3. M/s Goa Industrial Development Corp

1. Shri Faizi O. Hashmi, MD, GIDC
2. Shri G Satyanarayana
3. Shri Asim Tripathy
4. Shri N K Prasad, Consultant
5. Shri Abhik Mukhopadhyay, Consultant
6. Shri S. Puranic, Consultant
7. Shri Y.P. Ohri
8. Shri LRC Reddy, RQP

4.M/s Mahavir Coal Washeries Pvt.

1. Shri Ankur Jain ,Director
2. Shri Ankit Jain,Director,
3. Shri K. K. Jain ,Consultant,
4. Shri M. Jahri VIMTA
5. Shri V.P Ohri

5.M/s Mahanadi Coalfields Ltd.,

1. Shri A K Singh, Dir (P&P)
3. Shri C Joydev, Sr. Mgr. (Env.), MCL
4. Shri B C Tripathi, GM (Env.), MCL
5. Shri G.M.Naayak.S.O.MCL
6. Shri A K Samantray, Chief Manger (Env.), CMPDI
7. Shri A Singh, RD, CMPDI
8. Shri K S Ganapathy, Chief Manager, CMPDI

6. M/S Bharat Coking Coal Limited

1. Shri D C Jha, Dir (T), BCCL
2. Dr. EVR Raju, Chief Manager (Env.), BCCL
3. Shri Amit Roy Sr. Manager,CMPDI
4. Shri V K Sinha, Reg. Director, CMPDI
5. Shri S Panja, Sr. Manager (hydrogeology)
6. Shri Sumit Datta, Dy. Manager (Mines), CMPDI

7. M/s Jharkhand Integrated Power Limited

1. Shri Bimal Bawa Vice –President ,JIPL
2. Shri Balasubramaniam , Sr Vice –President ,JIPL
3. Shri Vijay Kochar, , Sr Vice –President ,JIPL
4. Shri Bijan Mishra Vice President ,JIPL
5. Shri P.S.S. Menon ,Vice President ,JIPL
6. Shri Alok Srivastava Asst. Vice –President, JIPL
7. Shri Ajay Sonkari,Manager , JIPL
8. ShriAlok, JIPL

8. M/s South Eastern Coalfields Limited

1. Shri P.K. ROY Chaudhary, Director (Technical
2. Shri B.K.Mishra General Manager (Mining)
3. Shri U.T. Kanzulkhahg, General Manager (mining)
4. Shri B.Dayal,General Manager (Mining)
5. Shri C.Shankar ,Chief Manager

6. Shri S.K. Mohanty ,Chief Manager (Mining)
7. Shri S.Singh,Senior Manager (Env)
8. Shri V G.Pradhan ,General Manager (Mining)
9. Dr Anurag Tiwari ,Manager (Environment)
10. Shri K.Vashishth, Senior Officer (Environment)
11. Dr T.D. Guin, Senior Manager (mine)

9. M/s Western Coalfields Ltd.,

1.Shri R. M.Wanare , General Manager (Env.)
2. Shri K Chakroborty, GM (Mining), WCL
3. Shri J.A. Kamalakar Senior Manager (Env.)
4..Dr. Debabrata Das, Assistant Manager (Hydrogeolog)-CMPDI
5. Shri S.K Japnania RD,CMPDI

10 M/s National Mineral Development Corp. Ltd

1. Shri S.K. Bhattacharya ,General Manager (R&P)
2. Shri Md. Nadim Ansari ,Manager (Geology) MMDC,
3. Dr, K.J. Kaulakar, Senior Manager NMDC
4. Shri Suraj Kumar, Manager (Mining),
5. Shri John Thomas, General Manager, NMDC

ANNEXURE-3

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.

(iv) 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:

I 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.

II Characteristics and quantum of washed coal.

III 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,

(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.

ANNEXURE -4

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/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
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?term modelling 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. OB dump 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 yesr										
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			

ANNEXURE -5

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

Area Under Surface Rights

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

(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?term modelling 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.	10th yesr										
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*	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.

(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			

ANNEXURE-6

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.	Forest Land			
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?term modelling 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. OB dump 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)

(B) MINING PLAN APPROVAL

(C) MINING PLAN/PROJECT APPROVAL

Date of Approval of Mining Plan/Project Approval:

Copy of Letter of Approval of Mining Plan/Project Approval

(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.

ANNEXURE-7

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