MINUTES OF 53rd EXPERT APPRAISAL COMMITTEE (EAC) (THERMAL & COAL MINING) MEETING HELD ON 16th-17th JULY 2012 IN SCOPE COMPLEX, LODI ROAD, NEW DELHI.

COAL MINING PROJECTS

The **53rd meeting** of the reconstituted EAC (T &C) was held on **16th-17th July 2012** in 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.

Confirmation of minutes

The minutes of the 50th meeting of EAC (T&C) held on **18th-19th June 2012** were confirmed.

The agenda items were taken up as given below:

1. Bhubaneshwari OCP (10 MTPA to 20 MTPA) of M/s Mahanadi Coalfields Ltd., dist. Angul, Orissa (Further consideration of EC based on TOR)

The proposal was earlier considered on 28th-29th March 2011 and response on the issues raised therein/clarifications received from MCL vide their letter dated 29.06.2012 were further considered.

The proponent made a presentation. It was informed that the proposal is for expansion from 10 MTPA to 20 MTPA within the existing ML area of 808.294 ha. The levels of production in Bhubaneshwari OCP during the past three years were provided as given below:

2009-10	3 MTPA
2010-11	4 MTPA
2011-12	7.11 MTPA

It was informed that the project would achieve its rated capacity of 10 MTPA during the current year. It was informed that a dedicated four/six lane concrete coal transport corridor from Hingula OCP to Lingraj OCP, which is about 41.58 km, has been identified and demarcated and work is in progress at a cost of Rs 290 crores. A flyover and a bypass have also been proposed in the Project and work is likely to be completed by 31.03.2015. It was clarified that there are no villages along the 41km dedicated road corridor. The introduction of a mechanised transfer-and-fast loading system in high-capacity mines of M/s MCL in Talcher coalfields was explained. It was informed that 4 Silos of 2x4000T capacity with pre-weigh hopper system for fast loading to wagon are proposed in Bhubaneshwari OCP, of which 3 are under construction and one is in the final stage of planning. The coal would be fed to a 10,000 TPD capacity bunker and transported to silos by belt conveyor and to be transported by rail thereafter. Similarly in the other large capacity mines such as Bharatpur, work on establishment of silos is to be completed by July 2013; and in case of Lingraj, 2 silos (2x4000T) are proposed and work would be awarded by Dec. 2013. The coal would be transported by a series of belt conveyors to Silos and loaded onto rail. It was informed that a total of 10 hoppers for receiving coal from trucks, 7 feeder

breaker circuit, series of belt conveyors, 15000T semi bunkers, 2 silos of 4000T capacity with hopper for fast loading onto railway wagons have been established at Ananta OCP. Further, at Bubhaneshwari OCP, a total of 24 hoppers for receiving coal from trucks, series of belt conveyors, 2000T semi bunkers, 2 Silos of 4000T capacity with hopper for fast loading onto wagons would be available with effect from March 2014, and It is proposed to transport 60 MTPA of coal to the railway sidings by conveyor-cum-rail and the balance 10 MTPA would continue to be by road to miscellaneous users. At Lingraj OCP, 12 truck receiving hoppers, 5 feeder breaker circuits, series of belt conveyors, 15000T semi bunker with side unloading arrangements, 2 Silos of 4000T capacity with pre-weigh hopper for fast loading to wagons are proposed. It was informed that about 16% of the total coal production from MCL mines in Talcher coalfields would be by road.

It was informed that production enhancement would be carried out by use of surface miners to the extent of 90%. It was informed that concurrent backfilling is not possible. However, voids available of one mine could be used to fill up the OB from other mines, however most mines have a life of 25-30 years. It was informed that of the total quarry area of 462.641 ha in Bhubaneshwari OCP, 375.90ha would be backfilled with an estimated overburden of 251.39 Mm3 and thereafter, the area will be reclaimed by plantation. At the post-mining stage, final decoaled void left would be developed as a water reservoir for water harvesting and also recharge the aquifer of the area. It was clarified that MCL presently has no proposal for dumping flyash as most of working mines have a life of nearly 30 years before reserves are exhausted. It was stated that green belt would be developed in an area of 85.60 ha around dumps and infrastructure area. A total area of 292.851 ha would be under afforestation at the final stage. It was informed that Rs 32.53 lakhs has been deposited to DFO Angul in 2003 for compensatory afforestation, which is being carried out in Durgapur RF for an area of 225.042 ha area in lieu of 112.521 ha forest land being diverted for the project. It was informed that a Five year Plan for Habitat Restoration for Bhubaneshwari mine has been prepared at the cost of Rs 50 lakhs.

It was informed that for R&R, two rehabilitation sites of 10 acres at Gurujang and 44 acres at Bhagmara have been identified. It was informed that medical facilities are being provided to villagers. Lingraj and Ajanta are adjoining mines of Bhubaneshwari OCP. It was informed that piped water supply is being provided to 19 peripheral villages for a total cost of Rs 2 crores. Backfilling of mine void and restoration would be carried out as per the approved project. Ground water parameters are being monitored fortnightly. Proponent informed that a Regional Environment Study carried out by ISM, Dhanbad on behalf of Govt. Of Orissa in an area of 40 km radius with Tentoi in centre in Angul and Dhenkanal districts of Orissa. It was informed that the mitigative measures proposed in the study to reduce pollution in area have been implemented. These include provision of 150 fixed sprinklers and mobile water sprinklers, 17 kms of black topping of roads, use of mechanical sweepers is proposed for Talcher Coalfields, for Bhubaneshwari OCP, tender is to be awarded and commissioning is expected by 2012, Lingraj to be completed by 2014, development of avenue plantation and use of surface miners which eliminates blasting and adoption of general safety measures recommended under Mine Regulation Act (1956) for prevention of coal fire. The total volume of the voids available in and

around Bhubaneshwari OCP is 415.35 Mm3, of which 178.24 Mm3 has been used as a water reservoir to meet the water requirements of mine operations. In addition, domestic Sewage Treatment Plant has been provided for the colony and service building for 760m3/day, of which 532 m3/day, will be utilised after treatment for watering plantation area/vegetation.

It was informed that studies for monitoring of levels of water table during pre- monsoon and post-monsoon had been done in the mine area and in the nearby villages. It was informed that of the total cumulative demand 7.85 Mm3 of water, domestic water requirement is 2.96Mcum, mine requirement 4.85Mcum. The details of air quality monitoring carried out were presented before Committee, which indicated that the levels of AAQ were within the limits notified for PM_{10}, $PM_{2.5}$, SO_2 and NO_x. Similarly, water quality analysis showed that the major water quality parameters analysed for mine discharge water and wells at 8 locations were within the prescribed limits. The details of a comprehensive R&R Action Plan prepared were presented. The total PAFs are 1204 from the villages of Hensamul (565), Jilinda (295), Naraharipur (334), Khanduabahal (10) and land losers of Longijoda, Anadipur, Madanmohanpur, Kandhal. It was informed that R&R for Hensamul and Naraharipur villages would be completed in 2012-2013. The total provision for R&R is Rs. 262.9109 crores.

The Committee desired that the roads used for coal transportation proposed for the initial years, should be developed with a 3-tier avenue plantation preferably of 20-30m width using native species. The Committee also desired that road transportation should be by mechanically covered trucks and not tarpaulin covered trucks, which should be introduced within 9-12 months. The Committee desired that Third Party evaluation of monitoring of AAQ levels from any recognised laboratory under EPA Rules 1986, should be carried and presented as part of compliance report on the EC. The Committee further desired that an 'Action Plan' for the transportation of coal by road to major consumers (during the initial years) should be submitted to ministry for record and the FSA entered with the major linkages should stipulate a condition to the effect that only mechanically covered trucks are used for coal transportation. The Committee observed that levels of AAQ appear to be low, although the project falls in a Critically Polluted Area and desired that Third Party evaluation of AAQ levels should be got carried by an agency and samples got collected and tested by a laboratory recognised under EPA Rules, 1986 as part of condition in EC. The Committee also desired that Source Apportionment Study should be got carried by an institution to determine the source and extent of air pollution form various sources as part of condition in EC. The Committee also desired that mineralogical composition of particulates (PM10 and PM 2.5) should be done to ascertain source of particulates (fuelwood, coal, flyash from TPPs or silica form natural dust) in CPA of Angul-Talcher and quantified. The Committee desired that lung burden analysis report of workers working in coal mining area should be provided and uploaded on the company website as part of condition in EC. The Committee noted that the details of area of the final void have not been provided. The Committee desired that no external OB dump should be left at the Final Mine Closure stage and the mined out area and void should be backfilled up to ground level to the extent possible and the void if left, should be no more than 30-40m depth. The Committee did not agree with any plan for dumping of flyash into decoaled mine voids in MCL mines and desired that a letter to this effect should be furnished; and desired that

sequential operation of mines should be done so that the voids of adjoining mines can be used for dumping OB. The Committee further desired that the time schedule for development of green cover should be provided and details furnished for record of Ministry. The Committee desired that mine water be used for irrigation of nearby agricultural land and also for green belt and other uses. The Committee desired that water from River Brahmani should not be drawn for these purposes and an awareness campaign should be launched by MCL for proper use of water from various sources. The Committee desired that a trend analysis of the water quality (surface and ground water) including heavy metals, should be carried out and data uploaded on the company website as part of condition in EC. The Committee desired that long-term monitoring on the impacts of simultaneous operation of large opencast mines should be carried out on the confined and unconfined aquifers as part of condition in EC. The Committee desired that regular supply of water to the affected villages should be undertaken. The Committee observed that the data furnished on R&R of Hensamul village needs to be rechecked and details furnished for record of Ministry. The proponent should also recheck expenditure on R&R expenditure and that further proposed for Bhubaneshwari OCP Expn. Similarly, expenditure on CSR should also be rechecked and details of these should be furnished for record of the Ministry. A minimum of Rs 5/T of coal as revenue expenditure should necessarily be spent annually, as the expenditure incurred so far on CSR is quit dismal. Annual social audit should be got carried out and details furnished as part of compliance report and also uploaded on the company website.

The Committee after discussions recommended the project for environmental clearance subject to furnishing the details sought above and subject to aforesaid conditions.

2. Expansion of Lakhanpur OCP (expansion from 15 MTPA to 18.75 MTPA in the existing ML area of 2697 ha) of M/s MCL, Jharsuguda, Orissa (TOR)

The proponent made a presentation. It was informed that the proposal is for 25% expansion in production from 15 MTPA to 18.75 MTPA. EC was granted for 15 MTPA project on 02.07.2008. The 25% expansion is proposed to be undertaken increasing the number of operational working days and increasing the effective working hours per day by increasing the efficiency. It was informed that of the total ML area of 2697 ha, 328.83 ha is forestland, 2368.17 ha is non-forest land, including 212 ha for R&R colony. Of the total ML area, 1441.64 ha is quarry area, 706.40 ha is for safety zone (of which 38.40 ha for external OB dump falls in safety zone), 188 ha is for infrastructure, 148.96 ha is for rationalisation of project boundary, 60 ha for residential colony, 152ha is for resettlement site. Mining would be opencast with shovel-dumper and use of surface miner. The estimated OB generation during balance life of the mine is 838 Mm3. It was informed that an amount of 1.94 Mm3 of OB has been stored in one external OB dump in an area of 17.50 ha in the existing project. It was clarified that no additional external dumping of OB is proposed in the expansion project. OB of 105.65 Mm3 has been stored in an area of 210.174 ha and it is proposed to additionally backfill an estimated 732.86 Mm3 of OB in the expansion project. Balance life of the expansion project is 19 years. An additional 250 m3/d of water is required for the expansion project to the existing 2970 m3/d. An estimated 2750 m3/d

is for the mine operations and 470 m3/d is for drinking. There is no additional R&R involved. Total PAFs for the existing project is 1289. Resettlement sites are at Ganesh Nagar and Jagannath Nagar. Ib River is about 3.25 km from the ML, Lilari nallah is about 0.5 km, and a seasonal nallah - Phulijori nallah, which is a tributary of Lilari Nallah flowing within the ML requires diversion. Hirakud Reservoir is about 4 km from the ML. A number of RFs fall in the buffer zone - Bikramkhol RF, RajpurRF, Rameda RF, Arhaparah RF. Coal transportation would be by existing railway siding. No additional manpower is proposed over the existing 803 for the expansion project. Public Hearing was held on 27.07.2007 for the 15 MTPA project. The proponent requested that the application be considered for EC for expansion by 25% under Clause 7 (ii) of the EIA Notification 2006. Director, MCL informed that out of about 100 mines, 13 mines have been identified by CIL for enhancing production of coal to overcome shortage of coal in country, of which only 3 mines are of MCL. The 25% expansion is proposed to be undertaken for the present project by increasing the number of operational working days and increasing the effective working hours per day by increasing the efficiency and would not have a significant impact on the environment. Director (Tech.), MCL further stated that Talcher and Ib Valley Coalfields have sufficient reserves to meet the entire country's future demand of coal and further MCL has the capability for producing coal for the entire country, however, the production cannot be met due to restrictions imposed by environmental and forestry clearances. Director (Tech.), MCL clarified that MCL would be submitting a detailed project for Lakhanpur OCP expansion in 1-2 months time.

The Committee observed that clause 7(ii) of the EIA Notification 2006 has not placed restrictions on companies for preparing projects with only 25% expansion in production and the rationale on CIL subsidiaries submitting applications for 25% enhancement across for their existing projects is not clear. The Committee was of the view that projects prepared on 25% expansion are not realistic as each project would require to be appraised on a case to case basis. Director, MOEF informed that the issue of 25% enhancement across for all projects had been discussed both in the Group of Ministers headed by Hon'ble FM and in the PMO and it had been agreed in both these forums that appraisal of the projects would be on a case-to-case basis. The Committee was of the considered view that the proponents should prepare projects, which are realistic keeping in view the demand for coal in the country and the expansion potential of the projects – be it 100% or 200% or more rather than seeking EC for frequent increase in production by 25% with one or more parameters such as increase in number of working hours/shifts, increase in number of manpower, outsourcing of manpower or equipment or both, increasing capacity of equipment, change in mine working, etc. The Committee was of the view that projects based on such frequent increases of production by 25% on a piece-meal approach would not help identify the impacts of the frequent enhancements using one or two parameters. The Committee observed that this is all the more important since Director, MCL has stated that MCL has the capability of producing coal to meet the entire country's requirements and therefore, projects should also be prepared on a scale based on a long-term vision that would meet objectives of coal requirements for the country.

The Committee desired that a scientific study is required for the 4 MCL mines on the peak production capacity achievable and the potential impacts on the surrounding environment by

increase of machinery, increase in transportation, increase in OB generation, increase of dust pollution, etc and the same should be realistically assessed and an environmental plan for their mitigation should be prepared. The Committee after discussions decided to return this application and requested MCL to submit, at the earliest, the detailed project, which is understood to be ready in 1-2 months. Chairman, EAC further assured Director, MCL that the Committee would hold extra meetings to meet the urgency of Coal India companies requiring EC for expansion projects based on such detailed projects and not merely on expansion by 25%.

3. Mandla South Underground Project (0.3 MTPA over 560 ha) of M/s M.P. State Mining Corp. Ltd. located in Pench-Kanhan Coalfields, dist. Chindwara, M.P. (**EC based on TOR granted on 30.05.2011**)

The proponent made a presentation. It was informed that Mandla (South) Coal Block was allotted to Madhya Pradesh State Mining Corporation Limited by MOC vide letter no 1316/8/2007-CA-I dated 25th July, 2007. M/s Jai Prakash Associates Limited has been selected as a JV Partner by MPSMCL to develop and mine the coal from this block and a JV – M.P. Jaypee Coalfield Ltd has been constituted. As per the Allocation Letter of MOC, coal mined out from the block would be used for commercial use. It was informed that Mandla (South) is an underground coalmine of a total ML area is 560 ha, of which 210.807 ha is forestland and 311.99 ha is agricultural land and 17.347 ha is wasteland. Stage-I FC has been applied for. Satpura Tiger Reserve is 35 km away and Pench tiger reserve is 25 km away from proposed site. The project also does not fall in the Pench-Satpura Tiger Corridor. Of the total ML area, area under Surface rights is 18 ha of which 11 ha is for infrastructure, 3 ha is for CHP, road and coal storage area and 4 ha is for green belt. Rated capacity of the mine is 0.3 MTPA. It was informed that the coal block lies in the catchment area of River Pench which flows at a distance of 5km from the mine and is a tributary of River Wainganga. Three seasonal nalas originate from core zone and flows along South Eastern side and joins River Pench. It was informed that surface drainage of the area would not be disturbed due to underground mining.

Mining would be mechanised by Bord & Pillar Method and extraction with continuous miner (no drilling and blasting). Ultimate working depth would be more than 350m. Mining would disturb the confined aquifer but not the unconfined aquifer. Grade of coal is C to E. Coal transportation on surface would be by mechanically covered trucks through existing road which is two lane black topped road to railway siding proposed to be constructed at Khirsadah about 18 km from the project site, until their own railway siding is conducted. The mine would generate additional road traffic of 5-7 10-T trucks/hour. Railway wagons would be loaded by belt conveyor through hopper and to linked project by rail. Mine entry would be by two inclines - 1st incline for main intake and coal transportation and 2nd incline for transportation of material and manpower. Incline would be for about 1km length and it may take 1-2 years before production can begin. It was informed that a Report on the Subsidence Prediction of Mandla South Under Ground Mine by three dimensional FEM has been prepared by BHU, Varanasi; as per which the tensile strain is 8 mm/m up to 25 years, which is well within the value prescribed by MoEF (20mm/m) and maximum subsidence value would be 0.691 m. It was informed that

native species such as Bel (*Aegle marmelos*), Amla (*Emblica officinalis)*, Gular (*Ficus glomerata*) would be used for developing green belt in 4 ha area. Water requirement is 207 m3/d, of which 87m3/d is for drinking and 120 m3/d is for the mine operations. Water table is in the range of 3.5-7.5m. It was informed that permission of State Ground Water Board has been obtained for drawl of ground water. Public Hearing was held on 04.04.2012. The proponent also presented details of issues raised during Public Hearing dated 4.4.2012. Capital cost of the project is Rs 300 crores. Total PAFs are 16 and land losers are 75. R&R cost is Rs 207.50 lakhs. CSR [combined for Mandla (North) and Mandla (South)] would be implemented at a capital cost of Rs 5 crores and Rs 5/T of coal annually. The cost for EMP is Rs 147 lakhs (capital) and Rs 50 lakhs is annual recurring cost. Life of the project is 45 years. Final Mine Closure Plan has been prepared and a total area of 14 ha (under Surface Rights) would be reclaimed with plantation.

The Committee observed that about 118.700 ha of forestland and 92.107 of Revenue Forest land (i.e. total forestland of 210.807ha) is involved in the project. The Committee stated that Stage-I Forest Clearance is required. The Committee desired that DGMS stipulations should be followed for two exit routes. The Committee desired that the transportation of coal should be by mechanically covered (high-capacity) trucks upto railway siding. The Committee observed that water quality report has indicated high levels of nitrate (40-45 mg/l) and Dissolved Oxygen is (4.8 mg/l) is low. The Committee desired that the water quality data should be rechecked by a laboratory recognised under EPA Rules, 1986 and results thereof submitted to Ministry for record. The Committee desired that the proponent should contribute to the implementation of the WL Conservation Plan and Habitat Restoration Programme. The Committee desired that safety features and sufficient ventilation of mine should be as per DGMS Regulations and a Disaster Preparedness and Management Plan should be prepared. The Committee desired that a Final Mine closure Plan should be submitted. The Committee desired that the proponent furnish a letter on allocation of Rs 5 crores (capital) as CSR budget. The proponent should carry out annual CSR audit and upload on the company website.

The Committee recommended the project for EC subject to FC clearance for 210.807 ha of forestland and furnishing of details sought above for record of the Ministry.

4. Expansion of Gare IV/6 Opencast Coalmine Project and Coal Washery of M/s Jindal Steel & Power Ltd., located in Tehsil Tamnar, dist. Raigarh, Chhattisgarh (TOR)

The proponent informed the Committee that the project was granted an environmental clearance on 18.05.2009; however, the EC was challenged by Adivasi Mazdoor Kisan Ekta Sangthan and Jan Chetna in 2009 in the National Environmental Appellate Authority (NEAA) and thereafter the case was transferred to the National Green Tribunal (NGT), which had vide Order dated 20th April 2012 (Appeal No. 3/2011 (T) (NEAA No. 26 of 2009) set aside the environmental clearance and had asked for re-conduct of Public Hearing on the project. The proponent informed that a fresh application for TOR had been made in this regard. The proponent circulated the Order of NGT dated 20th April 2012; the gist of the order is given below:

i) The EC granted in file No. J-11015/110/2007-IA.II (M) dated 18th May, 2009 by the MoEF is set aside.

ii) The MoEF is at liberty to direct the appropriate authority to re-conduct a Public Hearing by taking all steps as required under the law.

iii) The Public Hearing may be directed to be conducted by an experienced ADM, other than the present one who conducted the Public Hearing on 05.01.2008, and special care may be directed to be taken while recording the statements of the people participates.

The Committee observed that the proponent had not circulated the copy of Order of the NGT dated 20.04.2012, as requested by MOEF. The Committee decided that the project would be reconsidered in the next EAC meeting and requested the proponent to circulate the copy of the NGT Order to all members of EAC.

5. Coking (2 x 2 MTPA) and Non-coking Coal Washery (6.5 MTPA) at Integrated Steel Plant with Captive Power Plant of M/s Jindal Steel & Power Ltd., Angul,Orissa (Further consideration of TOR)

The project was earlier considered in the EAC (T&C) meeting held on 21st-22nd February 2012. The response received from the proponent on the clarifications sought by the EAC were further considered. These include: (i) details of complete water balance of water use of the three coal washeries - 2 proposed and one existing and of the linked Steel Plant-cum-TPP, including extent of recycle and reuse, material balance of the coal for the three washeries, source of coal and end-user of coal and its transportation, (ii) approval of the State Irrigation Dept. for diversion of the nala passing through the washery land, (iii) status of progress of the Steel Plant-cum-TPP and of the Coal Washery (6.5 MTPA) along with justification for enhancement of the capacity of the Steel-cum-Power Plant and requirement of the additional washeries, (iv) a Site Plan of the Steel Plant, TPP, the three (including the two proposed) washeries, green belt, realignment of the nala passing through the land, etc should be furnished.

The details of the water balance of three coal washeries (2 proposed and one existing) and of linked steel plant-cum-TPP, including extent of recycle and reuse were presented. It was informed that the total water requirement for the existing projects (Steel plant + 6.5 MTPA existing washery + Coal Processing Plant (CPP)) is 9700m3/hr, and being drawn from River Brahmani and which has been allocated by Department of Water Resource, Govt. of Orissa. Water requirement of two proposed washeries would be 284 m3/hr, which would be met from treated wastewater of the TPP. The proposed two washeries are designed with closed water circuit. The source and quantity of the three coal washeries is given below.

Source of coal	Quantity (MTPA)	For use in	Transported by
Utkal B1 captive coal mine	6.5	Existing Coal Washery/Steel Plant	4.8km piped conveyor

Imported/Indigenous coking coal (BCCL/CCL)	4	Proposed Coking Coal Washery (2x2 MTPA)	Rail/covered dumpers
Linkage/e-auction/ import	6.5	Proposed Non-coking coal washery (6.5 MTPA)	Rail/covered dumpers

It was clarified that the capacity of the Steel Plant is not being enhanced. However, two additional coal washeries are required as the existing coal washeries would meet only 50% of coal requirement of the Gasification Plant and Middling requirement of the CPP. The proposed 4 MTPA Coking Coal Washery would be used for meeting the requirement of clean coking coal for the Coke Oven and meet the partial demand of the 3.2 MTPA Blast Furnace. The proposed 6.5 MTPA non-coking coal washery would meet the balance coal demand of the Gasification Plant.

Material Balance of the Existing and Two Proposed Coal Washeries

Source of Coal	Quantity (MTPA) and ash content (%)	Clean coal (MTPA) and Ash Content (%)	Middling & Rejects (in MTPA) and Ash content (%)	Use of clean Coal	Use of Middling & Rejects (10 MTPA)	Remarks
Existing Coal Washery	6.5 MTPA (46-48%)	2.7 MTPA (34-36%)	3.8 MTPA (56%)	2.7 MTPA in Coal Gassifier	3.8 MTPA for linked TPP	Of the 10 MTPA of middling & rejects, 8.8 MTPA would be utilised in a 8x135 MW CFBC Power Plant and 1.2 MTPA in a Process Steam Boiler
Proposed Non-coking Coal washery	6.5 MTPA (46-48%)	2.7 MTPA (34-36%)	3.8 MTPA (56%)	2.7 MTPA in Coal Gassifier	3.8 MTPA for linked TPP	
Proposed Coking Coal Washery	4 MTPA (39-41%)	1.6 MTPA (16%)	2.4 MTPA (56%)	1.6 MTPA in a 2 MTPA Coke Oven	2.4 MTPA for linked TPP	

It was informed that the 98 % construction of the existing coal washery has been completed and the linked Plant would be ready by August 2012. It was informed that a seasonal nala Kurudabhali nala, passing through the site, would be realigned and permission has been sought from State Govt. on 16.06.2012.

The Committee desired that the entire coal from the washeries (including coal rejects) should be used in the proponent's own plants only and no trading of coal would be allowed. The Committee also sought details of firm linkage from BCCL mines. The Committee desired that records of the material balance of the three coal washeries should be maintained and furnished as part of Compliance Report. The Committee desired that details of coal transportation should also be provided as part of EIA-EMP. The Committee recommended TOR to project as given in **Annexure-3** read with **Annexure-4**.

6. Shahpur East (0.70 MTPA in 693 ha ML area) and Shahpur West (0.405 MTPA in 587.50 ha 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)

Consideration of the project was deferred to the next EAC (T&C) meeting scheduled in August 2012 as the proponent's request for consideration of the project on the next day was not found to be feasible.

7. Expansion of Coal Washery (2.4 MTPA to 3.6 MTPA) of M/s Hind Energy & Coal Beneficiation (India) Pvt. Ltd., located in village Hindadih, dist. Bilaspur, Chhattisgarh (EC based on TOR granted on 23.09.2010)

Consideration of the project was deferred to the next EAC (T&C) meeting scheduled in August 2012.

8. Proposed Pit Head Coking Coal Washery (3.5 MTPA) in Tasra Coal Block of M/s Steel Authority of India Ltd. located in Jharia Coalfields, Dist. Dhanbad, Jharkhand – Further consideration of TOR

The project was earlier considered in EAC meeting held on 21st-22nd June 2011 and the clarifications sought by the EAC (T&C) were further considered.

The proponent made a presentation. It was informed that the radiation measurements around the proposed washery site were carried out by a team of Bhabha Atomic Research Centre (BARC) during 23 to 26th August 2011. Tests on radiation levels in and around the proposed site were also carried out. A conceptual plan for decontamination of the site along with costs of remediation and decommissioning of old structures has also been made. It was informed that the old structure present at the site proposed for the washery are remnants of old factory, old buildings, overhead tanks, abandoned stack of Bihar State Super Phosphate and Gypsum Plant, which was in operation during 1956-1978. Waste material comprising of broken building material, weathered gypsum waste materials, old leachate slag and coal ash, etc are also found. Proponent informed that the treatment of solid wastes lying in and around the old factory site is estimated at a total cost of Rs. 10 lakhs. The proponent stated that the site of the earlier Bihar Super phosphate factory is suitable for setting up the proposed coal washery and land has also already earmarked for industrial activity.

The Committee desired that the radiation levels of the proposed site should be assessed as phosphate fertilizers tend to emit radiations. The Committee also desired that plants of the area should also be studied on the extent of chromosomal abnormalities, if any, (chromosomal breaks/aberrations) due to radiation from phosphate fertilizers. The Committee suggested that possible emissions of radiations from the old site could be reduced by taking appropriate

measures at the design stage itself. The Committee desired that the proponent should provide mitigative measures at the planning stage. The Committee further desired that no residential colony should be established at the site in future. The Committee also desired that the workers in the washery should be monitored and the help of TATA Memorial Hospital should be taken in this regard. The Committee desired that substantial amount should be allocated for detoxifying area. The Committee observed that the costs indicated by the proponent for decontamination (which includes decommissioning of old structures, excavation of materials, transport of materials and their disposal and decontamination of toxic materials) appear to be much on the lower side and decided that the proponent must bear the entire costs of decontamination of the proposed washery site before undertaking any developmental activity.

The Committee recommended TOR to the aforesaid project as given in **Annexure-3** read with general conditions at **Annexure-4**.

9. Tetariakhar OCP (0.5 MTPA to 2 MTPA (normative) and 2.5 MTPA (peak) and expansion in ML area from 131 ha to 208.47 ha) of M/s Central Coalfields Ltd., North Karanpura Coalfields, Dist. Latehar, Jharkhand (EC based on TOR granted on 10.12.2009)

The proponent made a presentation. The proposal is for expansion from 0.5 MTPA to 2 MTPA (normative) and 2.5 MTPA (peak) and expansion in ML area from 131 ha to 208.47 ha. EC for the 0.5 MTPA project was granted on 15.09.2005. The mine is located in North Karanpura Coalfields. Of the total ML area of 208.47 ha, 0.85 ha is forestland (which is not to be acquired), 141.74 ha is tenancy land, 65.88 ha is Govt. land. Of the total ML area of 298.47 ha, 108.57 ha is quarry area, 54.34 ha is ext. OB dump, 11.71 ha is infrastructure, 5.6 ha is nala diversion, 12 ha is haul roads, 15.35 ha is green belt, 2.61 ha is safety zone. Mining would be opencast using surface miner and shovel-dumper. The total estimated OB generation is 16.84 Mm3. Of the total OB of 16.84 Mm3, 13 Mm3 of OB would be dumped externally in an area of 54.34 ha of a max. height of 60m and the balance 3.84 Mm3 OB would be backfilled. An estimated 2.7 Mm3 OB from external OB dump will be re-handled in post mining stage. Final void of 108.57 ha area with 45 m depth would be left at the post-mining stage. A distance of 100m would be maintained between the toe of the external OB and Bhutha Nala and a retaining wall of 1m width and 1.5 m height has been proposed to be constructed in between the toe and bank of Bhutha nala to prevent silting of nala during monsoon. Ultimate working depth is 150m. Water requirement is 400m3/d, of which 275m3/d is for mining operations and 125m3/d is for drinking. Water table during pre-monsoon is in the range of 2.85-6.73m bgl and in the range of 0.30-6m during post-monsoon. It was informed that the present project is being operated on diesel as there is no electricity in the region. R&R involves 5 PAFs. Coal dispatch would be from proposed Tetariakhar Railway Siding at a distance of about 4km from project site, after the commencement of Tori-Shivpur Rail line. At present the coal is being transported by tipping trucks to Tori railway siding located at the distance of 29 km. Balance life of the mine is 11 years. Capital cost of EMP is Rs 43.8846 crores (including cost of Mine Closure). Public Hearing was held on 17.04.2012. Expansion project was approved on 21.01.2009.

The Committee desired that the extent of forestland involved in the project and requiring diversion should be clarified in a letter. The Committee desired that that a toe wall should be provided and dense plantation should be developed on the lower side of OB dump. The Committee desired that sand stone wherever is present in the OB as per lithology report, be provided to locals for further use. The Committee desired that the depth of the final void should be no more than 30-40m and used for pisciculture. The Committee desired that unconfined aquifer should be covered with shale with an additional estimated cost of Rs 6 crores and the height of the external OB dump should also be reduced to 25m or less, which could support agriculture/horticulture in consultation with local villagers and the dump merged with undulation of the surrounding environment. The Committee observed that the list of Sch.I fauna provided in the presentation is not correct. The Committee sought copies of WL Conservation Plan for seeking comments from expert, WII, Dehradun. The Committee desired that local youth should be motivated and provided skilled development training as it is a disturbed area. The Committee desired that the Rs 70 lakhs earmarked for CSR for 2012-13 should be spent on socio-economic schemes/measures for the poor. The Committee raised its concerns that only Rs 38 lakhs have been spent during the last 5 years towards CSR and desired that the status of spending on CSR on various projects should be made part of the company's Annual Report. The Committee desired that a Social Audit should also be carried out by an outside agency. The Committee observed that most of the Public Hearing issues have not been addressed properly. The Committee desired that issues of PH should be in tabular form - name of complainant along with issues raised, issues addressed by proponent, and amount to be spent on these activities under CSR. The Committee desired that maximum employment in the project should be from the local communities.

The Committee decided to further consider the project upon receipt of the aforesaid details.

10. Special Agenda Item of EAC (Thermal Power) on Thermal Power Project of M/s IL&FS Ltd.

Minutes on this agenda item have been issued by the EAC (thermal Power) separately.

11. Manoharpur Opencast Coalmine Project (8 MTPA) of M/s Orissa Power Generation Corp. Ltd. located in Ib Valley, Dist. Sundergarh, Orissa (EC based on TOR granted on 11.07.2008)

The proponent made a presentation. It was informed that Manoharpur Coal Block has been allocated by the Ministry of Coal in July 2007 to M/s Orissa Power Generation Corporation. Manoharpur Opencast coalmine project is an opencast project of 8 MTPA rated capacity in a total project area of 653.509 ha of which 324.677 ha is outside the coal block. The coal is captive to two power plants Power plant -2 x 660 MW (Phase II) and 2 x 660 MW (Phase III) of OPGC, located at a distance of about 48km. EC for the linked Power Plants has been obtained in 2010. Grade of coal is mostly F & G. There are no ecologically sensitive areas such as National

Parks, WL Sanctuaries, biosphere reserves, etc. Dulanga coal Block of M/s NTPC and Meenakshi Coal Block flank the Manoharpur OCP. Garia Nalla (tributary of Basundhara River) flows along the northern boundary and eastern side of the Block. A stretch of Garia nalla flowing over the south eastern part of the block would be diverted and road passing through the road would be diverted. The nala thereafter, which would flow into NTPC's Dulanga Coal Block would be further diverted by NTPC. The water from the catchment area in lieu of the nala would be collected in a garland drain and connected down stream of Garia Nala to maintain its flow. An Embankment would be constructed along the Garia Nala which would be 3m above HFL of Garia Nala.

Of the total project area, 193.739 ha is forestland, 238 ha is agricultural land, 176.839 ha is barren land, 13.189ha is homestead land, 20.040 ha is grassland and 11.611 ha is water body. Forestry clearance has been applied for and is at an advanced stage. Of the total 324.677 ha outside the coal block, 6.726 ha is forestland, 165.358 ha is agricultural land, 97.917 ha is barren land, 2.614 ha is homestead land, 45.937 ha is grassland and 5.815 ha is water body. Of the total project area of 653.509 ha, 550.954 ha is for quarry/excavation, 36.952ha is for external OB dump, 3.89ha is for coal stockyard, 20.117ha is for infrastructure, 7.13 ha is for roads, 3.7ha for road diversion, 5.99 ha is for 100m barrier, 2.34 ha is for nala diversion, 4.659 ha is for safety zone along existing nala, 8.906 ha is for safety zone along project boundary, 8.871 ha is for rationalisation of project boundary. It was informed that of the 324.677 ha outside the block, 0.498 ha is for crushing, 156.526ha is for external OB dump, 1.465 ha is for coal stockyard, 3.015 ha is for topsoil, 6.406 ha is for sedimentation pond, 108.367 ha is for allied infrastructure, 48.090 ha is for residential colony. It was clarified that the entire 324.677ha outside the ML area is non-coal bearing.

Mining would be by shovel-dumper and surface miner. Mining would be at a depth of 8m-205m. It was informed that a minimum 15m safe distance would be maintained between quarry edge and nala and a 3-tier thick plantation consisting of native species would be developed. The total estimated OB generation is 432.11 Mm3, of which 61.73 Mm3 would be stored in external OB dump of 193.478 ha of a max height of 70m, which after re-handling of OB, would be reduced to 50m height. The balance 370.38 Mm3 would be backfilled in an area of 257.11 ha. Backfilling would begin in the 2nd year. At the post mining stage a water body of an area of 13.96 ha would be left, whose depth would be reduced from 140m to 80m. The total water requirement is 3780 m3/d of which 2580 m3/d is for mine operations and 1200 m3/d is for the coal washery. Approval of CGWB has been obtained for drawl of 950 m3/d of groundwater. The captive pit-head coal washery in an area of 20 ha would operate in an improved HM Cyclone and would yield 6.4 MTPA of clean coal of 33 $\pm$ 0.5% ash and the balance 1.6 MTPA of coal of 55% ash content. It is a zero-discharge washery. Crushed coal from mine to pit head washery to be transported through covered conveyor belt then power plant to MGR. It was informed that coal rejects would be sent to M/s SV Power Plant for their FBC based TPP.

It was informed that an amount of Rs 385 lakhs has been proposed for a Wildlife Conservation Plan. It was informed that the site specific WL Conservation Plan has been approved by Govt. of Odisha. Public Hearing was held on 28.02.2012. Mining Plan has been approved by MOC in

August 2008. R&R involves 386 PAFs. A site of 74 ha has been planned for the resettlement colony and awaiting approval of the State Govt. Budget for CSR is Rs 240 lakhs. Life of the mine is 23 years.

The Committee noted that the original topo sheet of the study area has not been presented and is required to ascertain the presence of large number of water bodies in area. The Committee desired that copy of the approved Mining Plan should be submitted to ministry. Revised mining plan and details of mine closure should also be submitted. The Committee observed that the proponent proposed to backfill fly ash generated from TPP to mine. The Committee sought a clarification whether details of dumping of flyash has been reflected in the EIA-EMP of the linked TPP and environmental clearance granted to the linked TPP and also in the Revised Mining Plan for Manoharpur OCP. The Committee sought details of the environmental clearance granted to the linked TPPs and desired that the extracts of the EIA-EMP of the linked TPPs, wherein the issue of disposal of flyash has been given should be furnished. The Committee desired that all supporting documents regarding dumping of flyash in mine void including leachability study should be provided. The Committee stated that proper appraisal is required for dumping fly ash in mine voids.

The Committee desired that a letter from the Odhisa State Govt. should be obtained for allotment of 324.367 ha land out side coal block for OB dumping and infrastructure, in view that the State Govt. has banned acquisition of land outside coal blocks for OB dumping, infrastructure, etc vide Dept. of Steel & Mines, Govt. of Odisha's Office Order No. 1275/SM, Bhubaneshwar IV (Coal) SM-03/2011 dated 24.02.2012. The Committee also desired that the geological map, geological section of ML area should be provided by proponent on whether the coal could be mined by UG mining as the project formed a part of watershed. The Committee noted that the project was originally in 'No-Go' area and was subsequently revised to 'Go Area'. The Committee sought the status of forestry clearance. The Committee observed that CSR expenditure is only proposed for 5 years and should be at Rs 5/T and desired that it should be extended to cover the life of the project. The Committee observed that most of the issues raised in Public Hearing have not been addressed properly. The issues of PH should be in tabular form - Name of complainant along with issues raised, issues addressed by proponent along with specific budgetary provision on these activities under CSR.

The Committee decided to further reconsider the project after receipt of the aforesaid information.

12. Brahmpuri Underground Coalmine Project (0.36 MTPA peak in an ML area of 360 ha) of M/s Pushp Steels & Mining (P) Ltd., located in Pench-Kanhan Coalfields, dist. Chindwara, M.P. (Further consideration of EC based on TOR granted on 07.07.2009)

The proposal was earlier considered in the EAC (T&C) meeting held on 23rd-24th April 2012. The clarifications sought by the Committee were further considered.

The proponent made a presentation. It was informed that Global Tender Notices inviting bids for supply of mechanically covered vehicles for coal transportation have been issued in the Nav Bharat and Business Standard newspapers dated 7th June 2012. It was further informed that M/s TATA Motors Limited and M/s Ashok Leyland Limited have also been contacted for supply of mechanically covered trucks vide letter dated 04.06.2012. It was informed that the project is about 6km away from River Pench. A hydrogeology study has been carried out on the impact of mining on the groundwater regime of the area. It was informed that surface and ground water would not be affected. It was informed that the study on flora and fauna was carried out by Dr Swarkar. The proponent agreed to treat acid mine water if any, with lime dozing, before releasing the same for recharging the ground water. The proponent also agreed to install Fluoride removal plant as the levels of fluoride are high in ground water.

The Committee desired that the details of Acid Water Treatment Plant, volume of water to be treated and disposal of brine should be provided for record. The Committee desired that monitoring of outlet points should be carried out and records of same should be maintained and submitted to the Regional Office of the MOEF as part of the Compliance Report. The Committee desired that mechanically covered trucks should be used for coal transportation and stated that it has been brought to their notice that a company near Chennai has been operating/producing mechanically covered trucks. The Committee desired that the proponent contribute to the Habitat Restoration of Pench-Satpura Tiger corridor vide recommendation in the Report of the MOEF.

The Committee recommended the project for environmental clearance subject to furnishing Stage-I forestry clearance.

13. Proposed Gare Pelma Sector III Opencast-cum-Underground Coal Mine Project (5 MTPA normative and 6.5 MTPA peak in a total project area of 714.35ha) 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 in August 2009 and Modification of TOR dated 23.06.2011

The proponent made a presentation. It was informed that the proposal is for opening a new Gare Pelma Sector III Opencast-cum-Underground Coal Mine Project along with a pithead coal washery in district Raigarh, Chhattisgarh. The coalmine project is a Public-Private Partnership of M/s Goa Industrial Development Corp.- a Govt. undertaking and KSK Mahanadi Power Company Ltd., which is a developer appointed by the Government. A total of 37.5MW share of power generated is proposed for Govt. of Chhattisgarh, as the coal block is located in Chhattisgarh. The rated capacity of the mine is 5 MTPA (normative), of which 4 MTPA is opencast and 1 MTPA is underground and 6.5 MTPA (peak). The total extractable reserves by OC mining is 94.7 MT and by UG mining is 39.40 MT. The end user of the coal block is 1800 MW Power Plant of M/s KSK Mahanadi Power Company Ltd located at Nariyara, district Janjgir Champa, Chhattisgarh. Grade of coal is C-D.

There are no ecologically sensitive areas such as WL Sanctuaries, National Parks and Bioshere Reserves within the 10km of the buffer zone. A large number of RFs are located in the core zone and buffer zone. These include: Tolge RF within ML area, Tolgi West-East to North-eastern side, Jamkhani RF (8 km), Deongar RF (4 km), Rampur Protected Forest (2.5 km), Dongamukha PF (within 3 km), Tolge South PF (9 km), Piprahi (8.5 km on North eastern side).

S.N.	Land Use	ML (ha)	Outside ML (ha)	TOTAL Project Area
1.	Protected/Reserved Forest	165.10	-	165.10
2.	Chhote Bade Jhad ke Jungle	32.62	9.391	42.015
3.	Govt. Land	44.74	1.50	46.24
4.	Private Land	396.64	64.359	460.999
	TOTAL	**639.10**	**75.25**	**714.35**

Stage-I forestry clearance has been obtained from MOEF on 11.04.2011. The drainage of the area is controlled by Pajhar Nala on the west of the block and River Kelo on the east, which are tributaries of River Mand. It is not proposed to modify the drainage of River Kelo.

Of the total project area of 714.35 ha, 639.10 ha is ML area and the balance 75.25 ha is outside the ML of which 40.40ha is for external dump, 30 ha is for washery and CHP and 4.85 ha is for Magazine). Grade of coal is A to G. Upper seams from Vi and above would be extracted by opencast mining. Mining methodology of OC mining is by shovel-dumper and surface miner. Ultimate working depth is 150m. It was informed that of the total estimated OB generation of 293.5 Mm3, 16 Mm3 of OB would be stored in the external OB dump and the balance 277.75 Mm3 of OB would be backfilled. Of the total 60 ha area of external OB dump of a max. height of 60m, 20 ha would be within the ML and the balance 40.40 ha would be outside the ML. Backfilling would start from 2nd year onwards and 100% concurrent backfilling would commence from 4th year onwards. The external OB dump and the backfilled area would be stabilised by planting native tree species. Of the total quarry area of 442 ha, 350 ha would be backfilled and balance void of 92 ha of a max. depth of 30m, would be converted into a water body, which would help recharge and stabilise the water table in the neighbourhood and benefit the local population. It was informed that slope stability study has been carried out by Birla Institute of Technology, Mesra, Ranchi. At the end of mining, of the total area, 514.36 ha are would be covered under plantation by planting over one million trees. The list of flora and Fauna authenticated by State Forest Department was provided. It was informed that a detailed wildlife conservation plan has been prepared and approved by Chief Wildlife Warden, Forest Department, Govt. of Chhattisgarh and an amount of Rs 6.20 crores has been allocated.

It was informed that in regard to UG mining, the area under Mining Rights is 406.637 ha and area under Surface Rights for the underground mine is 12.159 ha. Mining for UG mine would be mechanised by B&P method and by use of continuous miner. Depth of mining would range from 30-400m. It was stated that Seams I to IV are at a greater depth and would be worked out by UG mining. Underground mining would start from 4th year onwards.

Water table is in the range of 3.15-5.4m bgl during pre-monsoon and in the range of 1.05-2.06m bgl during post-monsoon. The total water requirement for the project is 4050 m3/d, of which 2915 m3/d is for mine operations, 1000m3/d is for coal washery, 135m3/d is for drinking. Water requirement for the UG mine is 350 m3/d, of which 330 m3/d is for dust suppression. Water requirement of the mine-cum washery would be met from mine discharge water and the balance 135 m3/d for drinking would be met form tube wells. NOC from CGWA has been obtained on 07.03.2011.

It was informed that the proposed pit-head coal washery is of 5 MTPA capacity and is a three product HM Cyclone washery and is zero-discharge. Raw coal of 5 MTPA of 42% ash content would produce 3.75 MTPA of clean coal at 34% ash, 0.8 MTPA of middling with 51% ash and 0.42 MTPA of rejects with 92.7% ash. The coal washery would be housed in an area of 30ha. Water requirement for the washery is 1000m3/d. The clean coal would be transported to the linked TPP at a distance of 137 km. Middling of a GCV of 3150 Kcal per kg would be used as fuel in FBC based TPP of M/s SV Power Ltd. in Korba district. Mined out coal would be transported to washery by dumpers, after washing in the pit-head washery, would be transported by road to the nearest Kharsia Railway Siding through a proposed railway line. It was informed that until the proposed railway line is commissioned, coal would be transported through covered trucks via Punjipatra-Gharghoda-Chhal Road to Kharsia.

Life of the OC mine is 26 years and of the UG mine is 45 years. R&R consists of 440 PAFs from the villages of Bajarmuda (434), Dholnara (6). R&R budget is Rs 22587.356 lakha. Capital cost of the project is Rs 780 crores. Cost of EMP is Rs 12.6 crores and Rs 13.15 crores is recurring cost. Cost of CSR is Rs 28.78 crores (capital) and Rs 2.60 crores is annual recurring expenditure. Public Hearing was held on 18.04.2012. Mining Plan was approved on 17.05.2010.

The Committee noted that although the mine would be operating on a peak capacity of 6.5 MTPA, washery details have been provided for 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 also not been provided. The Committee noted that coal middling-cum-rejects are proposed to be given to M/s SV Power. The Committee desired that middling-cum-rejects should be utilised in their own power plant. The Committee was of the view that since the allocation of coal was made on Govt. dispensation route, 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 and the same may be obtained and details furnished to the Ministry. The Committee observed that as the linked Thermal Power Plant is at a distance of about 137 km, requirement of a washery may not be necessary and this should be re-examined. The Committee desired that accounting of material balance of each product eg. 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. The Committee observed that most of the issues raised in the Public Hearing have not been addressed properly. The Committee desired that the issues of PH should be brought out in a tabular form - name of complainant along with issues raised, issues addressed by the

proponent along with specific budgetary provisions on these activities under CSR. 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 714.35ha.

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

14. Cluster II (5 mines of a combined prod. capacity of 15.55 MTPA with a peak prod. of 20.215 MTPA in a combined ML area of 2025.71 ha) of M/s Bharat Coking Coal Ltd., located in Jharia Coalfields, dist. Dhanbad, Jharkhand (Further consideration of EC based on TOR granted on 23.03.2011)

The proposal was last considered in the EAC (T&C) meeting held on 23rd-24th April 2012 and issues raised therein were further considered.

The proponent made presentation. It was informed that the BCCL has undertaken concerted efforts for controlling the fire in Jharia Coalfields as per Mines Act, 1957 and DGMS stipulations under the supervision of DGMS. The fires have over the fires reduced substantially as substantiated by Thermal Infra Red Imaging study carried out through NRSA, Hyderabad. It was further stated that the Jharia Action Plan, which consists of all fire dousing projects/plans had been surveyed by DGMS and DGMS is also the monitoring and scrutinizing agency constituted by the Hon'ble Supreme Court of India under the WP(PIL) 387/1997 i.e. Haradhan Roy Vs UOI. It was clarified that any new scheme of fire dousing would need the approval of DGMS. The details of active fire affected sites as per approved Jharia Plan are given below:

FIRE AFFECTED SITES WITH FIRE DOUSING PROJECTS/PLANS IN CLUSTER-II					
S.No	**Colliery**	**Site name & no.**	**Areas affected (in Km2)**	**No of houses**	**Rehabilitation cost (Rs lakhs)**
1.	Phularitand	Ashakuti Gawalapatti /O8	0.018	24	66.26
2.	Phularitand	Mandra, Ganeshpur & Barwabera /O5	0.011	76	340.77

It was informed that BCCL had written a letter to NRSA, Hyderabad for a diagnostic study of fire and its monitoring through aerial photography on 21.05.2012 and their response is awaited. It was stated that the measures for fire control, rehabilitation and relocation for PAF's and mine reclamation are integrated. It was informed that large scale ecological restoration of the mined out areas and fire dug out areas would be undertaken by involving local people. A CSR Action Plan is being formulated by TISS, Mumbai. The details of voids and their depth at post mining stage, land use, details of the abandoned pits/voids that would be reclaimed and ecologically restored were provided. It was informed that some of water bodies would be utilised by the

local villagers including pisciculture. The details of the present levels of production from cluster-II are below:

EXISTING LEVELS OF PRODUCTION IN CLUSTER-II

NAME OF MINE	Coal production in MT for 2011-12		
	Normal production (in MT)	Coal recovered (MT) during execution of Master Plan	Total (in MT)
Block II UG Section	Proposed Mine		
Block II OCP Section	1.481	0.0414	1.522
Jamunia OCP	0.940	1.694	2.634
Shatabdi OCP	-	1.539	1.539
Muraidih UG Section	Proposed Mine		
Muraidih OCP Section	1.575	0.547	2.122
Phularitand OCP	0.035	0.416	0.451
Total	**4.031**	**4.2374**	**8.268**

It was informed that it is proposed to further enhance capacity of the Cluster-II mines by amalgamating all the individual mines thereby reflecting the highest achievable production capacity from this cluster. It was informed that a fresh application for environmental clearance would be submitted after obtaining EC, based on peak capacity with sufficient cushion for enhancing production of offsetting shortfall from other mines opening.

It was informed that following the decisions of the Committee, a detailed Coal evacuation plan within the clusters and for the entire Jharia Coalfields, would be implemented in a phased manner. The broad Conceptual Plan has been prepared in consultation with RITES and with the Railways. It was informed that presently, there are 33 railway sidings that cater to the transport of coal from BCCL mines, some of which are fire affected and need to be dismantled and relocated. Road transportation of coal is also being carried out. A separate Master Plan has been proposed in the approved JAP for diversion of Railway Lines and roads within the coal fields at a cost of Rs 20 crores. It was further informed that JRDA has appointed RITES for preparing the Plan for diversion of railway lines, roads and other utility lines vis-à-vis implementation of JAP. It was stated that RITES has proposed a separate road/rail network after dealing with the fire, subsidence and rehabilitation issues under the JAP. It was informed that in Phase-I, it is proposed to continue with the existing system of road–rail transport network and a gestation period of about 5 years would be necessary after the completion of the Jharia Action Plan (for individual clusters) for consolidation of the backfilled dug out fire affected and unstable areas, and hence, the Plan for implementation of the Coal Transportation Plan for Phase–I would be max. of 15 (10+5) years. It was informed that the company has adopted mitigative measures, which also form a part of the 'Environmental Action Plan' prepared for Dhanbad Critically Polluted Area, such as covered trucks, development of green belt on either side of roads, increase in water sprinkling, strengthening and maintaining of the roads etc. would be adopted up to 15 years within the existing road-rail transport. The specific

mitigative measures taken/proposed in the context of the Plan for Dhanbad Critically Polluted Area has been submitted to JSPCB, which has proposed construction of pucca road, mobile water sprinklers, proposed garland drain etc. For Phase–II, BCCL would implement the conveyor–cum-rail transport to avoid movement of trucks within the cluster for coal transportation in phase-II, which would be started after 15 years from now. It was informed that the entire coal of about 51 MTY from the 54 mines would be transported by rail-cum-conveyor belt and thus, minimising the road transport. In addition, BCCL would be introducing more Rapid Loading Systems (4) and Coal Handling Plants to cater to the coal transportation from all the clusters. In addition, about 10 coal washeries would be installed linked to mines with suitably designed off take points and the existing system of pay loaders would be discontinued.

The details of coal evacuation and movement for each of the mines of Cluster-II during Phase-I were presented. The details of Conceptual Plan of Coal Transportation for Phase-II involving a network of conveyors to coal washery/CHP/Railway siding was also presented. It was informed that survey work by TISS is to start and after completion of survey, suitable NGOs and agencies for implementation of CSR activities would be identified. It was informed that the details of CSR activities being undertaken have been uploaded on the company website. It was informed that the local communities had been involved in the pilot study on eco–restoration of mined out areas of 8 ha, which have been reclaimed in June 2012. Bamboo plantation along with other native species, has been planted by the local people. Further, a training programme on Eco-restoration was conducted for about 130 local youth in February, 2012. It was informed that an area of 45 ha of degraded mined out area has been identified for ecological restoration to be under taken during the next monsoon, of which 9.40 ha is from Cluster–II. The Committee was informed that the company has adopted “Corporate Environmental Policy” which has been approved by its Board of Directors on 21.04.2012. It was informed that BCCL is in process of obtaining forestry clearance for 29.75 ha of forestland in Muraidih colliery of Cluster-II.

The Committee desired that the Plan for conveyor-cum–rail for Cluster-II should be dovetailed with Jharia Action Plan. The Committee desired that road transportation of coal during Phase–I should be by mechanically covered trucks, which should be introduced at the earliest. The Committee desired that the rejects of washeries should be utilised in FBC based Power Plant. The Committee desired that after completion of reclamation, UG mining should be taken up. The Committee desired that the company must give priority to capacity building both within the company and to the local youth, who are motivated to carry out the work in future. The Committee desired that details of transportation, CSR, R&R and implementation of environmental action plan for each of the 17 clusters should be brought out in a booklet form within a year and regularly updated. The Committee desired that a study should be initiated to analyse extent of reduction in pollution load every year by reducing road transport. The Committee also desired that the road used for coal transportation should be developed with avenue plantation on both sides. The Committee desired that expertise available internationally could also be utilised for control of fire in Jharia Coalfields and for their reclamation and to further minimise time for fire and subsidence control. The Committee desired that the abandoned pits and voids should be backfilled with OB and reclaimed with plantation and or

may be used for pisciculture. The Committee desired that BCCL may examine setting up a separate management structure for implementing environment policy and socio-economic issues and the capacity building required in this regard.

The Committee recommended the locations of monitoring stations in the Jharia Coalfields should be finalised in consultation with the Jharkhand State Pollution Control Board. The Committee stated that smoke/dust emission vary from source to source (fuelwood, coal, flyash from TPPs, silica from natural dust, etc) and a Source Apportionment Study should be got carried out for the entire Jharia Coalfields. Mineralogical composition study should be undertaken on the composition of the suspended particulate matter (PM_{10} and $PM_{2.5}$) in Jharia Coalfields and also quantified. These studies would help ascertain source and extent of the air pollution, based on which appropriate mitigative measures could be taken.

Representations /Complaints received by MOEF on the functioning of BCCL mines.

A number of complaints/representations have been received on various issues concerning operation of BCCL mines. These include the following:

1. Letter dated 27.12.2011 of Shri Somnath Chatterjee, Member of Parliament to Minter for Environment & Forests.
2. Letter dated 18.01.2012 of Shri Sukhdev Vidrohi, State Secretary, Jharkhand Rashtriya Janata Dal.
3. Representation dated 21.01.2012 of affected local communities around BCCL mines area on environmental issues of clusters.
4. Letter dated 04.06.2012 from affected people of Sijua Area addressed to DGMS.
5. Letter dated 27.03.2012 of Shri Sukhdev Vidrohi addressed to Minister of Coal.

In addition, the Ministry has also received Minutes of Technical presentations held on Cluster II, IV and VII from the Member-Secretary, Jharkhand State Pollution Control Board, and the issues therein were also considered.

It was noted that the issues raised by Shri Somnath Chatterjee, MP vide letter dated 27.12.2011 were regarding the violation of Contract Labour Act and work being done through outsourcing. The proponent informed that the opinion of the Solicitor General of India had been obtained. This issue was related mainly to Contract Labour Act and not on environmental issues. The complaint of Shri Sukhdev Vidrohi was that the environment of each mine would be adversely affected and should be considered separately. Shri Vidrohi's complaint also referred to the BCCL mines working in violation of the environmental regulations. The complaint also referred to accidents that have occurred in BCCL mines, particularly in Gaslitand Colliery. Shri Vidrohi also referred to Dhanbad falling in Critically Polluted Area and the impact on the health of the local communities. The Committee noted that the issues raised by the complainants have been/are being addressed by the project proponent as per details explained above in the earlier EAC meetings where these proposals were appraised. The Committee noted that issues of outsourcing of equipment, manpower, etc does not directly fall in the domain of the EAC/MOEF, however, the quality of environment due to outsourcing; and the health and safety

issues of the outsourced manpower should be addressed by the company while outsourcing. The Committee recommended that active OB dumps near water bodies and rivers should be rehandled for backfilling abandoned mine voids. However, those which have been biologically reclaimed need not be disturbed.

The Committee after discussions recommended the proposal for environmental clearance subject to the aforesaid conditions and also given in earlier considerations of the proposal by EAC and conditions given for others clusters that are applicable, subject to obtaining prior approval of the DGMS in regard to mine safety issues and subject to MOEF Circulars as applicable.

15. Cluster No. IV (6 mines of a peak prodn. of 3.706 MTPA in a combined ML area of 1123.79 ha) of M/s Bharat Coking Coal Ltd., located in Jharia coalfields, in dist. Dhanbad, Jharkhand - EC based on TOR granted on 04.11.2010

The proposal was last considered in the EAC (T&C) meeting held on 23rd-24th April 2012 and issues raised therein were further considered.

The proponent made presentation. It was informed that the measures of fire control, rehabilitation and relocation for PAFs and mine reclamation have been integrated. The entire operation is being overseen by Director (Technical) (Operations) at the corporate level and by Chief General Managers at the project level. All the existing surface water bodies shall be protected from siltation, pollution, etc and ecologically restored and used for fish culture. The local villagers would be involved in this activity. It was informed that all mines in Cluster IV have abandoned quarries, eg. Salanpur Colliery UG, Katras Choitudih Colliery, Amalgamated Keshalpur & West Mududih Colliery, Amalgamated Angarpathra & Ramkanali colliery, Gaslitand colliery. It is planned to take up large scale ecological restoration in the mined out areas and fire dug out areas by involving local people. Surface area of opencast mining would also be reclaimed by ecological restoration using native species and species important for horticulture. The proponent informed that during post mining stage, a total of 794.09ha area would be reclaimed. The total additional area under plantation would be 719.42 ha (101.7 ha abandoned quarry area, 103.31 ha active quarry area, 14.82 OB dump out side quarry area, 4.36 ha service building /mine infrastructure area /coal dump etc, 160.25 ha green belt around OCP, 334.94 ha barren area), by planting 17,98,550 plants at a total cost of Rs 396.41 lakhs. A survey by TISS is to start shortly and after its completion and based on the survey, BCCL would identify suitable NGOs and suitable agencies for implementation of activities under CSR. It was informed that BCCL has uploaded the details of CSR activities taken up on its website. Similarly, Reports of TISS would also be uploaded after completion of study.

The details of existing levels of production in the Cluster-IV mines were provided as given below:

EXISTING LEVEL OF PRODUCTION IN CLUSTER-IV

NAME OF MINE	Coal production in MT for 2011-12		
	Production (in MT)	**Coal recovered during execution of Master Plan (in MT)**	**Total (in MT)**
Salanpur Colliery UG	O.071	-	O.071
Katras Choitudih Colliery UG	0.047	-	0.047
Amalgamated Keshalpur & West Mududih UG	2.115	1.25	3.365
Amalgamated Angarpathra & Ramkanali colliery UG	0.156	-	0.156
Gaslitand Colliery UG	Closed for production		
Total	**2.389**	**1.25**	**3.639**

It was informed that it is proposed to submit a fresh proposal for Cluster-IV based on peak capacity after amalgamation of individual mines within the cluster, reflecting the highest achievable production capacity. It was explained that this would also help conserve the coking coal found in lease boundaries and also provide sufficient cushion for enhancing production for offsetting shortfall from other mines. The details of conceptual Plan for coal transportation for Jharia Coalfields and coal evacuation and movement for each of the mines of Cluster-IV during Phase-I were presented. It was explained and confirmed that for Phase–II, BCCL would implement conveyor–cum-rail transport to avoid movement of trucks within the cluster for coal transportation.

The Committee desired that the Plan for conveyor-cum–rail for Cluster-II should be dovetailed with Jharia Action Plan. The Committee desired that road transpiration of coal during phase–I should be by mechanically covered trucks. The Committee desired that the rejects of washeries should be utilised in FBC based Power Plant. The Committee desired that after completion of 15 years, UG mining should be taken up. The Committee desired that the company must give priority to capacity building both within the company and to the local youth, who are motivated to carry out the work in future. The Committee desired that details of transportation, CSR, R&R and implementation of environmental action plan for each of the 17 clusters should be brought out in a booklet form. The Committee desired that a study should be initiated to analyse extent of reduction in pollution load every year by reducing road transport. The Committee also desired that the road used for coal transportation should be developed with avenue plantation on both sides. The Committee desired that expertise available internationally could be utilised for control of fire in Jharia Coalfields and for their reclamation and to further minimise time for fire and subsidence control. The Committee desired that the abandoned pits and voids should be backfilled with OB and reclaimed with plantation and or may be used for pisciculture. The Committee desired that BCCL may examine setting up of a separate management structure for implementing environment policy and socio-economic issues and the capacity building required in this regard.

The Committee recommended that the locations of monitoring stations in the Jharia Coalfields should be finalised in consultation with the Jharkhand State Pollution Control Board. The Committee stated that smoke/dust emission vary from source to source (fuelwood, coal, flyash, silica from natural dust, etc) and a Source Apportionment Study should be got carried out for the entire Jharia Coalfields. Mineralogical composition study should be undertaken on the composition of the suspended particulate matter (PM_{10} and $PM_{2.5}$) and also quantified. These would help ascertain source of the air pollution and appropriate mitigative measures could be taken.

The Committee recommended Cluster-IV mines (excluding Gaslitand Colliery UG) for environmental clearance subject to the aforesaid conditions above and those given in earlier consideration of the proposal by EAC, conditions given to others clusters that are applicable, and subject to obtaining prior approval of the DGMS in regard to mine safety issues and subject to MOEF Circulars as applicable.

16. Cluster VII (combined capacity 6.227 MTPA with a peak prodn. of 8.16 MTPA in a combined ML area of 2127.7 ha) of M/s Bharat Coking Coal Ltd., located in Jharia Coalfields, dist. Dhanbad, Jharkhand– EC based on TOR granted on 09.12.2010

The proposal was last considered in the EAC (T&C) meeting held on 23rd-24th April 2012 and issues raised therein were further considered.

The proponent made presentation. It was informed that as per Jharia Action Plan there are 31 fire and subsidence affected sites in Cluster VII. It was reiterated that BCCL is taking concerted efforts for controlling fire affected sites as per Mines Act, 1952 and stipulations of DGMS under their supervision. The extent of fires would be further substantiated and monitored by Thermal Infra Red Imaging study through NRSA, Hyderabad. The entire Jharia Action Plan, which consists of all fire dousing projects /plans had been surveyed by DGMS, which has been designated as the monitoring and scrutinising agency by Hon'ble Supreme Court of India under the WP (PIL) 387/1997 i.e. Haradhan Roy Vs UOI. Further, BCCL, has, as desired by the Committee, written to NRSA for conduct of Aerial Photography, as a diagnostic tool for monitoring. It was informed that all the abandoned pits/voids, the details of which were presented, would be reclaimed and ecologically restored. Further, it is planned to take up large scale ecological restoration in the mined out areas and fire dug out areas by involving local people. After completion of OC mining, the surface area of the mine would be reclaimed and restored ecologically.

The details of existing levels of production in the Cluster-VII mines were provided as given below:

EXISTING LEVEL OF PRODUCTION IN CLUSTER- VII

NAME OF MINE	Coal production in MT for 2011-12		
	Normal production (in MT)	**Coal recovered (MT) during execution of Master Plan**	**Total (in MT)**
Dhansar UG & OC	1.328	-	1.328
Kusunda OC	-	2.724	2.724
Industry UG	Closed for production		
Alkusa UG	0.054	-	0.054
Ena OC	-	0.317	0.317
South Jharia/ Rajapur OC	0.829	0.178	1.007
Burragarh UG	0.03	-	0.03
Simalbahal UG	0.07	-	0.07
Hurriladih UG	0.024	-	0.024
Bhutgoira UG	To be reopened		
Kustore UG	Closed for production		
East Bhuggatdih	Closed for production		
Vishwakarma OC (it will be operational after closure of Dhansar OC)	Proposed mine (will be operational after closure of Dhansar OCP)		
TOTAL	**2.335**	**3.219**	**5.554**

It was informed that during post-mining stage, a total 794.09 ha of area would be reclaimed. The total additional area under plantation would be 1165.67 ha (90.78ha abandoned quarry area, 516 ha of active quarry area, 27.31 ha of OB dump outside quarry area, 38.55 ha service building/mine infrastructure area/coal dump etc, 395 ha green belt around OCP, 98.5 ha Barren area, by planting 2914150 no of plants at the cost of Rs 642.20 lakhs.

It was informed that it is proposed to further enhance capacity of the Cluster-VII mines by amalgamating all the individual mines thereby reflecting the highest achievable production capacity from this cluster. It was informed that a fresh application for environmental clearance would be submitted after obtaining EC, based on peak capacity with sufficient cushion for enhancing production of offsetting shortfall from other mines opening.

The Committee desired that the Plan for conveyor-cum–rail for Cluster-VII should be dovetailed with Jharia Action Plan. The Committee desired that road transpiration of coal during phase–I should be by mechanically covered trucks. The Committee desired that the rejects of washeries should be utilised in FBC based Power Plant. The Committee desired that after completion of 15 years, UG mining should be taken up. The Committee desired that the company must give priority to capacity building both within the company and to the local youth, who are motivated to carry out the work in future. The Committee desired that details of transportation, CSR, R&R

and implementation of environmental action plan for each of the 17 clusters should be brought out in a booklet form. The Committee desired that a study should be initiated to analyse extent of reduction in pollution load every year by reducing road transport. The Committee also desired that the road used for coal transportation should be developed with avenue plantation on both sides. The Committee desired that expertise available internationally could also be utilised for control of fire in Jharia Coalfields and for their reclamation and to further minimise time for fire and subsidence control. The Committee desired that the abandoned pits and voids should be backfilled with OB and reclaimed with plantation and or may be used for pisciculture. The Committee desired that BCCL may consider setting up a separate management structure for implementing environment policy and socio-economic issues and the capacity building required in this regard.

The Committee recommended the locations of monitoring stations in the Jharia Coalfields should be finalised in consultation with the Jharkhand State Pollution Control Board. The Committee stated that smoke/dust emission vary from source to source (fuelwood, coal, flyash from TPPs, silica from natural dust, etc) and a Source Apportionment Study should be got carried out for the entire Jharia Coalfields. Mineralogical composition study should be undertaken on the composition of the suspended particulate matter (PM_{10} and $PM_{2.5}$) in Jharia Coalfields and also quantified. These studies would help ascertain source and extent of the air pollution, based on which appropriate mitigative measures could be taken.

The Committee recommended the project for EC to Cluster VII (excluding Kustore UG and East Bhuggatdih) subject to implementation of the conditions as given above and given in earlier consideration of the proposal by EAC, conditions given for others clusters that are applicable, subject to obtaining prior approval of the DGMS in regard to mine safety issues and subject to MOEF Circulars as applicable.

17. Cluster VIII Group of 10 Mines (Combined capacity 4.31 MTPA with a peak prodn. of 5.603 MTPA in a combined ML area of 1200.41 ha) of M/s Bharat Coking Coal Ltd., located in Jharia Coalfields, dist. Dhanbad, Jharkhand – EC based on TOR granted on 03.12.2010

The proposal was last considered in the EAC (T&C) meeting held on 23rd-24th April 2012 and issues raised therein were further considered.

The proposal is obtaining EC at the time of renewal of lease of 10 mines which are being grouped in a cluster with a combined lease area of 1200.41 ha with a normative production of 4.31 MTPA and a peak production of 5.603 MTPA. Of the 10 mines, 9 are in operation and one mine namely, Goluckdih OCP is a proposed mine.

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 and blanketing. Public Hearing was held on 25.02.2012. It was informed that Stage-I Forestry Clearance has

been obtained. It was informed that an estimated 2.431 MTPA of coal would be transported from Cluster–VIII in Phase-II, by conveyor to railway siding. The present levels of production from cluster-VIII are given below:

EXISTING LEVEL OF PRODUCTION IN CLUSTER- VIII

NAME OF MINE	Coal production in MT for 2011-12		
	Production (in MT)	Coal recovered (MT) during execution of Master Plan	Total Production (in MT)
Bastacolla UG & OCP	0.191	-	0.191
Bera UG & OCP	0.201	-	0.201
Dobari Colliery UG	0.21	-	0.21
Kuya UG & OCP	0.636	-	0.636
Ghanoodih Colliery(OCP)	-	0.599	0.599
Kujama Colliery(OCP)	-	0.478	0.478
Goluckdih (NC) OCP	Proposed mine (will be operational after closure of Kuya OCP)		
TOTAL	**1.238**	**1.077**	**2.315**

Details of voids at post mining stage land use, abandoned pits/voids that would be reclaimed and ecologically restored were presented.

Conceptual Post Mining Land use Pattern for Cluster-VIII					
Existing land use	Land use (ha)				
	Plantation	Water body	Public use	Undisturbed	Total
Agriculture land	-	-	-	24.71	24.71
Excavation including dump areas	154.26	42.65	-	-	196.91
Rail & Road	-	-	-	38.92	38.92
Homestead land & service land	-	-	-	132.80	132.80
Green Belt	76.6	-	-	-	76.6
Barren land	420.22	34.70	-		454.92
Forest land	130	120.57	-	-	250.57
Water Body	-	15.04	-	-	15.04
Others	-	-	-	9.94	9.94
Total	**781.08**	**92.39**	**-**	**326.94**	**1200.41**

It was informed that it is proposed to further enhance capacity of the Cluster-VIII mines by amalgamating all the individual mines thereby reflecting the highest achievable production capacity from this cluster. It was informed that a fresh application for environmental clearance would be submitted after obtaining EC, based on peak capacity with sufficient cushion for enhancing production of offsetting shortfall from other mines opening. It was informed that Stage–II Forestry Clearance has been granted by MOEF vide letter no. 8-44/2009 FC dated 12.04.2012 for 234.08 ha of forestland in Ghanoodih Bera and Dobari Colliery.

The Committee desired that the Plan for conveyor cum–rail for Cluster-VII should be dovetailed with Jharia Action Plan. The Committee desired that road transpiration of coal during phase–I

should be by mechanically covered trucks. The Committee desired that the rejects of washeries should be utilised in FBC based Power Plant. The Committee desired that after completion of 15 years, UG mining should be taken up. The Committee desired that the company must give priority to capacity building both within the company and to the local youth, who are motivated to carry out the work in future. The Committee desired that details of transportation, CSR, R&R and implementation of environmental action plan for each of the 17 clusters should be brought out in a booklet form. The Committee desired that a study should be initiated to analyse extent of reduction in pollution load every year by reducing road transport. The Committee also desired that the road used for coal transportation should be developed with avenue plantation on both sides. The Committee desired that expertise available internationally should be utilised for control of fire in Jharia Coalfields and for their reclamation and to further minimise time for fire and subsidence control. The Committee desired that the abandoned pits and voids should be backfilled with OB and reclaimed with plantation and or may be used for pisciculture. The Committee desired that BCCL may consider setting up a separate management structure for implementing environment policy and socio-economic issues and the capacity building required in this regard.

The Committee recommended the locations of monitoring stations in the Jharia Coalfields should be finalised in consultation with the Jharkhand State Pollution Control Board. The Committee stated that smoke/dust emission vary from source to source (fuelwood, coal, flyash from TPPs, silica from natural dust, etc) and a Source Apportionment Study should be got carried out for the entire Jharia Coalfields. Mineralogical composition study should be undertaken on the composition of the suspended particulate matter (PM_{10} and $PM_{2.5}$) in Jharia Coalfields and also quantified. These studies would help ascertain source and extent of the air pollution, based on which appropriate mitigative measures could be taken.

The Committee recommended the project for EC to Cluster VIII and subject to implementation of the conditions as given above and given in earlier consideration by EAC of the proposal and subject to other clusters as applicable, subject to obtaining prior approval of the DGMS in regard to mine safety issues and subject to MOEF Circulars as applicable.

18. Cluster XIII coalmines (7 mines of a total capacity of 0.18 MTPA and a peak production of 2.34 MTPA in an ML area of 1898.62 ha consisting of Murulidih of Pits (0.234 MTPA peak in an ML area of 571.32 ha, Bhurungiya Colliery, Mucharaidih Colliery in an ML area of 83.33 ha, Hantoodih Colliery in an ML area 193.41 ha, Padugora Colliery in an ML area of 17.6 ha, Murulidih Colliery in an ML area of 547 ha, Bhatdee Colliery in an ML area of 315.62 ha of M/s Bharat Coking Coal Ltd., located in Jharia Coalfields, dist. Dhanbad, Jharkhand (Further consideration of EC based on TOR granted on 28.04.2010)

The proposal was last considered in the EAC (T&C) meeting held on 23rd-24th April 2012 and issues raised therein were further considered.

The existing level of production in Cluster XIII is given below:

EXISTING LEVEL OF PRODUCTION IN CLUSTER- XIII

NAME OF MINE	Coal production in MT for 2011-12		
	Normal production (in MT)	**Coal recovered (MT) during execution of Master Plan**	**Total (in MT)**
Murulidih 20/21 pits UG	0.061	-	0.061
Bhurungiya Colliery	Closed for production		
Mucharaidih Colliery	Closed for production		
Hantoodih Colliery	Closed for production		
Padugora Colliery	Closed for production		
Murulidih Colliery	Closed for production		
Bhatadee Colliery	Closed for production		

The Committee was informed that land acquisition has been divided into two Phases. In Phase-I, only 6.41 ha of area of outcropped/exposed seam is required to be excavated in Murulidih to curb illegal mining and curb possibility of fire in the coal seam.

The conceptual plan for Post Mining Landuse for Cluster XIII is given below:

Conceptual Post Mining Land use Pattern for Cluster-XIII					
Existing land use	**Land use (in ha)**				
	Plantation	**Water body**	**Public use**	**Undisturbed**	**Total**
Agriculture land	-	-	-	1441.76	1441.76
Excavation including dump areas	25.41	6.63	-	-	32.04
Rail & Road	-	-	-	71.84	71.84
Homestead land & service land	-	-	-	159.09	159.09
Green Belt	3.36	-	-	-	3.36
Barren land	62.98	-	-	-	62.98
Forest land				39.29	39.29
Water Body		88.25			88.25
Others					
Total	**91.75**	**94.89**		**1711.98**	**1898.62**

It was informed that application of diversion of forest land of 6.41 ha is under the consideration at Regional Office, MoEF Bhubaneswar.

The Committee recommended the project for EC to **Murulidih 20/21 Pits UG of 0.18 MTPA and a peak production of 2.34 MTPA in an ML area of 571.32 ha** subject to implementation of Mine Closure Plan, conditions specified to other clusters as applicable, subject to obtaining prior approval of the DGMS in regard to mine safety issues and subject to MOEF Circulars as applicable and subject to forestry clearance.

19. Cluster XIV consisting of Lohappatty UG (0.03 MTPA with a peak prodn. Of 0.039 MTPA), Lohapatty OC Mine (0.375 MTPA with a peak prodn. of 0.487 MTPA) of M/s Bharat Coking Coal Ltd., located in Jharia Coalfields Ltd., dist. Dhanbad, Jharkhand (EC based on TOR granted on 28.05.2010)

The proposal was last considered in the EAC (T&C) meeting held on 23rd-24th April 2012 and issues raised therein were further considered.

Proponent made presentation. It was informed that there is no problem of fire in Cluster XIV; however problem of subsidence leading to unstable areas exists. The Plan for dealing of unstable sites and rehabilitation of affected people from these unstable sites in cluster under JAP has been integrated with EIA/EMP.

The present levels of production in the mines, sought by the Committee, were furnished and are given below:

EXISTING LEVEL OF PRODUCTION IN CLUSTER- XIV

Coal production in MT for 2011-12			
NAME OF MINE	**Production (in MT)**	**Coal recovered (MT) during curbing illegal mining activities**	**Total (in MT)**
Lohapatty UG Section	0.035	0.017	0.052
Lohapatty OC Section	-	Proposed mine	

It was clarified that no are of any mine of Cluster-XIV exists below River Damodar. Mining in both the mines of Cluster XIV would be carried out by underground method. The proponent agreed to monitor the data of bore well near river Damodar in this cluster for permeability and seepage of water from river Damodar. The Committee desired that the Plan for conveyor cum–rail for Cluster-VII should be dovetailed with Jharia Action Plan. The Committee desired that road transpiration of coal during phase–I should be by mechanically covered trucks. The Committee desired that the rejects of washeries should be utilised in FBC based Power Plant. The Committee desired that after completion of 15 years, UG mining should be taken up. The Committee desired that the company must give priority to capacity building both within the company and to the local youth, who are motivated to carry out the work in future. The Committee desired that details of transportation, CSR, R&R and implementation of environmental action plan for each of the 17 clusters should be brought out in a booklet form. The Committee desired that a study should be initiated to analyse extent of reduction in pollution load every year by reducing road transport. The Committee also desired that the road used for coal transportation should be developed with avenue plantation on both sides. The Committee desired that expertise available internationally should be utilised for control of fire in Jharia Coalfields and for their reclamation and to further minimise time for fire and

subsidence control. The Committee desired that the abandoned pits and voids should be backfilled with OB and reclaimed with plantation and or may be used for pisciculture. The Committee desired that BCCL may consider setting up a separate management structure for implementing environment policy and socio-economic issues and the capacity building required in this regard.

The Committee recommended the locations of monitoring stations in the Jharia Coalfields should be finalised in consultation with the Jharkhand State Pollution Control Board. The Committee stated that smoke/dust emission vary from source to source (fuelwood, coal, flyash from TPPs, silica from natural dust, etc) and a Source Apportionment Study should be got carried out for the entire Jharia Coalfields. Mineralogical composition study should be undertaken on the composition of the suspended particulate matter (PM_{10} and $PM_{2.5}$) in Jharia Coalfields and also quantified. These studies would help ascertain source and extent of the air pollution, based on which appropriate mitigative measures could be taken.

The Committee recommended the project for EC to **Lohapatty UG and Lohapatty OC mines** of Cluster-XIV subject to aforesaid conditions above and given in earlier consideration of the proposal by EAC, subject to conditions given for other clusters as applicable, implementation of final mine closure plan for Cluster XIV, subject to obtaining prior approval of the DGMS in regard to mine safety issues and subject to MOEF Circulars as applicable.

20. Cluster XVI coalmines (Dahibari-Basantimata OCP, Basantimata under Ground Mine, New Laikdih OCP (including Dahibari Coal Washery), Laikdih Deep UG, Chanch UG) (normative 1.51 MTPA and 1.963 MTPA peak in a combined ML area of 1964.21 ha) of M/s Bharat Coking Coal Ltd., in Raniganj Coalfields, dist. Asansol, West Bengal (EC based on TOR granted on 28.05.2010)

The proposal was last considered in the EAC (T&C) meeting held on 23rd-24th April 2012 and issues raised therein were further considered.

The proponent made a presentation. The details of coal production in Cluster-XVI during the last 5 years were presented as given below:

COAL PRODUCTION DURING LAST FIVE YEARS (MT)			
Year	**Name of Mine**		**Total Production (MT)**
	Dahibari Basantimata OCP	**Basantimat UG**	
2006-07	1.06	0.177	1.23
2007-08	1.29	0.171	1.46
2008-09	1.24	0.135	1.38
2009-10	1.14	0.183	1.32
2010-11	0.857	0.182	1.04

It was informed that a Plan for reclamation of the 3 closed mines has been prepared, whereby all the abandoned and existing mines pits would be filled up, reclaimed and ecologically restored. Of the total 38 Mm3 OB would be generated during the operation of Dahibari Basantimata Quarry, an estimated 26.50 Mm3 would be backfilled and the balance 11.50 Mm3 of OB would be stored in an external OB dump and technically and biologically reclaimed. The mine void would be used for as water reservoir and used for Pisciculture. The maximum depth of final void would be 30m. Coal would be dispatched to consumers through the existing railway siding of old CHP of Dahibari colliery. Rapid Loading System (3600 tph) for wagon loading has been proposed.

PLAN FOR RECLAMATION OF CLUSTER XVI				
S.N.	**Name of Mine**	**ML Area (ha)**	**Closure cost (Rs in Lakhs)**	
			Without Escalation	**With Escalation**
1.	Dahibari Basantimata OCP	385.68	2314.08	2587.141
2.	Basantimat UG	417	417.00	466.206
3.	New Laikdih OCP (includes Proposed Dahibari Washery)	305.10	1830.6	2046.61
4.	Laikdih Deep UG	281	281.00	314.158
5.	Chanch UG	575.43	575.43	643.3307
6.	Dahibari Washery	12.00	12	13.416
	Total	**1976.21**	**5430.11**	**6070.862**

It was informed that it is proposed to further enhance capacity of the Cluster-XVI mines in future by amalgamating all the individual mines thereby reflecting the highest achievable production capacity from this cluster. It was informed that a fresh application for environmental clearance would be submitted after obtaining EC, based on peak capacity with sufficient cushion for enhancing production of offsetting shortfall from other mines opening.

The Committee recommended the project for EC to Cluster-XVI mines namely **Dahibari Basantimata OCP, Basantimat UG and Dahibari Coal Washery** (excluding New Laikdih OCP, Laikdih Deep UG, and Chanch UG), subject to implementation of Mine Closure Plan for the closed mines, subject to conditions specified for other clusters as applicable, subject to implementation of Mine Closure Plan for Cluster XVI, subject to obtaining prior approval of the DGMS in regard to mine safety issues and subject to MOEF Circulars as applicable.

21. Kapuria UG Mine (2.4 MTPA normative with a peak capacity of 3.12 MTPA in an ML area of 809.60 ha) of M/s Bharat Coking Coal Ltd. located in Jharia Coalfields, Dist-Dhanbad, Jharkhand (TOR)

The Committee decided that the proposal would be considered in the next EAC meeting being held on 27th-28th August 2012.

MEETING OF EAC IN OCTOBER 2012:

The Committee decided that for better appreciation of the issues involved and steps outlined for implementation of environmental management of Jharia Coalfields, the EAC meeting scheduled for October 2012 would be held in Dhanad during 29th-30th October 2012. It was decided that as a part of the Site visit, the EAC would visit the coalmines of M/s Bharat Coking Coal Ltd. located in Jharia Coalfields, particularly Cluster-VI. The Committee also decided that it would hold special meetings with Divisional Commissioner, JRDA and Member-Secretary, JSPCB.

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

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Annexure-1

PARTICIPANTS IN 53rd EXPERT APPRAISAL COMMITTEE (THERMAL & COAL MINING) IN THE MEETING HELD ON 16th-17th JULY 2012 ON COAL SECTOR PROJECTS

1.	Shri V.P. Raja	…	…	…	…	Chairman
2.	Prof. C.R. Babu	…	…	…	…	Vice-Chairman
3.	Shri T.K. Dhar	…	…	……	…	Member
4.	Dr.G.S.Roonwal	…	…	….	…	Member
5.	Shri J L Mehta	…	…	….	…	Member
6.	Dr. T. Chandini	…	…	…	…	Scientist F MOEF
7.	Dr.Rubab Jaffer	…	….	…	….	Scientist B MOEF

Dr.R.K.Garg, Advisor, M/s Coal India Ltd., New Delhi attended the meeting on both days.

Annexure-2

PARTICIPANTS IN 53rd EXPERT APPRAISAL COMMITTEE (THERMAL & COAL MINING) IN THE MEETING HELD ON 16th-17th JULY 2012 ON COAL SECTOR PROJECTS

1. M/s Mahanadi Coalfields Ltd.

1. Shri A K Singh, Dir. (Tech.)
2. Shri B C Tripathy, GM
3. Shri A K Chakroborty,GM (M)
4. Shri K S Ganapathy, Chief Manager
5. Shri C Jayadev, Sr. Mgr (Env.), MCL
6. Shri B N Jha, CGM
7. Dr. A K Samantray, Chief mgr. (Env.), CMPDI
8. Shri A Kumar, GM
9. Shri S Kumar, Adv. MCL

2. M/s M.P. State Mining Corp. Ltd.

1. Shri S K Mandal, ED, MP SMC, Bhopal
2. Shri B S Prabhakaran, JP Associates Ltd.
3. Shri M S Sandhu, JP Associates Ltd.
4. Shri M N Jha, JAL
5. Shri S N Chawla, JAL
6. Shri S B Singh, Crystal Consultants
7. Ms Meeta Khilnani, Hydrgeosurvey Consultants Pvt. Ltd.
8. Shri S Kumar, Crystal Consultants

3. M/s Jindal Steel & Power Ltd.

Gare IV/6

1. Dr. J K Soni, JSPL
2. Dr. I N Rao, JPL
3. Sh Satya Prakash, JSPL
4. Dr. R Kumar, GM (Env.), JSPL
5. Shri Sharad Malviya, DM, JSPL
6. Dr.Marisha Sharma, Director, MINMEC

JSPL (Coal Washery)

1. Shri A K Sahu, DGM-EMD, JSPL
2. Shri P S Dhillon, JSPL
3. Dr.J K Soni, JSPL
4. Dr. I N Rao, JSPL
5. Dr. J K Moitra, EMTRC

4. M/s National Mineral Development Corp. Ltd.

Proposal was not considered

5. M/s Hind Energy & Coal Beneficiation (India) Pvt. Ltd.

Proposal was not considered

6. M/s Steel Authority of India Ltd.

1. Shri K L Srinivasa Rao, SAIL
2. Shri P C Tibrewal, SAIL
3. Shri Arvind Kumar, SAIL, Delhi
4. Dr. B K Tiwary, CIMFR, Dhanbad
5. Dr. Bhajtar Singh, CIMFR

7. M/s Central Coalfields Ltd.

1. Shri T K Nag, Director (Tech.)
2. Shri P K Sinha, CCL
3. Shri B K Sharma
4. Shri J Chakrovorty, Sr. Mgr., CMPDI
5. Shri V K Singh, CMPDI
6. Shri Pushkar, CMPDI
7. Shri D Anindya Singh, CMPDI

8. M/s Orissa Power Generation Corp. Ltd.

1. Shri K Venkatachalam, MD, OPGCL
2. Shri S Kar, OPGCL
3. Shri Bhaguban Prasad, Asst. Mgr.
4. Shri S K Mohanty, Forest Advisor
5. Shri Swapan Chaubte, ED, DCPL
6. Shri Suman Chatterjee, DCPL
7. Shri SKumar, Crystal Consultants
8. Dr.Kshirod Brahma, GM (mines), OPGC

9. M/s Pushp Steels & Mining (P) Ltd.

1. Shri Sanjay Jain, Dir
2. Shri V K Gupta, Pushp Steel
3. Shri S S Mohavil, B C B
4. Dr. D B Sawarkar
5. Shri Sanjay Kumar
6. Shri V P Thergaonkar, Consultant

10. M/s Goa Industrial Development Corp.

1. Shri F O Hashmi, MD, GIDC
2. Dr. Achulk, Manager
3. Shri G Satyanarayana

4. Shri Mandar Shirodkar, Dy GM (Law), GIDC
5. Shri D K Upadhyay, Sr. Mgr.
6. Shri Asim Tripathy
7. Shri N K Prasad, Consultant
8. Shri B Mukhopadhyay, Consultant
9. Shri S P Mishra, Geomin Consultant
10. Shri LRC Reddy, RQP

11. M/s Bharat Coking Coal Ltd.

1. Shri D C Jha, Dir. (Tech.)
2. Dr. EVR Raju, Chief Manager , BCCL
3. Shri B C Majhi, GM (Env.), BCCL
4. Shri Shashishekhar, CMPDI
5. Shri Amit Ray. CMPDI
6. Shri V K Singh, CMPDI
7. Shri D P Singh, CMPDI
8. Shri Ravi Ranjan, CMPDI

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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}, $PM_{2.5}$, SO_x and NO_x), 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/Tripartite Agreement with linkages (for stand alone washery) for the capacity for which EC has been sought.

(xxxvi) Submission of sample test analysis of:

Characteristics of coal to be washed- this includes grade of coal and other characteristics – ash, S

Washery Details	**Washery-(MTPA)**	**Expn. of Washery (.. MTPA to .. MTPA**		**TOTAL (MTPA)**	**Ash content (%)**	**Obtained from/End User**
Raw Coal (ROM)						
Washed Coal						
Middling + Coal Fines						
Coal Rejects						

(xxxviii) Corporate Environment Responsibility:

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

b) The Environment Policy must prescribe for standard operating process/procedures to bring into focus any infringements/deviation/violation of the environmental or forest norms/conditions.

c) The hierarchical system or Administrative Order of the company to deal with environmental issues and for ensuring compliance with the environmental clearance conditions must be furnished.

d) To have proper checks and balances, the company should have a well laid down system of reporting of non-compliances/violations of environmental norms to the Board of Directors of the company and/or shareholders or stakeholders at large.

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ANNEXURE-4

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 and vice-versa.
(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 and vice-versa.
(iv) Grant of EC is also subject to Circulars issued under the EIA Notification 2006, which are available on the MOEF website: www.envfor.nic.in

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