MINUTES OF THE 63rd EXPERT APPRAISAL COMMITTEE (EAC) (THERMAL & COAL MINING) MEETING HELD ON 17th-18thDECEMBER 2012 IN NEW DELHI.

COAL MINING PROJECTS

The 63rd meeting of the reconstituted EAC (T&C) was held on 17th-18th December 2012 in Scope Convention Centre, Scope Complex, New Delhi to consider the projects of coal mining sector. The list of the participants of EAC and the proponents are given at Annexure-1 and 2 respectively.

Confirmation of the minutes of the 61st Expert Appraisal Committee (EAC) (Thermal & Coal Mining) meeting held on 19th -20th November 2012 was as confirmed.

MONDAY, 17TH DECEMBER, 2012

1. The Committee discussed the report of its visit to Jharia Coal Field area. The Committee visited the Jharia coalfield keeping in view that over the last few years, this Committee (as well as the previous Committee) have been dealing with many proposals from BCCL in respect of new mining projects and expansion of existing projects in the Jharia Coal Field area. Detailed presentations were made in the past to this Committee and the previous Committee regarding the special problems of fire and subsidence in the Jharia Coal Field area. The history of this problem alongwith the recommendations of various experts group constituted by the Ministry of Coal to mitigate the problems in this area and also brought to the notice of this Committee. While prescribing the TOR and recommending for EC in respect of new projects or expansion of projects in this area, the EAC has been taking care to ensure that the conditions prescribed are in consonance with the Jhaira Action Plan. The EAC therefore, during its visit has(i) made an assessment of the ground reality with respect to environmental management of abandoned mines and operating mines, management of coal fires and subsidence and R&R issues under Jharia Action Plan, Master Plan and Jharia Rehabilitation Development Authority, (ii) interacted with the various implementing authorities (BCCL, CMPDI, DGMS, JRDA and others) for assessing the problems facing in the implementation of Jharia action plans approved by Government of India and to find out the ways to address them, and (iii) interacted with local R&D scientific organizations (CIMFR) and Academic Institutions (Indian School of Mines) to seek their views on the problems of coal fires and subsidence, and restoration of degraded landscapes and their possible involvement in addressing the environmental and social issues in JCF. The report of the visit was approved by the Committee with the following observations:

i. Project Proponent has the responsibility to reduce pollution load in the CEPI area and need to be undertake mitigative measures.
ii. In case of violation, the proponent should pass a Board Resolution so as not to repeat the violation and credible action be initiated by the State Govt as per OM of the MoEF dated 12.12.2012
iii. Violation cases should be recorded in the minutes as declaration by the proponent
iv. The report may be processed by the MoEF and be uploaded into the website of the MoEF.

2. **Expansion of Lakhanpur OCPPh-II (from 15.0 MTPA to 20.0 MTPA Peak in an area of2485.00 ha) of M/sMahanadi Coalfields Limited**in**village Ghanmal, Banjipali, Khuntamahul, Khairkuni, Tingismal, Ubada, Darlipali, Kusuraloi, Karlajori, Khaliapali, Soldia, Kudaloi and Lakhanpur. Tehsil Jharsuguda, District Jharsuguda, State Odisha. (EC under clause 7 (ii) of the EIA notification 2006)**

2.1 Lakhanpur OC Expansion Project (15.0 Mty) is a running mine started from 1991 and located in Ib Valley Coalfield, Jharsuguda district , Odisha.The Lakhanpur OC Expn. Ph-II (from 15.0 MTPA to 20.0 MTPA Peak in an area of2485.00 ha) of M/s Mahanadi Coalfields Limited proposal is for Environmental Clearance under Para 7 (ii) of EIA Notification.Lakhanpur OC Expansion Project (15.0 Mty) is a running mine started from 1991 and located in Ib Valley Coalfield, Jharsuguda district, Odisha. The Lakhanpur OC Expansion Project (15.0 Mty) was accorded Environmental Clearance vide letter No.J-11015/638/2007-IA.II (M) dt: 12/07/2008. Detailed EIA study of the core and buffer zones (10 km radius) has already been made during the preparation of EIA-EMP of Lakhanpur OC Expansion Project (15.0Mty).

2.2 The proposal was earlier considered in the 53rd Expert Appraisal Committee (EAC) [Thermal and coal Mining] meeting held on 16- 17th July 2012. The application for 25% increase in Environmental clearance as stated in clause 7 (ii) of the EIA notification 2006, for Lakhanpur OC Expansion Project (phase-II) from 15.0 Mty to 18.75 Mty was submitted on 27/03/2012. The said application was discussed in the 53rd Expert Appraisal Committee (EAC) [Thermal and coal Mining] meeting held on 16- 17th July 2012 at MoEF, New Delhi. After detailed deliberation EAC 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.The Committee after discussions decided to return this application and desired MCL to submit, at the earliest, the detailed project report for peak capacity / expansion potential of the project**.**

2.3 The proponent informed the Committee that :

2.3.1 The project report of Lakhanpur OC Expansion (Ph-II), Normative capacity 15.0 Mty (Peak capacity 20 Mty) was approved in 100th meeting of MCL Board held on 27/9/2008. The proposed expansion project will meet the coal demand from the coalfield, especially to the new consumers and reduce the gap between demand and availability.

2.3.2 The coal production for the year 2011-12 was 14.99 Mt and coal production upto Nov, 2012 is 8.40 Mt. Presently 0.36 Mt (2.4%) of coal is produced by conventional drilling blasting and 14.63 Mt (97.6%) is produced by Surface Miner. Incremental Coal will be produced by Surface Miner. The application for 25% increase in Environmental clearance as stated in clause 7 (ii) of the EIA notification 2006, for Lakhanpur OC Expansion Project (phase-II) from 15.0 Mty to 18.75 Mty was submitted on 27/03/2012.

2.3.3 The land requirement for peak 20 MTPA capacity is, 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 rationalization of project boundary, 60 ha for residential colony, 152ha is for resettlement site.

2.3.4 For 15 MTPA mining would be opencast with shovel-dumper and use of surface miner.

2.3.5 The details of the land usage is as under:

RECLAMATION OF MINED OUT AND MINING LEASE AREA	
Environmental	**Particulars**

parameters	Existing 15.0 Mty capacity	20.0 Mty
Total land involved	2697.00	-
Mining lease area	2485.00	-
Forest land	328.83	-
Non-forest land	2156.17	-
Land usage of mining lease area (ha)	**2485.00**	-
Area broken-up	412.117 (as on Nov., 2012)	-
Area to be broken-up	--	1029.523
Area not to be broken-up	--	1043.36
Solid Waste Management		
External dumping	Area - 17.50 ha Volume of OB - 1.94 Mcum	OB quantity of 0.30 Mm^3 will be dumped in the area of 20.90 ha temporarily.
Internal dumping	Area - 210.174 ha Volume - 105.65 Mcum	A quantity of 732.86 Mm^3 OB will be additionally backfilled internally in remaining area of 1059.296 ha.

2.3.6 No additional land, manpower or other resources are required.

2.3.7 The proposed expansion in production i.e. from 15 Mty to 20 Mty is planned to be made by increasing the no. of operational working days and increasing the effective working hours per day and by increasing the efficiency. The incremental production will be made through eco-friendly Surface Miner which does not involve any drilling, blasting or crushing operations.

2.3.8 The AQIP analysis using ISCST3 revealed that the incremental SPM and RPM levels for this capacity Expansion are within the permissible limit. Therefore, the incremental production will not have any significant impact on the environment. All environmental parameters discussed in the following slides is favoring for consideration of due diligence.

2.3.9 Details of production in last five years is as under:

S.no	Year	Production (MT)
i.	**2007-2008**	**10.33**

ii.	**2008-2009**	**11.78**
iii.	**2009-2010**	**13.06**
iv.	**2010-201**	**14.01**
v.	**2011-2012**	**15.01**

2.3.10 Total Mineable Reserves is 284.24 MT as on 1.4.12.Number of Seams is one Lajkura seam. Grade of coal Mostly F&G.Depth of mine minimum 12m and 165 m(maximum). OB Removal since inception is 132.09Mm3upto 31.03.2012. Stripping Ratio is 2.34cum/te. Manpower (Existing) is 803 nos.Total depth of mine is 165m and present depth of mine is 89m..

2.3.11 The transportation of Coal by 35 T Dumper and OB by 100 T Dumper. The capacity of existing MGR railway siding (2 km) and Y-curve siding (8km) is adequate to dispatch enhanced coal production of 20.0 Mtpa. Coal is transported to ñYò curve siding, (MGR) ULTS by tippers. Silo loading system is being planned dispatch of 15 Mty.The estimated OB generation during balance life of the mine is 838 Mm3.

2.3.12 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. OB quantity of 0.30 Mm^3 will be dumped in the area of 20.90 ha temporarily. 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. A quantity of 732.86 Mm^3 OB will be additionally backfilled internally in remaining area of 1059.296 ha. At the post mining stage, a void in 84.26 ha with 123 Max depth will be left as water body.

2.3.13 Of the total, 1717.73 ha would be under the plantation at the end of mine. Balance life of the expansion project is 19 years. Water level in core area is 4.36 m bgl to about 6.52m bgl(pre-monsoon) and 3 m bgl to about 4.82m bgl is post ï monsoon season.

2.3.14 Mine water discharge in peak season would be 48484 m^3/day. Ib River is about 3.25 km from the ML, Lilari nallah is about 0.5 km, and a seasonal nallah ï Phulijori nallah, which is a tributary of Lilari Nallah flowing within the mining lease, requires diversion. Hirakud Reservoir is about 4 km from the ML.

2.3.15 A number of Reserve Forests fall in the buffer zone - Bikramkhol RF, RajpurRF, Rameda RF, Arhaparah RF. There is no additional R&R involved.

2.3.16 Total PAFs for the existing project will be 1279. Resettlement sites are at Ganesh Nagar and Jagannath Nagar.Of the total no PAF,s 1279Khairkuni (369)&Ghanamal(30), Banjipali(412), Ubuda(312), Tingismal(20), Kuntamahul(31), Kusraloi (95),Kalajori(11), Khaliapali, Lakhanpur, Soldia (part), Kudaloi (part).R&R of Ghanamal,Banjipali ,Khuntamahul villages have been completed and 296 PAFs resettled in rehabilitation site. Resettlement sites are at Ganesh Nagar and Jagannath Nagar, 262 nos. opted for cash and Remaining 584PAFs to be resettled.612PAFs provided employment,15 PAF,s opted for cash.

2.3.17 Total expenditure incurred on last five year is Rs 414.35 Lakh.

2.4 Public Hearing: The Public hearing was held on 27.07.2007.The main issues raised were on dumping of OB materials haphazardly in the OB dump areas and the dumps are not covered with plantation, employment to the affected local people, free medical facilities in their hospitals to the affected people,heavy fugitive emission, public road is being used by for coal transportation, establishment of a technical training institute in the area, heavy air pollution, water scarcity, water pollution in Lilari Nallah subsequently to Hirakud reservoir, Deforestation due to mining, Noise pollution due to blasting, Spreading of deadly deceases,Socio economic imbalance, Proper utilization of fund for compensatory afforestation ,coal transportation tippers overloaded and uncovered, Fire in mine. Drinking water supply through pipe line, Water pollution in Bandhabahal Kanta etc.The status of compliance of earlier Environment conditions stipulated by ministry has also been presented. Total mine closure cost calculated as per the above guideline comes to Rs.16835.63 lakhs. The proponent assured to take necessary action on the concerns and suggestions made during the public hearing.

2.5 The Committee after deliberation, sought following information for further consideration in the next EAC meeting:

i. Expansion case need to be considered as per the recent OM of the MoEF dated 19 December, 2012.
ii. production plan increase over 15 MTPA to 20 MTPA is taking place after 16 yrs. reflecting no urgency and committee advised them to come with revised production plan
iii. Mitigative measures should be taken to reduce dust pollution load (as one of the conditions). The details of the same may be provided.
iv. If the production increases, the OB dump areas will be increased. Therefore, these areas need to be minimized.
v. Avenue plantation, GRASSING and reclamation of OB dump should be done.
vi. The proponent should prepare action plans e.g. long term and short term, for improvement of environment. Assurance for environment improvement in time bound manner should be submitted/provided

a) Sprinkler should be provided near OB dump and before blasting to suppress dust.
b) Black top roads should be provided to prevent fugitive dust emission.
c) Revised mining plan of Lakhanpur OCP should be submitted.
d) Sand stone should be used as construction material and be given to local people.
e) OB dumping schedule seems to be very critical and should be presented before the Committee.
f) The area and depth of void should be re-examined and be reduced.
g) The Committee will make a visit to the MCL mines so as to appraise itself on ground realities.

3. Lajkura OCP Expn. (Expn. from 1 MTPA to 2.5 MTPA normative and a peak capacity 3 MTPA in ML area of 641.36 ha) of M/s Mahanadi Coalfields Ltd., located in dist. Jharsuguda, Orissa (EC based on TOR granted on 29. 12.2008). – Internal discussion on the proposal for environmental clearance in two Phases (For Internal consideration)

3.1 The Committee was informed that the proposal was earlier considered in the EAC meeting held on 17-18 September 2012. The Committee, after deliberations, recommended the above cited project for grant of Environmental Clearance with specific conditions along with standard conditions: (i) 30 meter width should be provided to green belt; (ii) Social audit should also be done through an Institute of repute and details of the report be submitted to Ministry; (iii) A letter should be submitted to MoEF for breakup of expenditure incurred on CSR activity in rupees; (iv) To plan urgently for mechanized loading of railway wagon at the railway siding to reduce dust generation from pay loader loading.

3.2 The proponent informed in the meeting of February, 2012 that the project is presently working within the existing ML area of 252.29 ha within 1 MTPA production capacity. It further informed that since forestry clearance is still awaited for the 156.67 ha of forestland involved in the expansion project, EC may be given for expansion in production from 1 MTPA to 3 MTPA within the existing ML area of 252.29 ha and upon receiving the FC, the EC could be granted for the expansion in ML area of 721.29 ha.However, the proponent did not mention the same in the September meeting and has submitted a written request vide letter no. MCL/HQ/Envt/F-73/2012/3163 dated 22.11.2012 reiterating that the statement made in the February meeting and requested that EC may be given for expansion for production from 1 MTPA to 3 MTPA within the existing ML area of 252.29 ha and after the receipt of the FC, EC could be granted for the expansion in ML area of 721.29 ha.

3.3 The Committee recommended forEC for expansion for production from 1 MTPA to 3 MTPA within the existing ML area of 252.29 ha with the following observations:

i. Proponent should not operate in the forest area without Forestry Clearance.
ii. The area of expansion will be same for expansion form 1 MT to 3 MT.
iii. Since the proponent has been operating exceeding the limit of production for which the EC was granted construes as violation case. Therefore, this may be processed by the MoEF as per the relevant OMs. A Resolution of Board of Directors of the Companymay be submitted to the MoEF.
iv. The EC is recommended without forest land. EC with forest land can be granted once the stage ï I Forest Clearance is obtained.

3.4 The Committee recommended the Environmental Clearance for 2.5 (Normative) and 3 Mty (Peak) capacity in existing Mining lease area of 252.29 ha.

4. Hingula-II OC Expn. Project (Phase-III) (12 MTPA TO 15 MTPA and expansion of ML area From 544.40ha to 1741.95ha.) of M/s Mahanadi Coalfields Limited in Tehsil Jharsuguda,District Jharsuguda, Odisha.

4.1 The proponent made a presentation and informed that:

i. Hingula-II OCP was granted EC on 31.10.2007 for 12 MTPA capacity. The existing production is 4.9 MTPA. The present proposal is for expansion in production from 12 MTPA to 15 MTPA and expansion in ML area from 544.40 ha to 1741.95 ha and 610 ha to 1870 ha including the outside land 65.60 ha for R&R and 128.05 ha land in expansion project.
ii. SinghadaJhor flows along the northern boundary of the mine. A number of nalas ï Gurudia Nala, Sinha Jhor and Masani Jhor flowing through the ML join the Singhada Jhor. The project involves construction of an embankment along the Singhda Jhor and diversion of nalas following the ML, which would be realigned to their original course at the edge of the ML.
iii. It was clarified that no external OB dumps are to be created near the Singhada Jhor.
iv. The additional area of 1197.55 ha involves 435.15 ha of forestland. An application for diversion of forestland of 440.53 ha has been made on 28.02.2011. It was informed that the expansion project would commence after obtaining FC.
v. In expansion, the total mine block will be worked in two stages to extract all the workable seams.
vi. In Stage-I, Central and northern part of the total block which is having favorable stripping ratio will be worked in two quarry sections west quarry & east quarry. West quarry will be worked initially followed by east quarry. Overburden from western quarry will be temporarily dumped on south eastern part of the block where mining will be done in Stage-II. In Stage-II, Southern part of the total block which is having higher stripping ratio will be worked in years beyond 26 years (western part of remaining southern area will be worked first and eastern part of southern area will be worked at last stage) overburden from this stage will be filled in mined out area of stage-I and also in itôs own void area. In Stage-III, South-eastern part of the block will be worked at the last stage of mine when sufficient void is available in stage-I quarry so that temporary external dumps in this area will be rehandled and brought back to voids of stage-I mining operations. As mining is taken up at last stage (from 26 to 37 years) in south-eastern area of the block, void will be left in this area only, but not in northern portion where mining activity will be completed earlier.
vii. The depth of void in this southern area (around 100m) is also less compared to the northern side (around 177 m). After completion of mining operations the upper tier of the internal dump which is 30 m above ground level will be rehandled and brought back to southern voids to

reduce the void depth to less than 70m.The southern void cannot be filled upto ground level due to lack of overburden at this stage from this mine, but can further be filled from overburden from dip side blocks. The details are as follows:

Mining steps	**Quarry**	**Coal (in mt)**	**Overburden (in M.cum)**	**Stripping ratio (in cum./t)**	**Seam to be mined**	**Depth of quarry**	
						Max.	Min (m)
Stage-I	Existing Quarry	21.78	10.16	0.47	VIII & IX	49.0	12.80
	West Quarry	215.58	281.21	1.30	II, III, IV, V, L2	173.0	78.0
	East Quarry	168.77	332.69	1.97	II, III, IV, V, L2	177.00	104.00
	Total :	**406.13**	**624.06**	**1.54**			
Stage-II	South Quarry	107.79	380.31	3.53	ID ï IV B	125.00	40.00
	Grand Total :	**513.92**	**1004.37**	**1.95**			

viii. The post-mining land use,the reclaimed land will be used for productive purposes such as agriculture. It was informed that the total excavation land is 1140.76 ha for the incremental production which includes safety zone area of 173.75 ha and external OB dump area of 17.34 ha of existing 12.0 Mty project. External dump area of 17.34 ha would be merged with excavation area of incremental production. The details are as under:

Sl. No.	Item	For existing 12.0 Mty	Addl. land for incremental production	Total for 15.0 Mty
4.	Safety zone for expansion	--	184.25	184.25
5.	Infrastructure including CHP, magazing, etc.	77.10	47.29	124.39
6.	Rationalization of project boundary	7.43	12.34	19.77
7.	Diversion of the road	--	4.00	4.00
	Mining lease area	**544.40**	**1197.55**	**1741.95**
8.	Residential colony	22.00	28.00	50.00
9.	Rehabilitation site	43.60	34.45	78.05
	Total :	610.00	1260.00	1870.00

ix. The additional area of 1197.55 ha involves 435.15 ha of forestland. 194.64ha is Agricultural land 548.25 ha is Waste land, 8.38ha is for Surface water bodies, 11.13 ha is others.

x. It is observed that in pre-mining agricultural land in the mining lease area is 333.62 ha, whereas the land available for agriculture after mine closure is 888.35 ha. Similarly, forest land has been converted to non-forest for mining purpose is 435.150 ha and the reclaimed land available for afforestation is 422.55 ha.Forest enhancement ratio will be 1 time and Agriculture make-up ratio2.70 times.The pre-mining land of same extent of forest cover will be available after post-closure period but the availability of agricultural land will be increased by 2.7times. In post mining stage, of the total 1870 ha**,** 1409.54 ha Quarry excavation, 184.25Blasting danger zone. 124.39 ha infrastructure, 19.77 ha rationalization of project boundary, 4 ha for Diversion of Road, 50 ha Residential colony, 78.05 ha for Resettlement site. Plantation will be in 323.29 ha area. Water body would be in 64.16 h.

xi. The OB management plan indicated the reduction of the depth of the final water body to 40m. Total volume of OB to be removed from the mine would be 1022.41 Mm^3 and total volume of coal to be removed would be 336.95 Mm^3.Volume of OB in the external dumps for the existing project 1.95 Mm^3 and total Volume of OB in the temporary dumps for expansion project .In post mining closure of the total 1409.54 ha area,1217.74ha area would be backfilled area which includes 290 ha Above ground level with 30 m height,236 ha Area in which backfilling completed to pre-determined or ground level. 571.57 ha area in which backfilling is below ground level (within 25m below ground level) with 0-7.5m depth, 120.17 ha Area is partially backfilled,191.80 ha is unfilled void with 35-70m depth in post mining but no unfilled void in post mine closur.,788.86ha area in which backfilling completed to pre-determined or ground level with 1022.41 mm3 OB backfilled, the depth before filling ob 40-177m,342.68 ha area area in which backfilling is below ground level (in western part of southern quarry) remaining void in 17.13ha area with 0-7.5 m depth ,278 ha area is left out partial unfilled void in eastern part of southern quarry with remaining void in 157.65 ha void with 35-70 mt depth Total void available in the backfilled area and partially unfilled left-out void is 174.78 Mm^3. The left out partially unfilled void is final water body in the mined out pit or quarry.

xii. The maximum depth of the quarry with partial backfilling would be 70.0 m. About 111.13 Mm^3 of overburden material would be needed to fill-up void to bring-up the depth 40.0 m. This excess overburden material can be brought from the new mine in the dip side of the Hingula OCP. The south of the left out void or water body is non-coal bearing area and the reserve forest. Hence, this water body shall be earmarked for water harvesting for fauna living in the forest area.

xiii. The taxonomic enumeration of flora and fauna has been carried out for the Hingula OC Expn. Project (15.0 Mty) of core and buffer zone of Talcher coalfield by the Department of Environmental Sciences and the School of Life Sciences, Sambalpur University, Orissa in December 2008.The Study report shows existence of Schedule-I fauna in the core and buffer zone of the project. A list of fauna under different schedules of the Wildlife (Protection) Act 1972, was found in the core and buffer zone of the project which contains schedule ï I 7 II Fauna eg Monitor lizard, Python, common Peafowl, Wild Pig, Jackal.

xiv. The status of compliance of conditions in the earlier Environmental Clearance was presented. Regional Office of the Ministry at Bhubaneswar reported that there is no serious violation noticed. Non-compliance of environment stipulations was communicated to the project proponent.

4.2 The Committee after deliberation, sought following information for further consideration in the next EAC meeting :

i. Details of the calendar plan of production and OB generation and dumping external (both dumps shown separately), internal for existing and expansion incorporating the plan for re-handling.

ii. The Committee sought details of post-mining land use for use of the reclaimed land for productive use such as agriculture. The Committee desired that the OB management plan be re-looked to reduce the depth of the final water body to be 40m depth. The Committee sought a list of flora/fauna authenticated by PCCF (WL) or by any recognised institution that there is no presence of Schedule-I fauna in the study area.

iii. The committee noted the urgency expressed by the proponents for increase inproduction. It was pointed out to them that their application is with forest land for which Stage-1 clearance is awaited. Committee noted that the proposed west quarry does not involve any forest land and can be worked faster and advised the project proponents to come back with application for EC for west quarry area and later for the rest with forest land.

4.3 Committee also advised to explore other mining solutions e.g. high wall mining etc. to reduce forest land and other land degradation. for other sending separately

The Committee recommended the project and the proponent was asked to submit application for West quarry which is without forest land to meet the incremental production.

5 Of the total ML an area of 1197.55 ha, 544 ha additional land is required. 11 villages with 650 PAFs will be displaced.

6 Out of total PAFs under R&R 1701 PAFs, 918 PAFs of 12 MTPA and 783 PAFs of proposed 3 MTPA, 255 opted for cash and 780 will be provided employment.

7 Stage I forestry clearance yet to be obtained. 435 .15 ha forest land is involved.

8 As mining causes irreversible changes to land and the MCL projects involve 6072 ha total land. Committee desired that proponent should prepare a statement and have master plan for the land use of mind closure. 4 Mine has been closed under mining closure activity.

9 R&R in involved Rs. 6000-3, 00,000/- kept for R&R policy. Additional Rs. 3,80,000/- kept for making huts.

10 Stage ï I Forest Clearance may take time so proponent should come again after stage ï I clearance as the land which involves forest land would be mined after 20 years.

5. Orient UG Mine I & II (from 0.35 MTPA to 0.87 MTPA in an ML area of 1857.24ha) ofM/s Mahanadi Coalfields Ltd., Tehsil Brajraj nagar, Dist. Jharsuguda, Orissa (EC based on TOR granted on 11.07.2008)

5.1 The proposal was earlier considered in EAC meeting held on 23-24 May 2011 wherein the Committee desired that the coal being transported by road be dispatched by conveyor system that may be established within 2-3 years. The loading should be by bulk loaders. The Committee observed that the data generated on baseline environmental quality is old (2005-06) and noted that the same data has been shown for two different seasons - pre-monsoon and post monsoon which is not realistic. The Committee also observed that no monitoring station has been provided in the southern direction (down wind direction) which should be established. The Committee desired that a one season data which includes PM_{10} and $PM_{2.5}$ should be collected for the same season as meteorological data and furnished. The Committee sought details of distance of Ib River (HFL) form the mine operations. The Committee also sought a detailed expenditure for CSR carried out during 2010-11 for Rs 51.04 crores and a Plan for 2011-12. The Committee sought FC for the forestland involved in the project. The Committee decided to further consider the proposal based upon receipt of the aforesaid details.

5,2 The proponent made a presentation and informed that:

i. The coal being transported by road will be dispatched by conveyor system which will be established within 2-3 years to a common CHP and loading should be by bulk loaders.

ii. Orient U/G Mine No.1&2 is situated at about 800 m from the railway siding. Provision of conveyor system from the mine head to the siding was studied which reveals that it is not feasible because of small quantum of coal to be handled at the siding. Practically, one rake is being loaded every 2/3 days and transportation through conveyer from pit-head upto siding will essentially require installation of rapid train load out system. Thus, investment is not economically viable for such a small quantity handling.

iii. Coal production ranges from 389 te/shift to 951 te/shift. Number of trips needed by 16 te capacity tippers range from 24 to 59.

iv. Control Measures are being adopted for reducing dust pollution generated from transportation and as well as loading and unloading.

v. Water tankers, Avenue plantation exist on both sides of the coal transport road. One perforated pipe, overhead sprinkling arrangement, covered trucks / tippers, 20 nos. of fixed gun type water sprinklers, routine environmental monitoring is being done regularly.

vi. Fresh baseline data has been generated on environmental quality for air, water, noise and soil has for pre-monsoon season (March, April and May 2012). PM_{10} and $PM_{2.5}$ values range from 64 $\mu g/m^3$ to 115 $\mu g/m^3$ and 19 $\mu g/m^3$ to 37 $\mu g/m^3$ respectively. SO_2 and NO_x values varied between 11.0 to 17.0 $\mu g/m^3$ and 12.9 to 24.6 $\mu g/m^3$ respectively. All the values are found to be within the standards except PM_{10}.As desired by Committee, ambient air quality data for PM_{10} and $PM_{2.5}$ has been generated for the same season.

vii. The RL of High flood level (HFL) of the Ib river is 195.47 m above msl. The RL of the bench mark of the Orient U/G Mine No.1&2 is 241.005 m above MSL. The maximum depth cover of the mine is 320 m bgl and minimum depth cover is 63 m bgl. Ib River from the mine is 2.54 km. considering hydro-geological set-up of the area, the estimated radius of influence is 972 m. Hence inundation of the mine is not predicted due to high flood level of Ib river.

viii. Detailed expenditure for CSR was carried out during 2010-11 for Rs.51.04 criers and a Plan for 2011-12 has been prepared. Detailed expenditure, activity-wise, incurred in the CSR by MCL For the year 2010 ï 11 was Rs 5347.38 and for the year 2011-12 was Rs 2833.76Lakhs. The proposed expenditure for for 2012-13 has been estimated at Rs 215.62 Lakhs.

ix. Total forest land area within the mining lease hold area of Orient Mine No.1&2 is 82.213 ha.

x. The site inspection report/recommendation of C.F./Addl. Chief Conservator of Forest (Central), MoEF, Bhubaneswar for stage-I forest clearance with respect to the forest diversion proposal application under section-2 of F C Act, 1980 has been sent to the MoEF, New Delhi on dtd.26/11/2012.

5.3 The Committee after deliberation recommended the project for Environmental Clearance with following specific conditions:

i Transport from mine to siding with covered tippers and with mine 3 coal arrangement for mechanised conveyor loading of railway wagons .

ii Avenue plantation should be provided with suitable width.

iii The frequency of water spraying should be increased in addition to water spraying through mobile water tanker to reduce dust pollution.

iv. The Ambient Air Quality data generated by proponent should be checked by Dr Shiv Attri, Member, EAC.

v. The Social Audit should be conducted for the CSR Activity carried out in the area for the year 2011-12 other than the TISS eg Xavier institute, Sambalpur University etc. The report of the same should be uploaded into the Companyôs website. A copy of the audit report should be circulated to all the members of Committee.

vi. All the schools in MCL area should be provided with Black Boards, toilets etc. More funds should be spent on CSR activities

vii. Financial progress and Physical progress should be monitored.

6. Ananta OCP Expn. Project, Phase-III (Normative Capacity 15.0 Mty, Peak Capacity 20.0 Mty) in an expansion in area from 691.091 ha to 1419.821 ha) of M/s Mahanadi Coalfields Ltd.,Tehsil Talcher, District:Angul, Odhisa

6.1 The proponent gave a presentation and informed that:

i. Ananta OCP is an operating mine since 1991 and its current approved capacity is 12 MTPA (14th July, 2006). As on 01/12/2012 total reserve available within the existing 12 Mty project boundary is 12.0 Mt.Thus, the mine can operate for only one year in the existing boundary and thereafter the mine will be required to progress in the expansion area for which EC & FC are required to avoid discontinuity of the coal production from the mine. Hence continuing with the existing Projects in the expansion area is the best possible option because of ready to use infrastructure, HEMMs, Skilled manpower non requirement of external OB dump etc.

ii. Mine plan was approved by MoC for Ananta OC Expansion project (Normative 15.0 Mty; Peak 20.0Mty) vide letter No.43012/(1)/2008-CPAM dated 30.03.2009.EMP (Capital) Cost Rs 5735.83 Lakhs and recurring cost 6954.85 Lakhs. Capital cost of project is Rs. 207.28 Crores.

iii. The details of the total land requirement are as under:

Sl. No.	Type of Land	Existing 12.0 Mty	Addl. land	Total for 20.0 Mty
1.	Agricultural	190.74	168.320	359.060
2.	Forest	68.85	237.85	306.703
3.	Waste land	388.65	298.35	687.08
4.	Grazing	0.00	0.00	0.00
5.	Surface water bodies	25.87	10.87	36.74
6.	Others (Govt. Land)	16.90	13.34	30.24

Total for mining lease area :	**691.091**		**1419.821**

The details of break up of land use are as under:

Sl. No.	Item	For existing 12.0 Mty			Addl. land for incremental production (8.0 Mty)			Total for 20.0 Mty		
			Non-forest	Total		Non-forest	Total		Non-forest	Total
1.	Quarry excavation	68.85	305.042	373.892	237.853 $$	356.317	594.17	306.703	661.3 59	968.062
2.	Blasting danger zone	24.84	179.159	203.999	80.776*	123.62	123.62	80.776*	327.619	327.619
3.	dump area (external)	--	23.200	23.200	--	--	--	--	23.20	23.200
4.	Infrastructure	--	90.000	90.000	--	--	--	--	90.00	90.000
5.	Diversion of Road	--	--	--	--	4.00	4.00	--	4.000	4.000
6.	Rationalisation of project boundary	--	--	--	--	6.94	6.94	--	6.940	6.940
	Mining lease area (1 to 6)	93.69	597.409	691.091	237.853	490.877	728.73	306.703	1113.118	1419.821
7.	Residential colony	--	117.559	117.559	--	126.00	126.00	--	243.559	243.559
8.	Rehabilitation colony									
	Outside Lease area (6 to 7)	--	117.559	117.559	--	126.00	126.00	--	243.559	243.559
	Total :	93.69	714.96	808.650	237.853	616.88	854.7	306.70	1356.67	1663.38

							3	**3**	**7**	**0**

iv. Additional forest land for expansion project has been changed from 224.73 ha to 237.853 ha (13.123ha) as per the DGPS surveyed map which has been verified and authenticated by ORSAC (Orissa Space Application Centre)

v. Diversion of 62.67 ha of forest land for Ananta OC Expn. (for 12.0 Mty) project has been approved by Asst. Inspector General of Forest vide letter No.F.No.8-43/2004-FC, Govt. of India, MoEF (FC Division, dated 16th November,2004.Proposal for Diversion of Forest land (Stage-I) has been submitted to CCF(Nodal) in April-2010. As per latest requirement, Detailed DGPS Survey and authentication by Odisha Space Application Centre (ORSAC) has been completed in May, 2012, Tree Enumeration, Pillar posting, Compensatory Afforestation Scheme, Wild Life Management Plan etc already completed. Compliance under FRA (Forest Right Act) completed for Nine villages out of Total Ten villages involved.Proposal for Diversion of Forest land (Stage-I) has been submitted to CCF(Nodal) in April-2010. As per latest requirement, Detailed DGPS Survey and authentication by Odisha Space Application Centre (ORSAC) has been completed in May, 2012.

vi. Tree Enumeration, Pillar posting, Compensatory Afforestation Scheme, Wild Life Management Plan etc have already been completed. To meet the above demand, the capacity of Ananta OC Expn. has been proposed to be enhanced to normative capacity 15.0 Mty (i.e. 3.0 Mty incremental) and peak capacity 20.0 Mty. An additional land 728.73 ha is required for the expansion project including 237.85 ha (revised after DGPS Survey) of forest land.

vii. Coal Reserve is 329.59 MT.18 No. of seams will be worked (excluding local seams). Average Stripping Ratio2.21 m^3/t, Grade of coal is Mostly F & G. Life of the Expansion Project is 22 years.

viii. Total O.B. to be removed will be 791.61 M.cum. Quarry Depth will be 70 m (Minimum) and 265 m (Maximum).

ix. Major coal production will be done by using Surface Miner. Drilling, blasting, crushing and other dust generation activities will be eliminated and quality of coal can be improved. Surface Miner coal production will be about 85 to 90% of the total coal production.

x. Coal transportation will be by dumper/tipper which will be limited within the quarry itself. From Feeder-Breaker arrangement/receiving hopper at pit top coal will be transported by conveyor only for loading into the railway wagon through SILO loading arrangement. This will totally eliminate surface coal transportation by tippers.Further coal will be transported by railway which will be loaded through silo. Work for silo construction has already been started by the contractor in August 2012.Work for concreting the coal transportation roads has already been awarded which will reduce the dust pollution. This will eliminate truck movement and pay loader loading on surface.

xi. Ground water level in core area is less than 6.70 m bgl to about 10.55 m bgl. Only potable water will be drawn from the Brahman river through the Integrated Water Supply Scheme (IWSS) of Talcher Coalfield. Industrial and fire fighting water demand will be met mainly from the recycling of treated industrial effluent and mine discharge water. Mine discharge in Monsoon period 24344m3/day. Bangaru Jhar is flowing through the expansion area and need to be diverted. Expansion project will disturb the Bangaru jhara stream during 5th year of mining operation**.** Bangaru jhara stream lies on coal bearing area of expansion area. This needs to be diverted for extending the mine. The elevation or height on either side of the stream bed varies from 20 to 22.0 m. The mining depth below Bangaru jhara stream is 155m bgl. An amount of Rs.20crore has been provided in the project report for diversion and restoration of the Bangaru jhar stream.

xii. **Wild life issues:** The area is not the migratory route for any wild animal. Both core and buffer zones are found to be free from ecologically sensitive and biologically rich areas/habitats, such as national parks, sanctuaries, biosphere reserves and areas rich in genetic resources. Schedule ï I fauna like Monitor lizard, Python, Common peafowl and Schedule ï II fauna like Jackal, Wild pig, Kutra,

Proponent has made broad plan for conservation of the fauna which used the habitat of the study area like more afforestation of locally available species. Plantation of edible fruit bearing trees, natural water holes, Fire protection and prevention measures, restore the original habitat by planting natural species. Rs 20 Crores has been allocated for conservation of fauna and flora.

xiii. In the existing project, 1005 families from 5 villages were affected for which 100% R&R Completed. In the Expansion Project 689 families from 10 villages namely Ekadal (178), Hilloi (154), Rakas (139), Brundabanpur (22), Ajatipur (25), Rangamatia (30), Korihan (35), Dinabandhupur (50), Biraramchandrapur (9) and Kantapada (47) will be affected.Compliance under FRA (Forest Right Act) completed for Nine villages out of Total Ten villages involved. For the Extension Project R&R Policy of Odisha, 2006 is being followed.Rs.4136.827 lakh has been allocated for R&R of 689PAFôs of Expansion project..For Extension Project Resettlement will be at Gurjang or as per their choice through cash compensation.At Gurjang, 150 plots are available out of total 305 nos of plots. Approximately Rs. 5 Crores have already been incurred in developing the site and all infrastructures like drinking water supply, electricity supply, roads, drains, boundary wall, community centre, school, Mandir, cremation ground etc have been provided.

xiv. Rs.5.00 per tone of coal per annum will be spent towards corporate social responsibility. The CSR budget for 2012-13 would be Rs.55.15 lakhs. Action Plan for CSR for 5 years has been prepared.Rs750lakhs has been kept for fourth year and Rs. 13208.5 lakhs for the balance life of the project.

xv. **Public Hearing:** The public hearing was held on 27.07.2011.The main issues were raised were arrangement for permanent supply of drinking water to nearby villages throughout the year, separate coal transportation road from public road, employment,proper solid waste management, development of green belt and avenue plantation in the area, controlled blasting and the fire in the coal yard, allocation of separate fund for development of roads, health, education and drinking water supply etc. The proponent has assured to take appropriate action on the issues raised n during the public hearing.

xvi. Compliance to conditions of environmental clearance and environmental management of Ananta OCP (12.0 mty) was presented. Violation cases was noticed by the Regional Office of the Ministry at Bhubaneswar and non-compliance of the conditions communicated to project proponent.

6.2 The Committee after deliberation recommended the project for Environmental Clearance with following specific conditions:

i. There will be no void left. The OB should be rehandled and filled in the void to be filled up to ground level. Voids with 265mt depth are not permitted.

ii. Permission should be obtained from Water Resource Dept, State Govt. for diversion Bangaru jhar stream.

iii. Latest one season AAQ data should be generated. The data should be shown to Dr Shiv Attri, Member, EAC for his comments.

iv. The presence of Arsenic, Mercury (Hg), Geranium (Ge) maybe investigated.

v. Forest cover should be provided around Dera village.

vi. Investigation for effect of fluoride on human health specifically on children be done. Alternate fluoride free water be supplied to villagers.

vii. Continuous monitoring in the change in ecology be carried out by ecologist, biologist, social scientist.

viii. EC may be granted subject to the obtaining of the FC.

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

7.1 The proposal was earlier considered in EAC meeting held on 17 September 2012. The Committee sought clarification that: (i) middling-cum-rejects should be utilized in their own power plant; (ii) Since the allocation of coal was made on Govt. dispensation, the coal cannot be used by/traded to private parties and any re-routing of coal for power generation should have the prior approval of the MOC. This may be obtained and details furnished to the MoEF; (iii) The Committee observed that as the linked Thermal Power Plant is at a distance of about 137 km, the requirement of a washery may not be necessary and this should be re-examined; (iv) Accounting of material balance of each product e.g. coal and middling (and also rejects if agreed after review) is required and should be furnished based on the normative (5 MTPA) and peak capacity (6.5MTPA) of the coal mine and the records of every batch of washing should be maintained and uploaded on the company website;(v) Since most of the issues raised in the Public Hearing have not been addressed properly, the issues raised in the PH should be brought out in a tabular form viz. name of complainant along with issues raised, issues addressed by the proponent along with specific budgetary provisions on these activities under CSR; (vi)A copy of the forestry clearance for surface rights and mining rights for the forestland found in the total project area of 714.35ha; (vii) Committee desired that the sale of power should be to Govt. dispensing route. The power produced by KSK can be sold to Govt. regulated tariff as per CRC; (viii) Committee informed that M/s Goa Industrial Development Corp. would be responsible for proper use of power by Govt. dispensing route; (ix) ócumulative Impact Assessment Studyô should be done within proposed of mine and neighboring areas for adverse impact on air quality, water quality, noise level, ground water due to mining.

7.2 The Proponent made presentation and informed that;

i. As per the present arrangement between Goa-IDC & KSK, KSK will set up the washery for upgrading the coal quality. The washery is necessitated because the coal produced by Open Cast mining has higher ash percentage and lower GCV, as compared to the design parameters of the Boiler. In view of this, KSK has informed that the washery with following 3 product separations is proposed. The Ash percentage of washed coal 34%, Middlings is 51% .The Rejects (with 92.7% Ash) will be back-filled in the Internal/External Dump along with the Over Burden.

ii. Justification for setting up the Washery was presented & discussed during the meeting. However at the insistence of EAC, KSK agreed in the meeting to put up a two-product Washery instead of three-product Washery.

iii. Accounting of material balance of each product e.g. coal and middling (and also rejects if agreed after review) is required and should be furnished based on the normative (5 MTPA) and peak capacity (6.5MTPA) of the coal mine and the records of every batch of washing should be maintained and uploaded on the company website.

iv. The issues raised during the Public Hearing were discussed & the efforts being made by the proponent especially in CSR activities were appreciated by EAC.

v. A copy of the forestry clearance for surface rights and mining rights for the forestland found in the total project area of 714.35ha was submitted by the proponent. The document was accepted by EAC.

vi. The proponent re-confirmed that power produced by KSK utilizing coal from Gare Pelma Sector III coal block shall be sold only to Government Utilities in compliance with CERC tariff guidelines.

vii. The Cumulative Impact Assessment on air quality, water quality, noise level, ground water due to mining in Buffer Zone has already been studied and provided in EIA/EMP report will be submitted to MoEF.

7.3 The Committee after deliberation recommended the project for Environmental Clearance with following specific conditions:

i. Committee was informed that whenever allocation of coal block was done to State Govt., the State Govt. cannot form joint venture with private parties. This policy of GOM should be confirmed from

the Ministry of Coal. There is also a policy uncertainty after the recent CAG report. The following options seems to be under consideration (i) Natural resources through auction but public interest should be taken into consideration; (ii) Coal block allocation to public sector such as GIDC. Ministry of Environment & Forests should also check Inter-Ministerial Groupôs recommendation, in view of fresh policy likely to be announced by Government of India on allocation of coal blocks.

ii. Middling-cum-rejects should be utilized in their own power plant. KSK shall not give any rejects to SV Power and entire coal will be used in the 1800 MW end use project being implemented by KSK Mahanadi Power Company.

iii. Since the allocation of coal was made on Govt. dispensation, the coal cannot be used by/traded to private parties and any re-routing of coal for power generation should have the prior approval of the MOC. This may be obtained and details furnished to the MoEF.

iv. **Environment Clearance is recommended subject to the policy announced by Ministry of Coal and Ministry of Power. MoEF should consult the Ministry of Coal and Ministry of Power before processing this recommendation for further approval.**

8. Padmapur Extn. Deep Opencast Mine(Prod. Capacity 2.50 MTPA (Normative) 3.25 MTPA (Peak) in an area of 837.19 ha) of M/S Western Coalfield Ltd. Dist.Chandrapur, Maharashtra-(TOR)

8.1 The proposal is for new opencast mine. The proponent had made a presentation and informed that :

i. Of the total land 837.19 ha, 64.20 ha is forest land,689.31 ha is Agriculture land,70.70 ha is waste land,12.98 ha is settlement. The total land requirement for this project is 837.19 ha. Out of this 771.51 ha has already been acquired and balance Land i.e. 65.68 ha (20.98 ha agricultural land and 44.70 ha forest land) is to be acquired. The land use out of 837.19 ha ,231.22 ha will be for quarry area, 175.17 ha is for External OB dump, 3.96 ha is for road, 26.04 ha for built-up area/infrastructure, 400.80 ha is undisturbed area,8 ha is land for Kitadi village shifting.

ii. Mining be will by Shovel Dumper -combination. The depth of mine would be 100-180m. The gradient of Seam-1 is in 3.8 to 1 in 6, Total Average thickness considered will be 16.45-21.96m , Mineable reserves 10.85MT. The average Stripping Ratio is 5.79m3/T.

iii. Total Volume of OB 62.85 Mm^3 will be generated, out of which 35.13Mm^3 will be in External Dump and 27.72 Mm^3 OB in internal Dump. Backfilling will be started in 6^{th} year onwards. The balance void of this project will be backfilled by OB of adjoining Bhatadih OC mine.

iv. In post mining stage, total471.64 ha will be under plantation with 1475.04 nos of trees.

v. Drainage of area isErairiver, Motaghatnala.The ground water level in core area is 8.3 mbgl ï 12.8m bgl(Pre-monsoon)and 1.6 -8,1 m bgl in Post-monsoon. Total water requirement would be 7M3/day,3.80m3/day domestic requirement.

vi. The CSR cost would be Rs 5/T of coal as per CIL policy.

vii. The coal transportation will be by covered trucks Manpower are 452nos. life of the project is 8 years **.**

viii. **Forestry issues:** The Forest clearance of 58.54 ha forest land has been obtained vide No 8-39/85-FC Dt 8.1.1998 and 5.66 ha forest land vide letter No 8-7/91-FC Dt 16.10.1998.Balance 44.70 ha Forest land land for which FC is yet to be obtained. Due to the proposed change in land use of forest land under possession, FC for 44.70 ha land will be required.

8.2 The Committee after deliberations ,sought the following information /Clarification for further consideration of project for TOR

i. The land after mining should be reclaimed and bring back to agriculture land.

ii. There are large numbers of OB dumps, voids, abandoned mines.An integrated plan for all the closed mines and active mine, voids, OB dumps should be provided.

iii. Contour map /Plan for OB is required to be submitted.

iv. Land use break-up for pre-mining should be provided clearly.

v. Master Plan is required for last 50 years as the acquisition of new mines are being taken up and old mines with reserve abandoned. The closed and abandoned mine should be reclaimed and land should be used for Agriculture.

vi. Mine &Mineral Development regulation Act should also be applied to coal miming as well. The mine can not be abandoned if t ecol is still available and no new mines should be acquired.

vii. Master Plan should be prepared for entire area providing detail of first mined out the area completely for its resources and then move into new area. Restoration of the area be made for agriculture use.

viii. If proponent moves to new area without full extraction, then it will be violation of Mines &Mineral Rules.

ix. The OD dump is near the nala but the proponent proposed to construct 50 mt embankments.

x. Public Hearing was conducted on 2003.

xi. Nala should be diverted in such way that the natural flow of should not be affected. State Water Resource Department permission is required.

xii. Proponent should provide contour map. Natural drainage pattern should not be disturbed Initial planning is required for diversion of river/nala.

xiii. Entire hydrology of the area should be investigated. In this process, nallah/River, if they are passing through the mining area, it should be diverted in consultation with Dr.Chitley.The natural flow water should not be disturbed (as TOR condition)

xiv. No External OB dump should be left at the end of mining

xv. Tadoba ï Andheri Tiger Reserve is 3-4 km from ML area because of that the area has large number of water bodies.

xvi. Impact of Mining on Tadoba ï Andheri Tiger Sanctuary should be assessed. The Chief Wild Life Warden be consulted for presence of Mine in Tadoba-Andheri Tiger Reserve Buffer area.A letter is required from CWLW.

xvii. Compliance of earlier EC accorded to the project should be provided.

xviii. Copy of Stage-I forest clearance applied to State Forest Dept. is required as 44.70 ha is forest land.

xix. The assessment of the river basin e also be carried out.

9. Visapur Opencast Mine of production capacity of 1.00 MTPA (Normative) 1.25 MTPA(Peak) in an ML area of 1057.97 ha))of M/S Western Coalfield Ltd. Dist.Chandrapur ,Maharashtra-(TOR)

9.1 The proponent made the presentation and informed that:

i. The proposal is for new opencast mine. Of the total land 1057.97ha, 97.99 ha is Agriculture land,486.69 ha is waste land,3.54 ha is settlement. Land use out of total 1057.97 ha ,165.50ha is for excavation area, 282.51ha is for External OB dump, 54.80 ha is for backfilling in void area,43.20ha is for embankment,42.00 ha is for road/ infrastructure,461.96 ha is rationalization area, safety zone, river &nala diversion,8 ha is for rehabilitation of Arwat, Charwat &Mana villages out side ML area.

ii. The mining will be by Shovel Dumper -combination.

iii. The depth of mine will be 54 -144 m, Gradient of Seam-1 is 1 in 5 to 1 in 10. The total Average thickness considered is11.62-3.00m, Mineable reserves is 20.98 MT. The Average Stripping Ratio is 6.84 m3/t. Grade of Coal is ôEô. The ROM/GCV is 4614 Kcal/kg.

iv. The total volume of OB 143.49 Mm^3 will be generated, out of which 11.90 Mm^3would be in decaled void of HL OC, 42.22 Mm3 and 40.95 Mm^3in external OB dump, 31.13 Mm3existing internal dump of HL OC. The effective backfilling is 56% of the total overburden quantity. For external dumping, no

additional land is proposed for acquisition. The balance land is required for quarry operations, river/nala diversion and safety barrier.

v. **Forestry & Wilde life issues:** There are no National Parks, Wildlife Sanctuary, Biosphere Reserves found in the 10 km buffer zone.

vi. In post mining stage, total552.69 ha will be under plantation with 1381.725 no of trees.Drainage of area is Erai river flows at a distance of 6.7 km from the lease boundary. Water table is in the range of 2.8m - 11.35 m bgl in the core zone and 2.3-13.2 m bgl in the buffer zone.Ground water level in core area is 3.2mbgl ï 14.1 m bgl(Pre-monsoon)and 1.0 -4.5m bgl in Post- monsoon. Total water requirement would be 7M3/day.

vii. The CSR cost will be Rs 5/T of coal as per CIL policy.

viii. The coal transportation would be by tarpaulin covered trucks. Manpower are 403 nos. life of the project is 26 years .Cost of Environment protection(Capital) will be 50lakhs and in addition to above a provision of Rs. 3/te has been made towards environmental pollution control under revenue head throughout the mine life.

ix. The R&R cost would be RS 1173884 Lakhs. Cost of project is Rs.287.9237 Crores.Visapur mine is 35 km from Tadoba-Andheri Tiger Reserve.

x. The OB is being used for filling abandoned quarry. Thereis abandoned mine with 70mt depth. Proponent proposed to dump the OD of proposed mine in abandoned mine void. There is a barrier between Visapur and Hindustan Lalpeth mine which is still operating. Proponent proposed diversion of Erai River .committee observed that River flow is from North to South .The proposed project may block the flow of the perennial river by creating reservoir.

9.2 The Committee sought following information for further consideration of project for TOR:

i. Effect of mining on Era River be assessed.

ii. Design expert from Water Resource Department should be consulted for diversion of river as it is a very critical issue.

iii. Justification should be provided for 4 MT coal productions in 4-5 years of mine operation only.

iv. Reasons for abandoned the old mines.

v. Separate sheets, detail of abandoned mines should be provided. Proposed mine details should be provided on separate sheet simultaneously.

vi. Impact of Mining on Tadoba ï Andheri Tiger Sanctuary should be assessed. Consult the Chief Wild Life Warden for presence of Mine in Tadoba- Andheri Tiger Reserve Buffer area. A letter is required from CWLW.

10. Kiloni, Manora Deep, Baranj I-IV Captive Coal Blocks (Integrated Baraj OCP)(Expansion in Prod. Capacity from 2.5 to 5.0 MTY and expansion in area from 1075 ha to 1533.20 Ha.) of M/s Karnataka EMTA Coal Mines Ltd. Vill. Chakbaranj, Dist. Chandrapur, Maharashtra-(TOR)

10.1 The proponent made the presentation and informed that:

i. Baranj I-IV, Manora Deep and Kiloni . Coal Blocks in Wardha Valley Coalfields, Chandrapur Dist. Maharashtra, was allotted to Karnataka Power Corporation Ltd. vide Govt. of India, Ministry of Coal no. 47011/1(1)2002-CPAM/CA dated 10/11/2003M/s Karnataka Power Corporation Ltd (KPCL) formed a joint venture company, Karnataka EMTA Coal Mines Limited (KECML), with Eastern Mineral & Trading Agency (EMTA), for mining of the allotted coal blocks.

ii. The mining plan was approved by Ministry of Coal vide no. 13016/12/2004-CA dated 8.12.2004 for 2.5 MTY.EC granted by MOEF vide No.J-11015/400/2005ï IA.II (M) dated 18/05/2006. Mining operations started in 2008-2009.KPCL is adding a third unit of 500MW

capacity at Bellary TPS in the 11th Five Year Plan. Coal requirement is to be met from the captive block.

iii. The revised Mining Plan for 5.0 MTY capacity approved by Ministry of Coal vide no. 13016/18/2004-CA-I (Part) dated 24.8.2011Quarry operations in Manora Deep and Baranj-II blocks will be extended into area, earlier excluded due to blasting restrictions within 3 km of the Ordnance Factory Boundary, after obtaining permission from DGMS and Ministry of Defence.

iv. It is proposed to get these restrictions removed by adopting non-blasting mining technology of ripping of OB by high powered Ripper Dozers / Terrain Leveller within the 3 km restricted area. The nearest point at the end of mining will be approximately 2 km from the Ordnance Factory perimeter wall.No change in the area of the captive block and net geological reserve of coal. Extractable reserve increased from 103.64 MT in the earlier Mining Plan, to 126.50 MT in the Revised Mining Plan.

v. CIMFR, Dhanbad has been engaged for detailed study and preparation of the EIA/EMP.Integrated Baranj Opencast Project is located in Wardha Valley Coalfield, Dist. Chandrapur (Maharashtra). Nagpur-Chandrapur State Highway (SH-264) passing through Kiloni Coal Block.

vi. A metalled road passes over the coal blocks through Manora, Tanda and Chinchora villages, joins the SH-264.The mine is about 2km from the boundary of Ordnance Factory, Chanda in the South East side. The proposal is for 2 phases, Phase-I in 1457.20 Ha and Phase-II in 1533.20 Ha. Of the total 1533.20 Ha ,160.40 ha is forest land,1276.21 ha is Agricultural,8.72 ha is waste land,3.07 ha is grazing land,24.21 Ha is surface bodies,60.59 ha others.

PROPOSED LAND USE BREAK UP OF INTEGRATED BARANJ OPENCAST MINE

Sl. No.	Particulars	Total Land Requirement (Ha.)		
		EAC Approved (2.5 MTY)	Proposed Expansion (5.0 MTY)	
			Phase - I	Phase - II
A.	Within Lease Boundary			
1	Quarry area	963.25	1101.0	1177.0
2	External OB Dump	240.0	240.0	240.0
3	Top Soil Dump	25.00	-	-
4	Infrastructures	6	6	6
5	Embankment	15	15	15
6	Others (including safety zone)*	207.95	95.20	95.20
	Sub-Total (A)	*1457.20*	1457.20	1533.20

B.	**Outside Lease Boundary**			
1	**Colony & Township**	**20**	**20**	**20**
	Total (A+B)	**1477.20**	**1477.20**	**1553.20**

Year wise coal production		
S.No.	**Year**	**Production in MT**
1.	**2008-09**	**0.99 MT**
2.	**2009-10**	**2.25 MT**
3.	**2010-11**	**2.27 MT**
4.	**2011-12**	**2.19 MT**
	Total	**7.70T**

vii. Net Coal Reserves is 156.91 Mt. Average thickness of Coal proposed to be worked 9.5m (single section) to 13.0 (Double section) Initial proposed quarry depth 25 m to 220m. External O.B. Dumps 240.0 Ha) .126.5 Mt. Mineable Coal, 906.23 Mm^3 OB & Stripping Ratiois7.16 Cum/t.

viii. The mining will be by Shovel Dumper Combination & Ripper Dozers / Terrain Leveller Surface Miners for Coal, Maximum Quarry width at floor870m.Max. OBR at rated capacity is 45.4 Mm^3/year. The year of achieving target production of 5 MTPA is at 4^{th} year.

ix. Total OB generated 906.23 Mm3 in integrated project, sector A total OB generation would be 439.49 $Mm^{3,}$ which includes the OB of Baranj IV 68.76 $Mm^{3,}$ Kiloni207.34 Mm^3, Baranj III - 163.39 $Mm^{3,}$ Sector-B total OB generation would be 466.74Mm^3which include OB from Baranj I41.92 Mm^3, Baranj II-64.82 Mm^3, Manora Deep 360 Mm^3.886 ha internal OB dump area and 169.9 ha external OB dump area would be reclaimed. There will be two external OB dump in 240 ha area with 60 mt height.

x. In Post mining stage, the1533.20 ha will be reclaimed by afforestation and 20 ha area to be used as Colony & Township.

xi. The R&R will involve Out of 1269 PAFôs of Baranja Mokasa village and 350PAFôS of Chakbaranj will be rehabilitated in Rehabilitation site of village Kodara in an area of 22.68 ha area.195 PAFôs has already moved from Baranja Mokasa. The project affected families195 have been shifted. Rehabilitation site at Village Kudrara. Rs. 4, 54,04,925/- has been spent towards civic amenities .

xii. Mine closure cost would be Rs. 202.64 crore.

xiii. **Public Hearing:** The earlier Public Hearing was held on 18.06.2005.The issues raised were company has not obtained no objection from Grampanchayat,getting appropriate rate of land with the satisfaction of PAP, lowering of water level,of employment ,measures taken by company to avoid effect of pollution on crops, However with regard to Chekbaranj&BaranjMokasa NOC without resolution is being issued. Policy for utilization of coal in Maharashtra, Karnataka State will be benefited by coal mining from Chandrapur District and people of Chandrapur District will suffer from pollution and Environmental degradation hence we oppose to this project. Project authority has not given details about effect on water level, effect on environment, land acquisition rate etc. Total Environment

management cost (Capital) isRs 4858.80 Lakhs .Total Life of the Mine27 Years. Manpower 567 Nos. Capital cost is Rs. 977.03Crores

10.2.1 The committee after detailed deliberation of the project sought further clarifications for TOR :

i. Committee informed that the subsequent post CAG report stated that Coal block allotted to Govt. dispensation rout cannot form Joint Venture Company with Private parties. If there is change in policy Karnataka Power Plant to check up from Ministry of Coal

ii. The paper of de allocation of EMTA Block of Gaurangdih should be provided. Power should be sold at regulated tariff.1000MW long term PPA with Kernataka .Details of long term PPA should be provided to MoEF.

iii. CIL allocation cancelled by MOC on 12.07.2012 and life of mine also reduced to 27 years.

iv. Prepared detailed document along with Chronological events for allocation of coal block and the same should be circulated to all members of committee.

v. As the mine is in close vicinity of ordinance factory, Permission of Ministry of Defense is required .

vi. Phase ï I project is without Forest land but Phase ï II project with Forest land.

vii. Detailed R&R Plan is required. Copy of same should be submitted to MoEF.

viii. The mine is 10 km away from Tadoba-Andheri Tiger Reserve.A certificate is required from CWLWfor the distance to Tadoba-Andheri Tiger Reserve from the mine.

ix. There are three nallas which going to join WardhaRiver. Topo sheet of nala diversion with contour map is required.

x. Permission from State Flood and Irrigation Dept. is required .Drainage map of Wardha river should be provided as nala which join Konda which ultimately joins Wardha River.

xi. Detailed Action Plan of Hydrogeology detail of nala to be diverted should be provided in consultation with Flood & Irrigation Department .Diversion Plan of nala is to be submitted.

xii. The OB would be rehandled and backfilled in void/water body and entire area would be leveled upto ground level. There would be no OB dump at the end of mining.

xiii. The Committee desired that separate proposal should be submitted for washery in Phase ï I

xiv. An Action Plan of CSR and R&R are required.

xv. Phase ï wise Plan for resettling of PAF should be prepared and submitted.

11. Rajgamar Dipside (Deavnara) underground Coal Mine Production Capacity 0.6 MTPA &in the mining Lease Area of 730 ha) M/s Deavnara Coalfields Pvt.Ltd. At Villages, Rajgamar, Tewanara and Godma ,Tehsil Korba, Dist. Korba, Chhattisgarh-(TOR)

1. The proponent made the prostration. It was informed that it is green field project. Deavnara Coalfields Pvt. Ltd. (DCPL).A Joint Venture Company incorporated on 19.08.2011 for implementation of the Coal Mining Project at Rajgamar Dipside (Deavnara) Coal Mine.Government of India, Ministry of Coal (MoC) allocated Rajgamar Dipside (Deavnara) Coal Block (RDDCB), Korba Coalfield of Chhattisgarh under captive dispensation route for end use to M/s API Ispat &Power tech Pvt. Ltd., New Delhi and M/s C. G. Sponge Manufacturers Consortium Coalfield Pvt. Ltd., Raipur, Chhattisgarh (14.10.2011).The project is allocated under captive dispensation route for consumption at their respective EUP. DCPL has initiated all the necessary steps for implementation of the Coal Mining Project in the allocated coal block.MOC Allocation: 38011/2/2007-CA-I(Part-II), dated 14.10. 2011. Application for Forest Clearance for 554.376 Ha has been submitted on 18-04-12. Of the total ML area of730 Ha, 554.376 ha is Forest land, 7.090 ha is Government Revenue Land, 168.534 ha is Agriculture land. 715 ha land is under mining right and15 ha under surface right.: The mine lease area include 80.00 Ha of area worked by SECL under Rajgamar Colliery, having 10.00 Ha All Right Area and 70.00 HA Mining Right Area. The area have two old abandoned mine entries (Incline No. 8 and 9) and workings in Seam R-IV (Middle +Bottom) and Seam R-II standing on pillars and water logged. The proposed 10.00 Ha surface right forest area has already been broken by SECL, so infrastructure of proposed mine will be established in the

said land and balance 5.00 Ha all right area will be acquired for construction of ventilation shaft and its approach road. The location is outside the CEPI area. Project under consideration is an underground coal mine & proposed to be developed by semi-mechanizedbord& pillar method and caving.Major part of the seams have swings N-S to NW-SE. There are total 6 numbers of faults (largely south-westerly direction) present in the Block.Out of six coal seams, R-II in the most promising seam from thickness and quality point of view Geological Reserves 78.463 MT, Mineable Reserves 46.840 Mte(>1.5 m). Net Extractable Reserves 16.92 Mte (>1.5m) Quality (Grade) of Coal as per GR All Seams have Grade A to F ï and average Grade D in Workable Seams R-IV and R-II.There is no National Park, Wildlife sanctuary, Defence installation or sensitive area located within 15 km radius of the proposed mine.The main drainage is controlled by Phulakdi and GurmaNalas which are draining into Hasdeo River. The Phulakdi Nala is flowing from North-East to South-West direction along the South Eastern boundary of coal the block. The Highest Flood Level (HFL) is 314.00 m. The water requirement of the proposed coal project is estimated to be 180 m3/day. The industrial requirement is estimated to be 130 KLPD which will be met from mine water pumping. While the Drinking water requirement 50m3/day shall be met from boreholes proposed within ML area. Necessary permissions from competent authorities shall be obtained. The water requirement will be met from the mine pumped water. Total manpower required to achieve 2000 TPD works out to 957 out of which 796 manpower will be deployed underground and 161 manpower will be deployed on surface. CSR actitivies will be taken and provision for Rs 5/tonne of coal produced will be made. CSR details shall be provided as per the need based survey. Cost of project is Rs. 150 Crores. Life of mine is 34 years.

2. **The committee after detailed deliberation recommended project for TOR:**

i. The Subsidence study should be carried out.
ii. Prevention of fire in the pillar of coal which would be left unextracted.
iii. There would be no change in external surface drainage area.
iv. Measures to be taken to recharge the ground water.
v. Transportation of coal by mechanically covered truck.
vi. Avenue plantation should be provided at the coal transportation route**.**
vii. Examine the option for Korba Railway siding for coal transportation as coal goes to Raipur upto 200km by roads which generate dust pollution.

12. Pit head captive wet washery(1.8 MTPA in an area of 21ha) located in GarePelma IV/8 Coal Mine of M/s Jayeswal Neco Ltd., Tehsil Garghora dist. Raigarh, Chhattisgarh - (EC based on TOR granted on 08.04.2010).

12.1 The proponent made the presentation and informed that:

i. The proposal is for establishment of a captive coal washery of 1.8 million tonnes per annum (MTPA) capacity of raw coal by wet processand in atotal area of21 ha which also has the linked Steel Plant at Siltara, Raipur (operational) .The proponent made a presentation. It was informed that the proposal is for establishment of a new (proposed) commercial coal washery (wet process) in a land of 10.25 acres near village Khamaria, district Raigarh, Chhattisgarh. M/s Jayaswal Neco Industries Limited, to whom a coal block has been allotted.
ii. The1.8 MTPA Coal Washery on 10.336 ha land inside ML areao of Gare-Pelma Captive Coal Block IV/8 Captive coal mines of JNIL IV/4 Coal Block M/s JayaswalNeco Industries Limited.
iii. The mining capacity of IV/8 block is 1.2 MTPA. The mining capacity of IV/4 block is 0.48 MTPA, expansion to 1.0 MTPA.
iv. Total ROM coal available with JNIL is 2.2 MTPA. 5500 T/Day ROM with 40 -45 % Ash will be washed. Washed coal 1650 T/Day with 28 to 30% Ash and S ï 0.5% .1650 TPD washed

coal taken to Steel Plant at Siltara, Raipur (operational). Middling + Fines 3850 TPD with 45 - 48% Ash, S ï 0.5% taken to 600 MW TPP at Hamirpur, Raigarh and coal linkage awaited.

v. It is a closed circuit washery with no discharge. Water Requirement is 240 kl/day .Source of Water accumulated in mine pits will be used for coal washing. Wastewater shall be treated and reused for coal washing.

vi. **Forestry and wild life issues:** There are no National Parks, Wildlife Sanctuary, Biosphere Reserves found in the 15 km buffer zone.

vii. Fresh water make to washing circuit 215m^3/day (100% re-circulated). Dust Suppression &Gardening20 m3/day, Domestic uses is 5 m^3/day.The wastewater from the coal washing process will be treated and 100% recycled for coal washing. The domestic wastewater will be treated in septic tanks and disposed in soak pits. Garland drains with sedimentation pond will be provided to desilt the storm water before flowing into stream. Spent oil and lubricants will be collected in drums and sold to CECB / CPCB authorized re-processors. No wastewater will be discharged into natural streams.

viii. The coal transportation will be by road. JNIL developed dedicated road from Gare IV/4 (Banjikhol) to Milupara (2 km).JNIL developed 2.2 km dedicated road from Gare IV/4 (Bankheta) to Dongamouha [1] JNIL along with Monnet developed dedicated road from Millupara to Hukradipa passing through Gare IV/8 (8.8 km). Thereafter BOOT road is used till Raigarh (approx. 50 km). Coal movement done by 35 T dumpers. Trained drivers used. Greenbelt shall be developed all around the plant boundary.33% of the land area shall be developed as greenbelt (3.4 ha).The capital cost investment for the environment management has been estimated approximately 150 lakhs.10% of the capital cost has been earmarked as annual recurring expenses.

ix. **Public Hearing:** The public hearing for the proposed 1.8 MTPA Coal Washery was held on 8th June 2012.Issues raised were Road accidents during heavy vehicle movement, Employment of tribal girls / ladies of the affected area, Discharge of mine water in Kelo river and Sajara Nala , source of water for coal washery, area under PESA , no diversion of land for 10 years and no Gram Shabha has been conducted, elephant affected area, work proposed under CSR, Plantations,

12.2 The Committee after detailed deliberations recommended for the EC with the following specific conditions:

i. As large numbers of existing and proposed neighboring mines and industries in the area, the Cumulative Impact Assessment study of entire coal mining area should be carried out by proponent.

ii. The entire water of the area is acidic due to presence of Pyrites people use carbonate to increase alkanity. Proponent may take measures to reduce the acid in water. Recharging of groundwater is required.

iii. Schedule-1 Fauna- Peacock, Sloth bear and Elephant reported in area. Proponent should contribute on proportionate basis in Wild Life Conservation Plan prepared by state Govt. for conservation of flora and fauna

iv. Thick green belt of 50 mt should be provided all around the plant area with native species as watery is polluting the area.

v. The coal washery plant and area should be completely covered.

vi. One season (non-monsoon) primary base-line data on Environment quality (PM_{10}&$PM_{2.5}$) should be done.

vii. All the internal roads within washery should be made of concrete

viii. Electrical equipment should be dust proof and properly protected.

ix. Transportation of 60km Bhupdeopur by road should be by mechanically covered trucks and later on upto Raipur by rail. As requested by proponent to allow road transportation of coal untill railway siding comes in the area, the Committee has suggested that a written commitment be submitted by the proponent in this regard.

x. CSR 1% of the cost of project i.e. Rs. 44.50Crores for upliftment of surrounding villages

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ANNEXURE-1

PARTICIPANTS IN 63rd EXPERT APPRAISAL COMMITTEE (EAC) (THERMAL & COAL MINING) MEETING HELD ON 17th -18th DECEMBER, 2012 ON COAL SECTOR PROJECTS.

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

Special Invitee

8.	RajivkumarGarg	é	é	é	é	Advisor (Environment & Forest) CIL

Annexure-2

PARTICIPANTS IN 63rdEXPERT APPRAISAL COMMITTEE (THERMAL & COAL MINING) IN THE MEETING HELD ON 17th-18thDECEMBER 2012 ON COAL SECTOR PROJECTS

1. <u>M/s Mahanadi Coalfields Ltd.,</u>

1. Shri D. Bhattacharya GM, MCL
2. Shri S. K. Bhar (Sr. Manager)
3. Shri A. K. Singh, Dir (P&P)
4. Shri B C Tripathi, GM (Env.), MCL
5. Shri A K Samantray, Chief Manger (Env.), CMPDI
6. Shri K S Ganapathy, Chief Manager, CMPDI
7. Shri S. J. Jervo, (Sr. Manager) Mining
8. P.M. Prasad (G.M. Hingula)
9. Shri A. Kumar (G.M. Ananta)
10. Shri S. Ray Chaudhary (G.M. OC)

2. <u>M/sGoa Industrial Development Corp.</u>

1. ShriFaizi O. Hashmi, MD, GIDC
2. Shri G Satyanarayana
3. ShriAsimTripathy
4. Shri N. K. Prasad, Consultant
5. Shri S. Puranik, Consultant

3. <u>M/s Western Coalfields Ltd.,</u>

1. Shri S.K Jagnamia, RD, CMPDI

2. Shri R. M. Wanare, General Manager (Env.)
3. ShriKaushikChakraborty, GM (Env.), WCL
4. Dr. Debabrata Das, Assistant Manager (Hydrogeolog)-CMPD

4. M/s Karnataka EMTA Mining Pvt. Ltd.

1. ShriNaryanPrasd
2. Shri A.K. Tooley
3. Shri S.C. Chatterjee
4. Shri A.R. Sharma
5. Shri T. Sannappa
6. Shri G. Purusotham
7. ShriNirmal Kr. Singh

5. M/s Deavnara Coalfields Pvt. Ltd.

1. ShriShantanuPuranik
2. Shri Ashok Jamkar
3. ShriGagan Pant
4. ShriPrashantLaharia
5. Shri Ajay Kr. Singh

6. M/s JayeswalNeco Industries Ltd

1. Shri R.K. Sikr
2. Shri S.K. Moitra
3. Shri S.K. Swain
4. Dr S.S. Garg, General Manager
5. ShriPankajSinha JNIL
6. ShriAlokRajan

ANNEXURE-3

GENERIC TOR FOR COAL WASHERY

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

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

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

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

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

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

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

(vii) Impacts of mineral transportation - the entire sequence of mineral production, transportation, handling, transfer and storage of mineral and waste, if any, and their impacts on air quality should be shown in a flow chart with the specific points where fugitive emissions can arise and the specific pollution control/mitigative measures proposed to be put in place.

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

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

(x) Details of green belt development.

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

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

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

(xvi) Submission of sample test analysis of:

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

II Characteristics and quantum of washed coal.

III Characteristics and quantum of coal waste rejects.

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

(xviii) Copies of MOU/Agreement with linkages (for stand alonewashery) 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						

(xxxvii) Corporate Environment Responsibility:

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

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

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

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

ANNEXURE -4

GENERIC TOR FOR AN OPENCAST COALMINE PROJECT

(i) An EIA-EMP Report would be prepared for **??.. MTPA** rated capacity in an ML/project area of ??ha based on the generic structure specified in Appendix III of the EIA Notification 2006.

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

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

(iv) A Study area map of the core zone and 10km area of the buffer zone (1: 50,000 scale) clearly delineating the major topographical features such as the land use, surface drainage of rivers/streams/nalas/canals, locations of human habitations, major constructions including railways, roads, pipelines, major industries/mines and other polluting sources. In case of ecologically sensitive areas such as Biosphere Reserves/National Parks/WL Sanctuaries/ Elephant Reserves, forests (Reserved/Protected), migratory corridors of fauna, and areas where endangered fauna and plants of medicinal and economic importance found in the 15 km area of the buffer zone should be given.

(v) Land use map (1: 50,000 scale) based on a recent satellite imagery of the study area may also be provided with explanatory note of the land use. Satellite imagery per se is not required.

(vi) Map showing the core zone delineating the agricultural land (irrigated and unirrigated, uncultivable land (as defined in the revenue records), forest areas (as per records), along with other physical features such as water bodies, etc should be furnished.

(vii) A contour map showing the area drainage of the core zone and 2-5 km of the buffer zone (where the water courses of the core zone ultimately join the major rivers/streams outside the lease/project area) should also be clearly indicated as a separate map.

(viii) A detailed Site plan of the mine showing the various proposed break-up of the land for mining operations such as the quarry area, OB dumps, green belt, safety zone, buildings, infrastructure, CHP, ETP, Stockyard, township/colony (within and adjacent to the ML), undisturbed area and if any, in topography such as existing roads, drains/natural water bodies are to be left undisturbed along with any natural drainage adjoining the lease /project and modification of thereof in terms of construction of embankments/bunds, proposed diversion/rechannelling of the water courses, etc., approach roads, major haul roads, etc.

(ix) In case of any proposed diversion of nallah/canal/river, the proposed route of diversion/modification of drainage and their realignment, construction of embankment etc. should also be shown on the map.

(x) Similarly if the project involves diversion of any road/railway line passing through the ML/project area, the proposed route of diversion and its realignment should be shown.

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

LANDUSE DETAILS FOR OPENCAST PROJECT

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

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

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

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

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

(xv) Map of the study area (1: 50, 000 scale) (core and buffer zone clearly delineating the location of various stations superimposed with location of habitats, other industries/mines, polluting sources. The number and location of the stations in both core zone and buffer zone should be selected on the basis of size of lease/project area, the proposed impacts in the downwind (air)/downstream (surface water)/groundwater regime (based on flow). One station should be in the upwind/upstream/non-impact/non-polluting area as a control station. The monitoring should be as per CPCB guidelines and parameters for water testing for both ground water and surface water as per ISI standards and CPCB classification wherever applicable. Values should be provided based on desirable limits.

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

(xvii) Details of mineral reserves, geological status of the study are and the seams to be worked, ultimate working depth and progressive stage-wise working scheme until end of mine life should be reflected on the basis of the approved rated capacity and calendar plans of production from the approved Mining Plan. Geological maps and sections should be included. The progressive mine development and Conceptual Final Mine Closure Plan should also be shown in figures.

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

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

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

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

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

(xxiii) Impact of blasting, noise and vibrations.

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

(xxv) Impacts of mineral transportation ?within and outside the lease/project along with flow-chart indicating the specific areas generating fugitive emissions. Impacts of transportation, handling, transfer of mineral

and waste on air quality, generation of effluents from workshop, management plan for maintenance of HEMM, machinery, equipment. Details of various facilities to be provided in terms of parking, rest areas, canteen, and effluents/pollution load from these activities.

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

Project	**Total waste generation (Mm3)**	**Topsoil (Mm3)**	**Total OB generation (Mm3)**	**Total OB in Ext. Dump**	**Total OB Backfilled (Mm3)**
Original Project (ha)					
Expansion Project (**ha) (balance life)**					
TOTAL (Mm3)					

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

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

S.N.	**Land use Category**	**Present (1st Year)**	**5th Year**	**10th Year**	**20th year**	**24th Year (end of Mine life)***
1.	Backfilled Area (Reclaimed with plantation)					
2.	Excavated Area (not reclaimed)/void					
3.	External OB dump Reclaimed with					

	plantation)					
4.	Reclaimed Top soil dump					
5.	Green Built Area					
6.	Undisturbed area (brought under plantation)					
7.	Roads (avenue plantation)					
8.	Area around buildings and Infrastructure					
	TOTAL	110*	110*	110*	110*	110*

* As a representative example

Table 2: Stage-wise Cumulative Plantation

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

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

* As a representative example

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

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

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

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

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

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

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

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

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

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

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

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

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

(xxxix) Submission of sample test analysis of:

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

(xxxx) Copy of clearances/approvals ? such as Forestry clearances, Mining Plan Approval,

NOC from Flood and Irrigation Dept. (if req.), etc. wherever applicable.

(A) FORESTRY CLEARANCE

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

(B) MINING PLAN/PROJECT APPROVAL

Date of Approval of Mining Plan/Project Approval:

Copy of Letter of Approval of Mining Plan/Project Approval

(xxxxi) Corporate Environment Responsibility:

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

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

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

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

ANNEXURE -5

GENERIC TOR FOR AN UNDERGROUND COALMINE PROJECT

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

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

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

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

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

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

S.N.	ML/Project Land use	Area under Surface Rights (ha)	Area Under Mining Rights (ha)	Area under Both (ha)
1.	Agricultural land			
2.	Forest Land			
3.	Grazing Land			
4.	Settlements			
5.	Others (specify)			

Area Under Surface Rights

S.N.	**Details**	**Area (ha)**	**Forestland**	**Agr. land**	**Wasteland**	**Settlements**	**Others (ha)**

			(ha)	**(ha)**	**(ha)**	**(ha)**	
1.	Buildings						
2.	Infrastructure						
3.	Roads						
4.	Others (specify)						
	TOTAL						

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

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

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

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

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

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

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

(xiv) Detailed water balance should be provided. The break up of water requirement as per different activities in the mining operations, including use of water for sand stowing should be given separately. Source of water for use in mine, sanction of the competent authority in the State Govt. and impacts vis-à-vis the competing users should be provided.

(xv) Impact of choice of mining method, technology, selected use of machinery - and impact on air quality, mineral transportation, coal handling & storage/stockyard, etc, Impact of blasting, noise and vibrations.

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

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

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

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

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

Table 1 Stage-wise Cumulative Plantation

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

	mining)										

*As a representative example

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

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

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

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

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

(xxvi) Public Hearing should cover the details as specified in the EIA Notification 2006, and include notices issued in the newspaper, proceedings/minutes of public hearing, the points raised by the general public and commitments by the proponent made should be presented in a tabular form. If the Public Hearing is in the regional language, an authenticated English Translation of the same should be provided.

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

(xxviii) Submission of sample test analysis of:

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

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

(A) FORESTRY CLEARANCE

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

ANNEXURE-6

GENERIC TOR FOR AN OPENCAST-CUM-UNDERGROUND COALMINE PROJECT

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

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

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

(iv) A Study area map of the core zone and 10km area of the buffer zone (1: 50,000 scale) clearly delineating the major topographical features such as the land use, surface drainage of rivers/streams/nalas/canals, locations of human habitations, major constructions including railways, roads, pipelines, major industries/mines and other polluting sources. In case of ecologically sensitive areas such as Biosphere Reserves/National Parks/WL Sanctuaries/ Elephant Reserves, forests (Reserved/Protected), migratory corridors of fauna, and areas where endangered fauna and plants of medicinal and economic importance found in the 15 km area of the buffer zone should be given.

(v) Land use map (1: 50,000 scale) based on a recent satellite imagery of the study area may also be provided with explanatory note of the land use. Satellite imagery per se is not required.

(vi) Map showing the core zone delineating the agricultural land (irrigated and unirrigated, uncultivable land (as defined in the revenue records), forest areas (as per records), along with other physical features such as water bodies, etc should be furnished.

(vii) A contour map showing the area drainage of the core zone and 2-5 km of the buffer zone (where the water courses of the core zone ultimately join the major rivers/streams outside the lease/project area) should also be clearly indicated as a separate map.

(viii) A detailed Site plan of the mine showing the various proposed break-up of the land for mining operations such as the quarry area, OB dumps, green belt, safety zone, buildings, infrastructure, CHP, ETP, Stockyard, township/colony (within and adjacent to the ML), undisturbed area and if any, in topography such as existing roads, drains/natural water bodies are to be left undisturbed along with any natural drainage adjoining the lease /project and modification of thereof in terms of construction of embankments/bunds, proposed diversion/rechannelling of the water courses, etc., approach roads, major haul roads, etc.

(ix) In case of any proposed diversion of nallah/canal/river, the proposed route of diversion/modification of drainage and their realignment, construction of embankment etc. should also be shown on the map.

(x) Similarly if the project involves diversion of any road/railway line passing through the ML/project area, the proposed route of diversion and its realignment should be shown.

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

LANDUSE DETAILS FOR OPENCAST PROJECT

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

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

LANDUSE DETAILS FOR UNDERGROUND PROJECT

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

Area Under Surface Rights

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

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

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

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

(xv) Map of the study area (1: 50, 000 scale) (core and buffer zone clearly delineating the location of various stations superimposed with location of habitats, other industries/mines, polluting sources. The number and location of the stations in both core zone and buffer zone should be selected on the basis of size of lease/project area, the proposed impacts in the downwind (air)/downstream (surface water)/groundwater regime (based on flow). One station should be in the upwind/upstream/non-impact/non-polluting area as a control station. The monitoring should be as per CPCB guidelines and parameters for water testing for both ground water and surface water as per ISI standards and CPCB classification wherever applicable. Values should be presented in comparison to desirable limits.

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

(xvii) Details of mineral reserves, geological status of the study are and the seams to be worked, ultimate working depth and progressive stage-wise working scheme until end of mine life should be reflected on the basis of the approved rated capacity and calendar plans of production from the approved Mining Plan. Geological maps and sections should be included. The progressive mine development and final mine closure plan should also be shown in figures.

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

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

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

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

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

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

(xxiv) Impact of blasting, noise and vibrations.

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

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

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

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

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

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

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

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

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

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

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

* Representative case as an example

Table 2: Stage-wise Cumulative Plantation

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

* Representative case as an example

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

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

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

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

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

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

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

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

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

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

(xxxxii) Submission of sample test analysis of:

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

(xxxxiii) Copy of clearances/approvals ? such as Forestry clearances, Mining Plan Approval,

NOC from Flood and Irrigation Dept. (if req.), etc.

(A) FORESTRY CLEARANCE

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

(B) MINING PLAN /PROJECT APPROVAL

Date of Approval of Mining Plan/Project Approval:

Copy of Letter of Approval of Mining Plan/Project Approval

(xxxi) Corporate Environment Responsibility:

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

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

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

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

ANNEXURE-7

GENERAL CONDITIONS AND ADDITIONAL POINTS OF TOR

The following general points should be noted:

(i) All documents should be properly indexed, page numbered.

(ii) Period/date of data collection should be clearly indicated.

(iii) Authenticated English translation of all material provided in Regional languages.

(iv) After the preparation of the draft EIA-EMP Report as per the aforesaid TOR, the proponent shall get the Public Hearing conducted as prescribed in the EIA Notification 2006 and take necessary action for obtaining environmental clearance under the provisions of the EIA Notification 2006.

(v) The letter/application for EC should quote the MOEF file No. and also attach a copy of the letter prescribing the TOR.

(vi) The copy of the letter received from the Ministry on the TOR prescribed for the project should be attached as an annexure to the final EIA-EMP Report.

(vii) The final EIA-EMP report submitted to the Ministry must incorporate the issues in TOR and that raised in Public Hearing. The index of the final EIA-EMP report, must indicate the specific chapter and page no. of the EIA-EMP Report where the specific TOR prescribed by Ministry and the issue raised in the P.H. have been incorporated. Mining Questionnaire (posted on MOEF website) with all sections duly filled in shall also be submitted at the time of applying for EC.

(viii) General Instructions for the preparation and presentation before the EAC of TOR/EC projects of Coal Sector should be incorporated/followed.

(viii) The aforesaid TOR has a validity of two years only.

The following additional points are also to be noted:

(i) Grant of TOR does not necessarily mean grant of EC.

(ii) Grant of TOR/EC to the present project does not necessarily mean grant of TOR/EC to the captive/linked project.

(iii) Grant of TOR/EC to the present project does not necessarily mean grant of approvals in other regulations such as the Forest (Conservation) Act 1980 or the Wildlife (Protection) Act, 1972.

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

REPORT OF THE VISIT OF EXPERT APPRAISAL COMMITTEE (THERMAL & COAL) OF MoEF TO JHARIA COAL FIELD OF BHARAT COKING COAL LTD (BCCL), DHANBAD, JHARKHAND

DECEMBER 2012

MINISTRY OF ENVIRONMENT & FORESTS
GOVERNMENT OF INDIA

CONTENTS

REPORT OF THE VISIT OF EXPERT APPRAISAL COMMITTEE (THERMAL & COAL) OF MOEF TO JHARIA COAL FIELDS (JCF) OF BHARAT COKING COAL LTD (BCCL), DHANBAD, JHARKHAND

1.0 *Background

1.1 The Jharia coalfield spreads over an area of 453sq.km in Damodar valley (Figure 1). It takes a shape of a sickle with 38km long and 17km width. Morphotectonically, the coalfield represents half – graben configuration with its southern boundary marked by basin margin fault. It is located between 23^0 36' – 23^0 48' N latitude and 86^0 07' – 87^0 29'E longitude (Figure 2). The greater part of the coalfield is in Dhanbad district of Jharkhand State and a part of it is also in adjacent Bokaro district of Jharkhand (Figure 2). The total mining area is 380sq.km, of which the leasehold area of BCCL is 273sq.km. TATA Iron and Steel Company has 22sq.km leasehold area and the remaining 10sq.km leasehold area belongs to Indian Iron and Steel Company. The land use as of 2004 is as follows: 5.24%, 11.85%, 5.73%, 26.04%, 17.02%, 34.12% of the areas represent mining, non-mining barren land, water bodies, vegetated, built-up and agriculture areas respectively (Figure 2).

1.2 The Jharia Coalfields (JCF) has reserve of 5.31 billion tones of prime coking coal, 6.16 billion tones of medium coking coal and 7.95 billion of non coking coal. The coal seams are thick and occur at relatively shallow depths. Lt. Harington was the first to locate coal in JCF as early as 1839 and mining activity was initiated in 1890. The pioneer coal companies engaged in coal mining were Bengal Nagpur Coal (1890), Khar Jharia Coal Co. (1893), East India Coal Co. (1893), Standard Coal Co. (1900) and Muriladih (1901). The coal bearing lands were owned by Zamindars/Rajas who granted mining leases to individuals/companies on payment of 'Salami' and royalty. Mining was confined to outcrop regions and was both underground and opencast; leaseholds were small and fragmented; small areas around the entries were worked resulting in undue splitting of standing pillars making working unsafe; quarries were usually shallow and were made

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Based on the information and maps presented by BCCL to the committee

manually; coal seams were accessed by shallow inclines and shafts; Bord and pillar system was adopted and coal was extracted by manually using hand picks. With the increase in coal extraction, auxiliary industries such as soft coke “bhattas”, beehive coke ovens, brick factories and coke plants were developed. This led to increase in human population migration and settlements on coal bearing lands and abandoned mines (Figure 4).

1.3 The unscientific mining in the past before nationalization of coal mines resulted in (i) abandoned mines which are water logged and unapproachable; (ii) pillars reduced to stooks and extensive roof falls and collapse of entries; (iii) underground mine fires; (iv) unstable landscapes and subsidence (v) abandoned quarries and overburden dumps; (vi) degraded and barren lands (Figure 5 & 6). Figure 7A illustrates 398 mines of JCF before nationalization. Besides the problems inherited form the past legacy of unscientific mining the dense transport network contributing to air and water pollution, the toxic gaseous emissions from coal fires, the massive population growth (2200 to 4153 per sq.km) leading to encroachment of unstable and coal fire prone areas are other environmental and social issues of JCF. Figures 5, 6, & 7B illustrate the extent of land degraded due to subsidence (35.0sq.km), fires (17.3sq.km) dumps (6.4sq.km) and quarries (4.3sq.km) and the location of mine fires in different collieries, the number of families affected (79,159 families spreading over 595 sites located across 25.7sq.km area) due to unstable and uncontrollable mine sites. Under these scenarios, the Government of India nationalized coal mines and JCF was nationalized during 1972-1973 (coking coal mines in 1972 and non coking coal mines in 1973).

2.0 A number of committees examined the problems of subsidence and coal fires in JCF before nationalization (Subsidence Committees such as First subsidence Committee by MMGI in 1992, second Subsidence committee in 1957, CMRS committee in 1964), and after nationalization (Gegani Committee in 1976 and Prasad Committee of 1986). These committees made a few suggestions on the resettlement of people living in unstable areas and quarrying the residual deposits and subsequent reclamation besides collecting data and monitoring on subsidence.

After 1986, a number of committees were constituted by Government of India to manage the environmental quality in JCF, particularly with respect to subsidence, mine fire and rehabilitation of people living in unstable and fire prone areas and also restoration of degraded landscapes of abandoned mines.

2.1 The most prominent among them were Apex Monitoring Committee on unstable area in 1992 and 1995 a high level committee constituted by the Hon'ble Prime Minister in 1996 to look into problems of subsidence and fire in Ranigang and Jharia coalfield. The N. D. Tiwari Committee constituted by Government of India in 1980 for restoration of degraded dumps due to coal mining, a planning group constituted by Government of India in 1987 for the preparation of an advance Environmental Management Plan for JCF, Cheri Committee constituted by MoEF in 1988 for restoration of abandoned mines.

2.2 These committees made different recommendations for management of four issues (i) subsidence (ii) coal mine fires (iii) rehabilitation of people living in unstable and fire prone area and (iv) restoration of degraded lands.

2.3 A World Bank aided project – Jharia Mine Fire Control Technical Assistance Project (1994-1997) was also implemented for bringing JCF fires under control and preparation of EMP for JCF. A carrying capacity based development planning of Damodar river basin which includes JCF, was initiated by CMRI with financial assistance by MoEF in 2001. The CMPDI prepared a Master Plan to control subsidence and fire in BCCL in 1999 and this was updated in 2003 and again revised in 2008. The 2008 Master Plan was accepted by the Government of India.

2.4 A number of litigations were filed in High Courts and Hon'ble Supreme Court of India regarding rehabilitation of families to safe areas from fire and subsidence areas of Ranigang and Jharia coalfields. The Supreme Court [381 of 1997 WP(C) No.381 of 1997, Haradhan Roy Vs GOI and others] is ongoing and all other cases are tagged to this case. On the direction of the Hon'ble Supreme Court, an Action Plan was prepared in 2003 (Jharia Action Plan) based on Master Plan of CMPDIL of 1999. This Action Plan was finalized in consultation with Ministry of Coal, GOI, State Government and DGMS in

2003, the Hon'ble Court directed DGMs to examine the Action Plan and the DGMS constituted a Committee to examine the Action Plan who submitted its Report in 2005.

2.5 The Master Plan of CMPDIL of 2008 was approved by Government of India for an estimated cost of Rs 7112.11 crores and Government of Jharkhand also approved R&R package outlined in Master Plan 2008 (Figure 8). After the approval of Master Plan, the EMSC (Environmental Measures and Subsidence Control) and RCFS (Rehabilitation and Control, of Fires and Subsidence) schemes of BCCL were dovetailed into the Master Plan.

2.6 Jharia Rehabilitation Development Authority (JRDA) was constituted by Government of Jharkhand to look into the issues and implementation of rehabilitation of non BCCL families from the fire and subsidence endangered areas of Jharia coalfields. It is headed by Commissioner as its Chairman and Deputy Commissioner of Dhanbad as Managing Director of JRDA.

3.0 For renewal of mine leases of abandoned and active mines which never received Environmental clearance (EC) because of continuous mining from pre-nationalization of mines, BCCL approached MoEF for grant of EC of abandoned and highly fragmented mines having high level of land degradation due to fire and subsidence and active mines operating much before nationalization, some of which have even underground fires and subsidence. It was decided in a meeting held on 28th February 2008 at the level of Secretary (Coal), GOI and Secretary (Environment & Forests), GOI that a common EIA-EMP should be prepared for cluster of mines having mine lease boundaries close to one another. The BCCL applied for EC for 10 clusters of mines. It was discussed in EAC and the EAC suggested that the concept of cluster approach is to have an integrated holistic environmental management of abandoned, existing and proposed mines in such a manner that the environmental impacts of mining are minimized or reduced, restoration of degraded abandoned mined out areas including OBDs and voids be taken up and dovetailed to the Jharia Action Plan for fire, subsidence and rehabilitation with the cluster concept for overall improvement of mines environment in the area.

3.1 The BCCL prepared a comprehensive proposal using the cluster approach involving geo-environmental aspects such as drainage system, land degradation due to fire and subsidence and mining, air pollution due to transportation of coal, coal fires, R&R as suggested in Jharia Action Plan, restoration of closed and abandoned mines, green belts and geological continuity of mines (Figure 9). The MoEF after detailed scrutiny of proposals by the EAC issued TORs for 17 clusters comprising of 103 mines of BCCL.

4.0 ECs have already been issued to 10 cluster of mines. Keeping in view, the ECs already issued and the implementation of Jharia Action Plan monitored by the Hon'ble Supreme Court and the activities undertaken by BCCL as per Master Plan for Jharia coalfields and by the Jharia Rehabilitation Development Authority (JRDA), the EAC decided that the full EAC should visit the Jharia coalfields of BCCL: (i) to assess the ground reality with respect to environmental management of abandoned mines and operating mines, management of coal fires and subsidence and R&R issues under Jharia Action Plan, Master Plan and Jharia Rehabilitation Development Authority, (ii) to interact with the different implementing authorities (BCCL, CMPDI, DGMS, JRDA and others) for assessing the ground realities with regard to the problems facing in the implementation of Jharia Action Plans approved by Government of India and to suggest the ways to address them, and (iii) to interact with local R&D scientific organizations (CIMFR) and Academic Institutions (Indian School of Mines) to seek their views on the problems of coal fires and subsidence, and restoration of degraded landscapes and their possible involvement in addressing the environmental and social issues in JCF.

5.0 Site Visit

The following members of Expert Appraisal Committee (T&C) visited BCCL from 27-31st October 2012.

(i) Shri V. P. Raja, Chairman, EAC (T&C), MoEF

(ii) Professor C. R. Babu, EAC (T&C), MoEF

(iii) Shri J. L. Mehta, EAC (T&C), MoEF

(iv) Professor G. S. Roonwal, EAC (T&C), MoEF

(v) Dr. C.B.S. Dutt, EAC (T&C), MoEF

(vi) Dr. Manoranjan Hota, Member Secretary of EAC (T&C), and Director MoEF

(vii) Dr. R. K. Garg, Advisor, CIL

The other members Dr S.D. Attri, Shri M.S. Puri, Professor V.B. Mathur and Professor K.K.S. Bhatt could not make it due to other commitments. Shri T. K Dhar also could not join the visit because of some sudden sad bereavement in the family.

5.1 The team accompanied by senior officials of BCCL and staff of Environmental Division of BCCL (names listed in Annexure I) visited the following:

(i) Coal bed methane production,

(ii) Moonidih underground mine,

(iii) Sijua Ecological restoration site,

(iv) Damoda Ecological Restoration site,

(v) Shatabdi Fire Management site,

(vi) Fire Management at Rajapur OCP fire

(vii) Trench cutting to prevent fire reaching RSP college at Jharia town

(viii) Jharia town and its surroundings

(ix) Ghanoodih fire area and relocation of people located near the fire

(x) Interaction with rehabilitated people at JRDA's R&R site at Belgaria

(xi) Interaction with the construction engineers and rehabilitated people at BCCL's R&R site.

5.2 The other activities during the visit are as mentioned below:

(i) Address to the entire staff of BCCL (Directors, all operational Area General Managers, HOD's, Project/Area Environmental Nodal Officers, Area/Project – Officers/Welfare Officers by the CMD, BCCL, Chairman and some members of EAC on issues relating to mining environment.

(ii) PPT presentation by BCCL on the status of Jharia Master Plan and Ecological Restoration.

(iii) PPT presentation on scientific studies of coal fire at clusters by CIMFRI.

(iv) PPT presentation by JRDA.

(v) Interaction with CMD, Directors, Operational Area General Managers, HODs of BCCL and special invitees including DC of Dhanbad, Dy. DG of Central Zone, DGMS, Director of ISM, Director of CIMFRI, and Regional Officers of JSPCB of Jharkhand and Special JDRA Board meeting relating to R&R issues of Jharia Action Plan. (The list of participants in the interactive session with EAC is given in Annexure II.)

(vi) Inspection of facilities available at Indian School of Mines and interaction with the staff of ISM.

6.0 Observations

6.1 During the visit to **pilot plant of coal bed methane** and its utilization as source of power, some suggestions were made by EAC. Since some of the Jharia coalfields have gassy seams which are prone to spontaneous heating, the methane gas trapped within coal seams is evacuated through tested technology and the methane gas is used in generators for producing electricity. The members suggested that more R&D is needed to get higher amount of methane from coal beds so that coal inside is not prone to spontaneous heating and also enhances power generation. It was also pointed out that the method of detecting methane within the coal bed using sensors may enable to locate zones of methane within the coal seams and also emphasized the need to ensure that there will be no coal fires in coal fields from where methane is evacuated for generating electricity.

6.2 The team spent about three hours inside **Moonidih underground coal mine**, which produces high quality coking coal from underground pits at varying depths. The team moved inside the tunnel made through thick coal seam by electric driven rail and examined the roof mine drainage flowing into mine sump from which the mine water is lifted to the surface by massive pumps. The team was also shown safety tools such as oxygen cylinders which could be used during emergency.

The members brought out the following issues to the attention of BCCL management: (i) since underground mining is environmentally more friendly, there is need to develop technologies that enable to extract as much coal reserves as possible through underground mining as substantial coal can not be extracted because of tunneling, pillaring and roofing within the coal seams; (ii) heavy pumping of mine water and its proper utilization, and possible impacts on the ground water availability for local communities; (iii) the entire underground area being in oxygen stress, it is absolutely essential that the lung efficiency of mine workers is periodically monitored and records maintained; and (iv) coal dust within the mine to be contained, particularly along the transport route.

6.3 The team visited **eco-restoration project of Forest Research Institute at Sijua mines** (Figure 10). The overburden dump was covered with invasive weeds such as *Hyptis suaveolens, Parthenium*, *Lantana* and *Pennisetum purpureum*. The most dominant one was *Pennisetum*. No native grasses were observed. Saplings of Neem, Bamboo, *Dalbergia sisso* and *Pongamia pinnata* were planted. Professor C. R. Babu suggested to the project proponent to use the biomass of *Pennisetum* as much as possible mulch to retain the moisture, and uproot all the invasive weeds and introduce native grasses. It was also suggested by him that the plantation of exotic species such as Neem and *Pongamia pinnata* should be avoided. The entire landscape at Sijua was highly degraded and only invasive weeds dominated the lands spreading several sq.km.

6.4 The team visited the **OBDs of Damoda mines** where ecological restoration work has initiated about 5 months ago with the help of Centre of Excellence Programme of MoEF (University of Delhi) (Figure 11A). The area was free from invasive weeds and covered with native grasses such as *Cenchrus ciliaris, C. setigrus, Dichanthium annulatum,*

Saccharum, *Heteropogon* and *Eragrostis.* Saplings and rhizome slips of native bamboo species and other species such as *Emblica, Terminalia, Adina*, Kusum, Mahua, *Dalbergia sisso* and *Holoptelia* were planted. The growth of saplings was very good. A number of insects and birds arrived to the partially vegetated site and Wildbores, Jackals and Indian hare and other herbivores are also reported to have been visiting the area.

The team suggested that dense cover is needed to retain the moisture and enrich soil nutrients and soil development. More saplings of Mahua, Tendu, Kusum and Char should be planted.

The EAC would like to record its appreciation for the efforts made by BCCL in promoting ecological restoration of degraded landscapes. In fact the BCCL established an eco-park showing a model of eco-restoration of OBD in the heart of BCCL township (Figure 17).

6.5 The team also visited four major coal mine fire management sites – (i) Shatabdi Fire Project (Figure 11B); (ii) Rajapur OCP Fire Project (Figures 12, 12A & 12B) ; (iii) Fire arresting by trench cutting at RSP College, Jharia town and (iv) Ghanoodih fire area close to human settlement which is being shifted (Figures 13, 14 & 15).

The committee was rather surprised to see that the coal mine fires **continue to rage** in Jharia coalfields resulting in loss of 8 to 10 % of prime coking coal reserves despite the implementation of Action Plan, the Master Plan and JRDA for management of coal mine fire, subsidence resulting from coal mine fire and R&R for people living in unstable landscapes. The method of control of fires is highly mechanical and involves quenching it by dumping OBD which is taken out from open cast mining of the coal blocks from non fire zone as well as fire affected mines. It was observed that smoke emerges out from OBDs of 10m high and it is difficult to ascertain how long it will take to quench the underground fire by this method. This is the only method followed at all the four sites visited. A deep trench was cut to prevent fire from spreading to the nearby college close to Jharia town. The entire town of Jharia was surrounded by mine voids and OBDs emitting smoke and other gaseous emissions and coal mine fires emitting toxic gases.

There are human settlements close to coal mine fires. It appears that the mechanical method followed involves heavy machinery and dumping of OBD on coal bearing zone which may not quench underground fire immediately.

The EAC members posed many questions, regarding the gaseous composition of emissions from coal mine fires, the residual ash composition after coal fires and the impacts of fire on human health as also the atmospheric chemistry. When confronted with a basic questions as to what contributes to coal mine fire, answer provided by BCCL was that unscientific mining and auto-oxidation with diffusion of oxygen into mine environment from atmosphere led to coal mine fires. The members, however, felt that several factors could possibly be contributing to coal mine fires including the role of elements in the coal and volatile constituents in the coal.

The major consequences of coal mine fires are: (i) massive subsidence of land leading to abandonment of existing railway lines, roads, hospitals, schools and colleges and human settlements and the entire town of Jharia is threatened; and (ii) gaseous fumes including phosphorus and H_2S. The major limitation for rapid control of fires is: (i) the unwillingness of people to move out of the existing coal mine fire prone areas and refusal of the Jharia town inhabitants to move out from the project site, (ii) the delays in relocation to be minimized by JRDA and (iii) effective Co-operation of Jharkhand State Pollution Control Board (JSPCB). All these would go a long way in quenching fires quickly and effectively.

6.6 The committee had also visited the JRDA's R&R site at Belgaria and interacted with the people who were non BCCL and relocated from coal mine fire area (Figure 16). EAC was informed that the JRDA needs to rehabilitate 24000 families of encrochers, about 33,000 private nonBCCL families and 900 service building and all of them inhabiting unstable areas. The people expressed their reservations that they needed educational facilities for their children, medical facilities, suitable transport system to nearest townships and social connectivity. The team also visited the BCCL's R&R site at Kusum Vihar close to Dhanbad and also visited the flats that are being constructed. The EAC suggested that: (i) the one-room flats should be upgraded to two-room flats with one

sitting-cum-dining room, and (ii) electrical wiring should be upgraded from 1kw. Repair and maintenance of flats should also be undertaken at periodic intervals.

6.7 The Chairman and some committee members addressed to a large gathering consisting of Directors, Operational Area General Managers, HOD's, Project/Area Environmental Nodal Officers, Area/Project Personal Officers, Welfare officers of Fire, Environment and CSR and other employees of BCCL at community hall. The Chairman emphasized that coal was, is and will be major source of energy for India and its extraction through open cast mining is by and large ecologically destructive and hence the need for evolving efficient underground mining technologies that result in conservation of coal as well as preventing large scale land degradation. One member of EAC desired that the audience should take oath that each one of them will plant one sapling of native tree species and nurture it till it is fully grown. He also called for technology improvement from coal mining to final dispatch to the consumer for reducing atmospheric pollution.

The CMD also addressed the audience by highlighting achievements of BCCL with respect to enhanced coal production, profit making, and BCCL's long term commitment for ecological restoration of mined out areas, control of coal mine fires and R&R of people living in proximity of coal mine fires.

Officials of Prajapati Brahmakumari Ishwariya Vishwa-Vidyalaya made a presentation where in they expressed the need for spiritual upliftment and their strong commitment for extending help to BCCL in the implementation of ecological restoration programme and a number of CSR schemes launched for project affected people and surrounding villages. The staff of BCCL also enacted a show on the coal fire management, R&R issues and ecological restoration.

6.8 Presentations were made to the committee by: (i) BCCL on the status of Jharia Master Plan and Ecological Restoration, etc., (ii) CIMFR on the scientific study of coal mine fire at cluster 9, and (iii) JRDA on R&R status of people living in areas affected by coal mine fire (Figures 18, 19 & 20). A special JTDA Board meeting was also held.

The Chairman of EAC pointed out the need to analyse the composition of gaseous emissions from coal mine fires and their impacts on the health of local population and workers. He emphasized the involvement of JSPCB and district health officers in the assessment of gaseous emissions from coal mine fires and their health hazards. He pointed out that early warning system for detecting fires and subsidence should be evolved. There is a need for committed group of young officers for achieving the objectives of Jharia Action Plan.

Professor Roonwal (Member EAC) suggested that the extent of the underground fires and their propagation should also be assessed. He also stressed that the chemical composition of fumes emitting from the fires and the ash, resulting from the fires should be done. Professor Panigrahi, Director, ISM also emphasized the need to understand the chemistry of gaseous emissions and ash resulting from coal fires.

Shri A. Kumar (Deputy D.G of DGMS) appreciated the work done by BCCL on controlling fires and this work must be highlighted through media for public awareness.

Dr C.B.S Dutt emphasized the need for continuous monitoring of the behavior of mine fires and prediction of new fire prone areas and also surface subsidence and topography with 30cm contour interval at every 5 year period. He suggested that NRSC, Hyderabad could extend all possible help and co-operation to BCCL in this matter. He pointed out that there is a need to understand the fire triggering mechanism and assessment of atmospheric hot spots in Jharia coalfields. Installation of s systematic, continuous and real time weather station is important.

Dr. Hota (Director, MoEF) and Shri J. L. Mehta (Member, EAC) also stressed the assessment of health disorders among people living in and around Jharia coalfields and create public awareness about the harmfulness of living close to mine fires.

The CMD of BCCL emphasized the necessity for speeding up of implementation of R&R of non-BCCL families from the fire areas to safe areas. He pointed out that the danger of subsidence due to fire may happen at any time and is unpredictable. He also mentioned

that no technically sound method is available for finding out what is the actual position of fires below the ground, and, therefore one can not say when subsidence occurs.

The CMD of BCCL also stressed that the progress of work on rehabilitation of non-BCCL families from endangered areas by JRDA is rather very slow, particularly the land acquisition and construction of houses. He also pointed out that the work on R&R of non-BCCL families is very slow and JRDA does not have land and houses for accommodating people from fire areas if sudden accident occurs. He suggested that the safety of families is most important and JRDA should act on a war footing manner.

Deputy Commissioner, Dhanbad explained that the JRDA has some limitations and it has to work as per the guidelines of Master Plan and can not deviate from it. As per the Master Plan, R&R sites have to be constructed only at the designated places.

Shri J. L. Mehta explained that in view of delay due to land acquisition in construction of R&R project in full and urgency of faster shifting of affected families construction need to be site specific and need not be rigid as specified in the Master Plan. Construction of houses as per the land availability should be done and need not wait for construction of complete large townships at one go. He suggested that sites should have roads, schools, market place, playground, parks etc. developed along with house construction. In the township visited though families have been shifted, these facilities are yet to be taken up.

The Chairman of EAC Committee, DC (Dhanbad) and other members also appreciated the suggestions made by Shri Mehta. The CMD of BCCL pointed out that some amount of land available all over the Jharia coalfields after mining up to the combined seam has been completed, and this land will be reclaimed and can be utilized for temporary shifting of families fro fire areas where already socio-economic surveys and issues of identity cards was completed by JRDA. He requested GMs of different areas of BCCL to finalize identification of such lands and have a detailed discussion with DC of Dhanbad. These sites are only transit sites and people will be shifted back to the permanent R&R township, when they will be constructed by JRDA at a later stage.

These temporary small R&R areas will be provided with roads, water supply and solar lighting, by BCCL. However, the water supply and lighting will be removed at the endangered fires sites as per the directives of Hon'ble High Court of Jharkhand, Ranchi.

Chairman of EAC very emphatically informed DC of Dhanbad to widely publicize and communicate in writing to the people living in fire areas etc. about the danger and health issues involved in living in such areas. He also suggested that as per the approved Master Plan, JRDA should be adequately staffed and vacancies should be filled at the earliest. He also suggested that JRDA should continuously monitor, on day to day basis, for the successful implementation of Master Plan. He advised, that if there is any deviation from the Master Plan, the same could be put up through JRDA Board to the High Power Central Committee headed by the Secretary of Ministry of Coal.

6.9 The BCCL organized a cultural programme wherein the Children of BCCL employees and local artists displayed their talents. The EAC appreciated the efforts of BCCL to encourage and sustain cultural heritage of Dhanbad.

6.10 The EAC also visited Indian School of Mines and interacted with the staff. The committee suggested to the staff that they should work jointly with BCCL for addressing the problems of coal mine fires.

7.0 Recommendations

Based on the observations made during the visits to field sites and discussions held with stakeholders, the committee recommends the following:

7.1 There are three major challenges facing BCCL: (i) management of coal mine fires and associated subsidence and other environmental issues; (ii) rehabilitation of affected BCCL and non BCCL people living in coal mine fire areas and potential coal mine fire and subsidence vulnerable areas and shifting of infrastructure such as railways, roads and other communication network facilities from unstable areas and; (iii) ecological restoration of overburden dumps and voids. Besides these three major challenges, the

other environmental ecological problems facing the entire region are (i) pollution and (ii) degradation of non coal bearing landscapes due to invasion of alien species.

7.2 The committee appreciated the efforts made by BCCL to address the above mentioned challenges under Jharia Action Plan, Master Plan for Jharia coal fields and Jharia Rehabilitation and Development Authority. However the magnitudes of the problems are so enormous that **there is a imperative need for concerted efforts for implementation of Action Plans ou**tlined in Master Plan for Jharia coalfields approved by Government of India by a committed group of officers.

7.3 BCCL strengthen its efforts to evolve/adopt already available in situ location and evacuation of methane in coalfields by sensors for efficient extraction of coal bed methane.

7.4 The Committee strongly advocates/emphasizes the need for R&D leading to increased conservation of coal in underground mining and BCCL make all attempts to extract as much as possible coal through underground mining with high efficiency.

7.5 The BCCL to examine the depletion of ground water due to underground mining and ways and means to recharge the ground water in a way that the water table is well sustained.

7.6 There being an oxygen stress and dust inside underground mine, BCCL to ensure periodically examining the lung efficiency of mine workers and to take necessary remedial measures, if required.

7.7 Although the BCCL is making all round efforts to ecologically restore the mined out areas, but the magnitude of work to be undertaken is so high that BCCL should engage school and college students, besides local self help groups and other agencies such as Prajapati Brahma Kumaris Ishwariya Vishwa-Vidyalaya for making mined out areas into productive ecosystems.

7.8 The entire landscape of the region being highly degraded due to intense anthropogenic activities leading to invasion of alien species, the local Government and State

Government together with BCCL should make a strong campaign to eradicate the weeds and restore the landscapes to productive ecosystems. **In fact the local and State Governments should take help of BCCL in the task of ecological restoration of degraded landscapes and cooperate with BCCL for sustainability of environment and ecology of the area.**

7.9 BCCL in the long run may utilize high resolution LISS-IV data on an annual basis using biomass indices like LAI and normalized difference vegetation index (NDVI) etc. for assessing the performance of ecologically restored sites.

7.10 With regard to management of atmospheric pollution particularly in open cast mining and due to transport and handling of coal at various points, the committee interalia recommends the adoption of the following: (i) wet drilling and controlled blasting for proper fracturisation; (ii) reduction in crushing; (iii) water spraying at loading, transport, transfer and deposit points; (iv) restrict the movement of dumpers to shorter distances; (v) promote more of inpit crushing and conveyer transport in OC mines; (vi) replace, wherever feasible truck transport by pay loader loading at railway sidings and; (vii) adopt wagon storage instead of ground storage and reduce rake loading time by railways.

7.11 The continuous raging of coal mine fires and subsequent subsidence, continuous occupation of hazardous areas prone to coal mine fire and subsidence by human settlements and the loss of 8 to 10% prime coking coal due to coal mine fires, despite of massive efforts of BCCL to contain the coal mine fires, subsidence and R&R problems as per the Master Plan of Jharia coalfields, there is an imperative need for further insight on the coal mine environment that triggers coal mine fires. To study in great detail the chemical constituents including elements like Na, K and P of coal, particularly volatiles and also on the characteristics of top soil horizon above the coal seams through an **integrated multidisciplinary research** involving the various Institutes located in Dhanbad and other competent Institutes across the country. The data generated through R&D along with thermal imaging and ancillary satellite data is certainly expected to be useful in identifying the potential sites for coal fires and subsidence and developing a forecast system.

7.12 The cumulative impact assessment studies on the pollution load in the air and water in and around Dhanbad should be carried out by CPCB to ascertain the contributions of each of the polluting industries located in the area so that an integrated management plan can be evolved.

7.13 The BCCL should immediately initiate studies on the identification of coal mine fire areas through ground surveys using thermal imaging camera so that the fire control measures can be implemented before the spread of fire in new areas within coal seams. Monitoring of coal fires at the ground level should also be regularly carried out.

7.14 The technology being somewhat costly, even the thermal images at $90m^2$ and $1km^2$ resolutions from ASTER and MODIS could be considered for use in diagnostic purpose. Similarly, the extent of subsidence could be mapped by using RADAR Interferometer technique using RADARST. ENVISAT data could also be employed to assess the extent of subsidence and its magnitude and the accuracy of data will be at 5-10m level.

7.15 The Committee felt that composition of gases emanating from coal fires needs to be analyzed using automatic gas analyzers; continuous monitoring of air quality around coal mine fires and as well as in and around settlements engulfed by such fires is a must. The ambient air quality in these areas must be disseminated to the public from time to time.

7.16 The Committee observed that the gaseous emissions from coal mine fires may not only have impacts on human health but also on regional weather patterns and climatic changes. It was therefore of paramount importance that the measurement of green house gases (GHGs), SOx, NOx, Ozone, VOCs (volatile organic carbon) and NMHC (non-methylated hydrocarbons) using automatic gas analyzers and the continuous systematic observations on the role of these gaseous emissions on atmospheric chemistry, both in upwind and downwind directions, is carried out on long-term basis by network of Institutions involving expertise from Institutes such as, PRL, IITM, MOEs, IIT-K, IISc., IICT, IMD, ISM, CIMFRI, JSPCB, BARC, CMPDI, NRSC and others, with CMPDI as coordinating unit. The network programme should also investigate black carbon, organic carbon, boundary layer studies, radio sonde and Ozone sonde, AWS and radiation

aspects. It may be noted that the use of water spraying and scraping the surface for dousing the fire in mines may also accelerate chemical processes leading to production of Ozone and other harmful chemical constituents. This needs to be studied. It was brought to the notice of Committee that Dr CBS Dutt (a member) from NRSA, Hyderabad has already submitted a preliminary proposal for consideration of CIL (Annexure V).

7.17 The Committee strongly recommends that BCCL, JSPCB and District Health Authority should undertake base line survey of selective respiratory health disorders among villages located near the coal mine fires and Jharia township and villages located far away from coal mine fires and disseminate the information so obtained among the local communities about the harmful impacts of living close to coal mine fires so as to convince them to relocate from hazardous sites to safe sites.

7.18 The technology adopted for control of coal mine fires is rather an archaic one and does not lead to dousing of fire but allows isolation of fires and extraction of coal before it catches fire from the moving coal mine fire. In this process substantial quantity of precious coal is lost before the fire is actually controlled and in some cases coal continues to burn inside the mine. It is therefore absolutely important to understand what triggers coal mine fires and how it spreads across the seams and to identify the vulnerable zones within the mine. There is need to improve the existing technology/methodology used for the management of coal mine fires and also to develop innovative technologies without using heavy machines and dumping of OBD on the surface of burning coal mines. For this purpose, various scientific Institutes located in Dhanbad and Ranchi and IIT-K must collaborate and evolve chemical / physio-chemical / biophysical methods of coal mine fire. BCCL must ensure this.

7.19 The Committee felt extremely concerned about the very slow relocation of human settlements of non BCCL category from rapidly spreading coal fires and subsidence prone and unstable zones due to (i) non willingness of people to shift; (ii) lack of land at designated places as per the Master Plan, (iii) slow action by Jharia Rehabilitation and Development Authority (JRDA) due to inadequate manpower; and (iv) very slow action on the socio-economic survey, land acquisition and construction of houses by JRDA. The

Committee strongly recommends that: (i) JRDA should take necessary action for immediate relocation of non BCCL settlements to safe places; (ii) if designated places were not available for relocation as per Master Plan, the JRDA may have to deviate from the Master Plan and the proposal for deviation should be put up to the High Power Committee headed by the Secretary, MoC through JRDA Board; (iii) JRDA should fill up all vacant positions immediately; (iv) JRDA may develop site specific R&R sites having total infrastructure facilities such as roads, water supply, lighting to begin with and then develop large townships; (v) the townships developed by JRDA for relocation should have all infrastructural facilities such as roads, water connections, play grounds, schools and medical facilities, transport to nearby towns (social connectivity); (vi) the JRDA should take up BCCL's offer to set up transitory relocation of settlements where socio-economic survey and issue of identity cards were issued by JRDA on reclaimed mined out lands having all infrastructure facilities in different coal blocks.

JSPCB and JRDA should extend full cooperation to BCCL for relocation of coal fore affected people, control of fire and extraction of coal reserves before precious coal is lost due to mine fires, as the magnitude of relocation of more than 55,000 non BCCL families and 25,000 BCCL families is a gigantic task. BCCL has also to come up to the expectations of such large number of families and spare nothing at their command.

JSPCB and State Government Should also extend cooperation to BCCL in land acquisition and physical possession of areas affected by coal mine fire/ unstable areas /abandoned mines for faster control of mine fires, R&R of affected people and ecological restoration of degraded landscapes.

7.20 The Committee suggests that BCCL should utilize remote sensing technique for mine planning based on topography and terrain characteristic, as has been done for Belpahar and Gevera mines in Chattisgarh by NRSC, CMPDI and Survey of India. For example (i) Indian Remote Sensing Satellite data of Cartosat-1 digital elevation studies could be made for the entire coal fields to characterize topography during 2011-2012 at 5m vertical resolution; (ii) Airborne Laser Topography Mapping (ALTM) using NRSC aircraft could provide 30cm and above contour interval for the mining area to be prepared

jointly by NRSC, CMPDI and survey of India and is useful in mine planning and development; (iii) NRSC's Airborne Large Format Digital Camera (ALFDC) which provides multispectral digital data for the entire mining area for 2012-2013 and facilitates in generation of stereo models for analytical photogrammetric basis in retrieval of contours with an interval of 30-40 cm accuracy could be made use. Such valuable information could be generated every 5 years that would enable to estimate volumetric quantities of OBD and mined areas which in turn help in the colossal problem of OBD management. The OBDs should be located and developed in such a pattern that simulates water sheds.

ACKNOWLEDGEMENT

The EAC is thankful to BCCL authorities, particularly the CMD, and the Directors for extending local hospitality and logistical support during visit to different sites. Shri T. K. Dhar (member of EAC) could not make it to join the EAC team visit due to bereavement in the family. However, he could spare time to go through the Report and made changes wherever required and EAC is thankful to him for giving his valuable comments and suggestions on the Report.

Shri V. P. Raja
(Chairman)

Shri J. L. Mehta
(Member)

Professor J. S. Roonwal
(Member)

Professor CBS Dutt
(Member)

Professor C. R. Babu
(Member)

Dr R. K. Garg
(Special Invitee)

Dr Manoranjan Hota
(Member Secretary)

Annexure I

List of BCCL officers accompanied the EAC during field visits

1. D.C. Jha, Director (T) OP, BCCL
2. P.K. Saha General Manager (Environment), BCCL
3. Dr E.V.R. Raju, Chief Manager (Environment), BCCL
4. A.K. Dutta, General Manager, W.Jharia Area, BCCL
5. J.S. Mahapatra, Chief Manager (Mining), Moonidih Project, BCCL
6. U.K. Sinha, Sr. Manager (Mining), Moonidih Project, BCCL
7. P.S Mishra, General Manager, Barora Area, BCCL
8. S.K. Brik, Sr. Manager (Survey), Barora Area, BCCL
9. B.C.Maji, General Manager, Sijua Area, BCCL
10. B.C. Nayak, General Manager, Bastacolla Area, BCCL
11. R.K. Nigam, General Manager, Lodna Area, BCCL
12. R.M. Prasad, General Manager (Welfare), BCCL
13. R.R. Prasad, P.R.O, BCCL
14. A.P. Khalko, Chief Manager (Environment), BCCL
15. B.K. Haldar, Chief Manager (Forestry), BCCL
16. B. Modi, Chief Manager (Mining), BCCL
17. S.K.Gupta, Sr Manager(Civil) , BCCL
18. M. Kumar, Sr Manager (Env), BCCL
19. Rajkumar, Sr Manager(Mining), BCCL
20. Kr Ranjeev, Sr Manager (Mining), BCCL
21. S. Debnath, Dy Manager (Survey), BCCL
22. A.Chandra, Sr Manager, IE Deptt, BCCL

23. O.N. Singh Sr Manager (Mining), BCCL
24. Arun Kumar, Project Officer, Damuda Colliery, BCCL
25. S.N. Sharma, S.O.M./Mgr., Damuda Colliery, BCCL
26. U.S. Singh, SOM, Damuda Colliery, BCCL
27. K.C. Mishra, Project Officer, Shatabdi Fire Project, BCCL
28. Gopaljee,Officer Incharge (R&R & Estb), JRDA

Annexure II

List of Participants present in interactive session at Koyla Bhawan, on 30.10.12

1. T.K. Lahiri, CMD, BCCL
2. Prashant Kumar, Deputy Commissioner Dhanbad-cum-Managing Director, JRDA, Dhanbad
3. D.C. Jha, Director (T) OP, BCCL
4. A. Sarkar ,Director (T)P&P, BCCL
5. A Kumar, Deputy Director General, DGMS, Dhanbad
6. D.C. Panigrahi, Director, Indian School of Mines, Dhanbad
7. Amalendu Sinha, Director, CIMFR, Dhanbad
8. Prof. J.K. Patnaik, Deptt. of Management Studies, ISM, Dhanbad
9. Biswajeet Pal, Associate Professor, Deptt. of Environmental Sc& Tech ,ISM, Dhanbad
10. N. Sahay, Sr. Principal Scientist, CIMFR, Dhanbad
11. V.K. Sinha , Regional Director, CMPDI,RI-II, Dhanbad
12. A.K. Mitra, Chief General Manager (Coordination)/TS to CMD
13. R.N. Prasad, Chief General Manager, TS to D(T)P&P, BCCL
14. A.K. Sengupta, Chief General Manager, Washeries, BCCL
15. K.K.S. Sinha, Chief General Manager (E&M), BCCL
16. Dr. S.C. Gupta, Ch. Medical Surgeon, BCCL
17. A.N. Sahay, General Manager (Excav.), BCCL
18. P.S. Mishra, General Manager, Barora Area, BCCL
19. Soumen Chatterjee, General Manager, Block-II Area, BCCL
20. S.K. Mukhopadhayay, General Manager, Govindpur Area, BCCL
21. Subir Das, General Manager, Katras Area, BCCL

22. B.C.Maji, General Manager, Sijua Area, BCCL
23. A. K. Singh, General Manager, Kusunda Area, BCCL
24. J.P. Gupta, General Manager, Pootki Balihari Area, BCCL
25. A.K.Dutta, General Manager, W.Jharia Area, BCCL
26. B.C. Nayak, General Manager, Bastacolla Area, BCCL
27. R.K. Nigam, General Manager, Lodna Area, BCCL
28. S. Ghosh, General Manager, E. Jharia. Area, BCCL
29. T. Mondal, General Manager, C.V. Area, BCCL
30. A. Chattopadhyay, General Manager (Administration), BCCL.
31. P.K. Chaudhary, General Manager (Estate), BCCL.
32. P.K. Saha General Manager (Environment), BCCL.
33. R.M.Prasad, General Manager (Welfare), BCCL.
34. Keshav Gupta, General Manager (Kapuriya)/TS to Dir. (T) OP, BCCL.
35. Surendra Singh, General Manager (Safety), BCCL.
36. S. Dasgupta, General Manager (HRD), BCCL.
37. S. Kumar, General Manager (System), BCCL.
38. K.N. Jha, General Manager (Sales), BCCL.
39. K. Mitra, General Manager (IED), BCCL.
40. S.N.Sinha,PM (Administration), BCCL.
41. R.R. Prasad, P.R.O, BCCL.
42. Dr E.V.R. Raju, Chief Manager (Environment), BCCL.
43. A.P. Khalko, Chief Manager (Environment), BCCL.
44. H.K. Ghanwat, Chief Manager (Environment), BCCL.
45. B.K. Haldar, Chief Manager (Forestry), BCCL.

46. Ajay Kumar, Chief Manager (Civil), BCCL.
47. B. Modi, Chief Manager (Mining), BCCL.
48. S.K.Gupta, Sr Manager(Civil), BCCL.
49. M. Kumar, Sr Manager (Env.), BCCL.
50. Rajkumar,Sr Manager (Mining) , BCCL.
51. Kr Ranjeev, Sr Manager (Mining), BCCL.
52. S. Debnath, Dy Manager (Survey), BCCL.
53. Amit Roy, Chief Manager(Mining),CMPDI,RI-II, Dhanbad
54. S. Dutta, Asst Manager (Mining), CMPDI,RI-II, Dhanbad
55. Amarjeet, Management Trainee, CMPDI,RI-II, Dhanbad
56. A.Chandra Sr Manager, IEDeptt, BCCL.
57. O.N. Singh Sr Manager (Mining), BCCL.
58. Gopaljee,Officer Incharge (R&R & Estb), JRDA
59. Sunil Dalela, Chief Manager (Civil), JRDA

Annexure III

LOCATION OF BCCL/ JHARIA COALFIELD

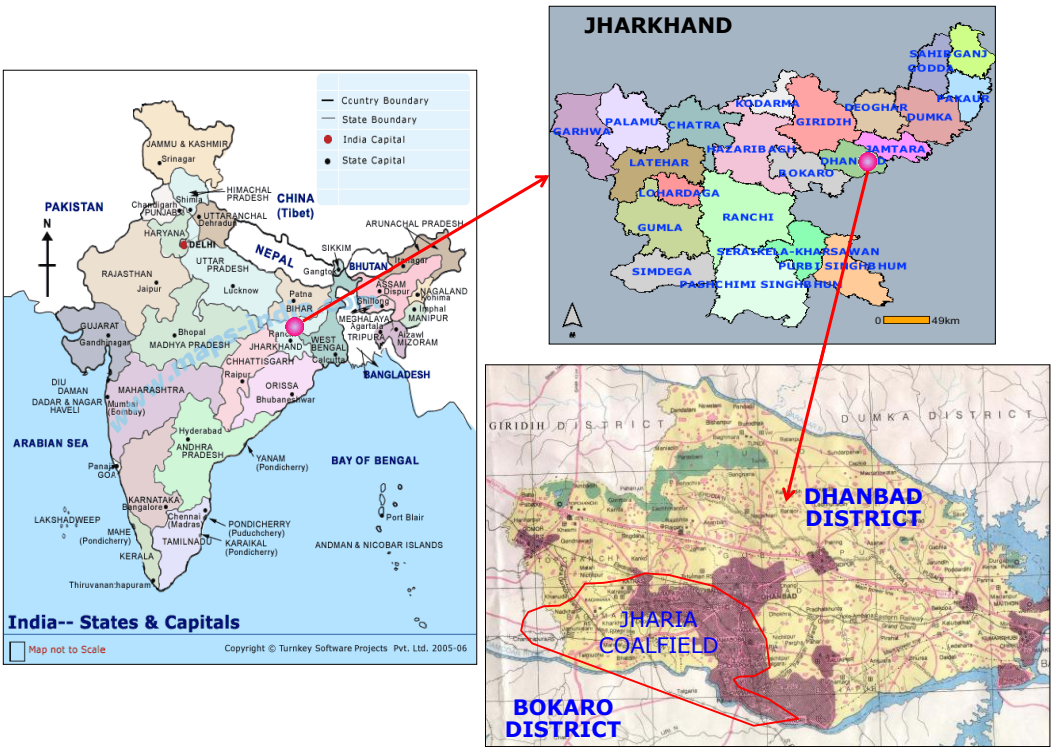


Figure 1

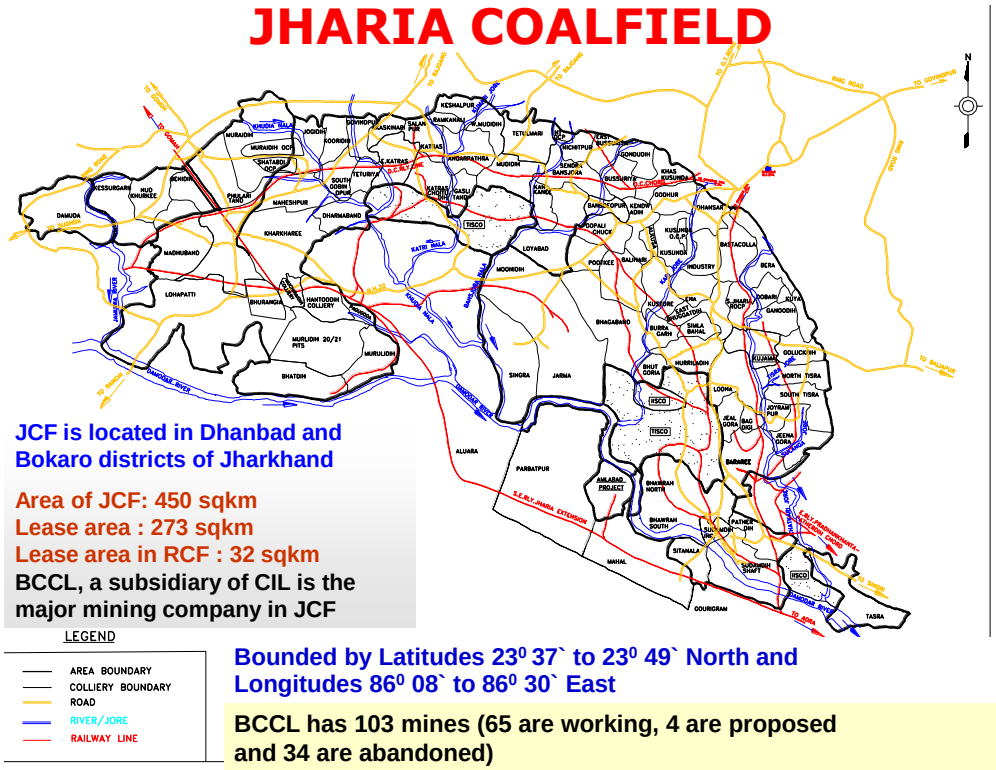


Figure 2

LANDUSE – LANDCOVER MAP OF JHARIA COALFIELD (2004)

Land-Use Type	Area %
Mining area	5.24
Non-mining Barren land	11.85
Water bodies	5.73
Other Vegetation	26.04
Built-up land	17.02
Agriculture area	34.12

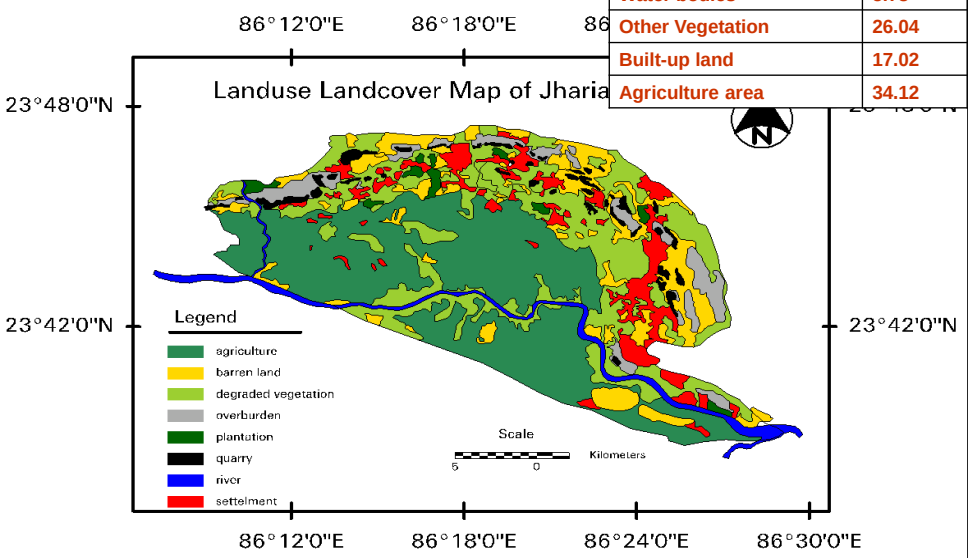
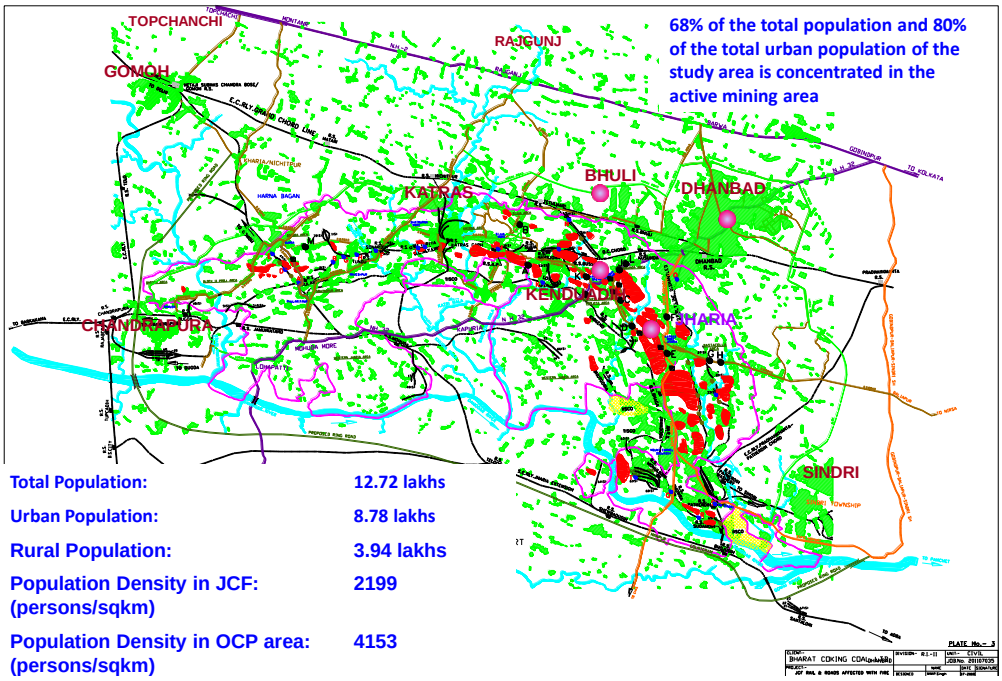


Figure 3

JHARIA COALFIELD AND SURROUNDINGS – PRESENT SCENARIO



Total Population:	12.72 lakhs
Urban Population:	8.78 lakhs
Rural Population:	3.94 lakhs
Population Density in JCF: (persons/sqkm)	2199
Population Density in OCP area: (persons/sqkm)	4153

Figure 4

DEGRADED LAND IN JHARIA COALFIELD

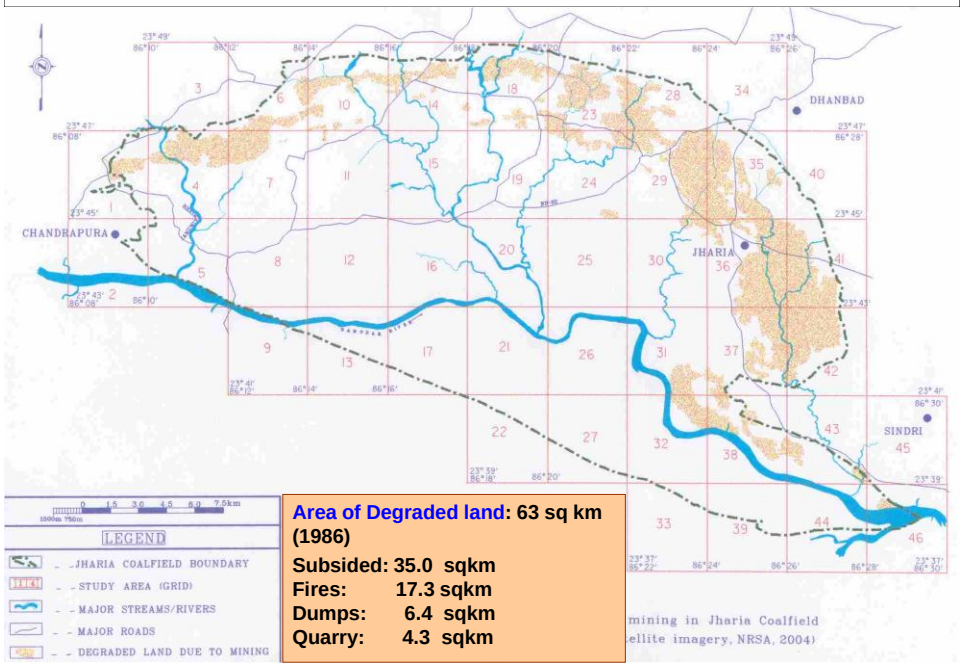


Figure 5

MINE FIRE LOCATIONS IN JCF

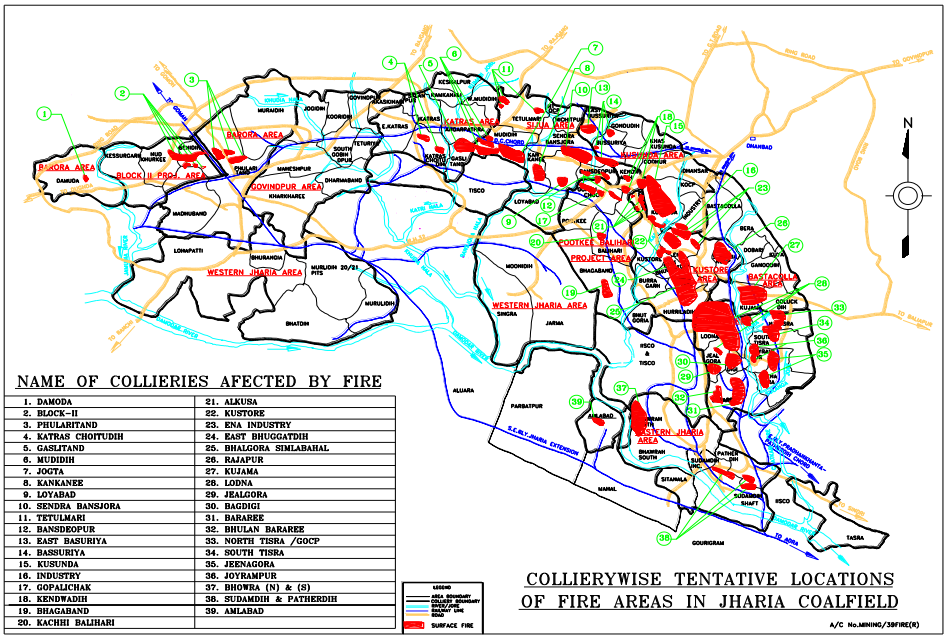
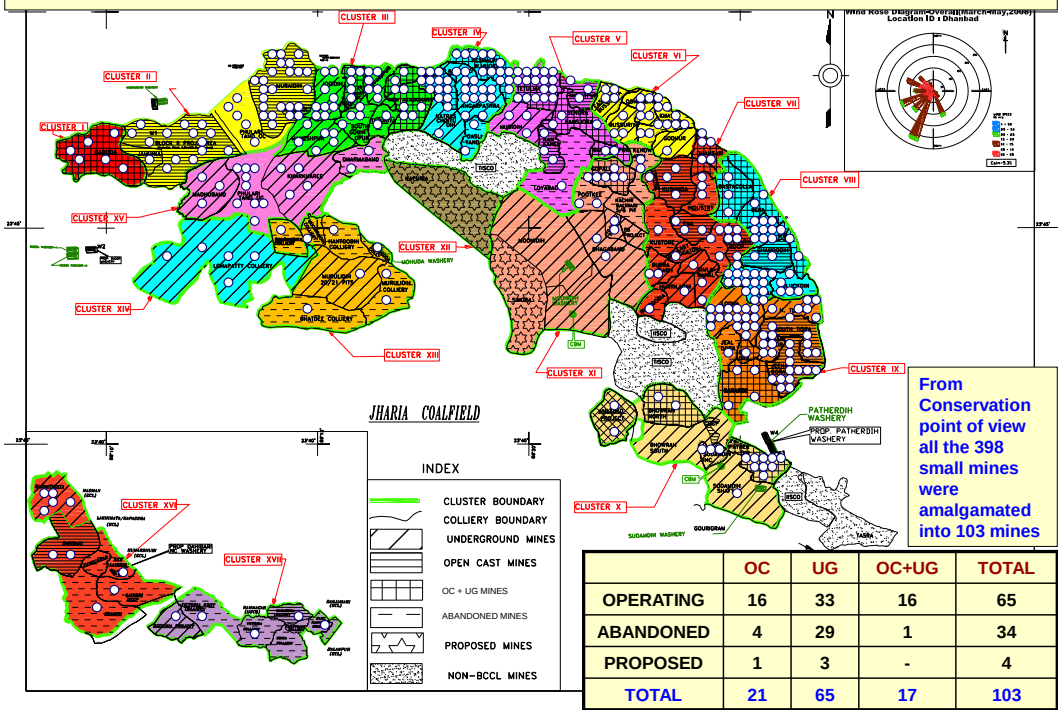


Figure 6

JHARIA COALFIELD SHOWING LOCATION OF 398 MINES BEFORE NATIONALISATION

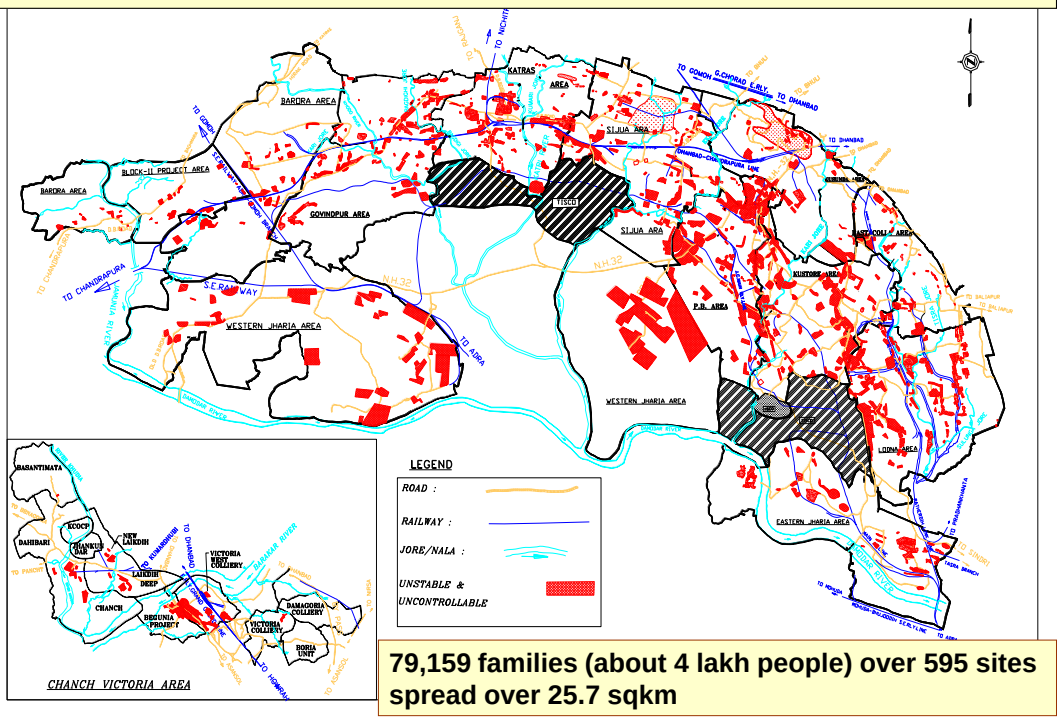


From Conservation point of view all the 398 small mines were amalgamated into 103 mines

	OC	UG	OC+UG	TOTAL
OPERATING	16	33	16	65
ABANDONED	4	29	1	34
PROPOSED	1	3	-	4
TOTAL	21	65	17	103

Figure 7A

UNSTABLE AND UNCONTROLLABLE SITES



79,159 families (about 4 lakh people) over 595 sites spread over 25.7 sqkm

Figure 7B

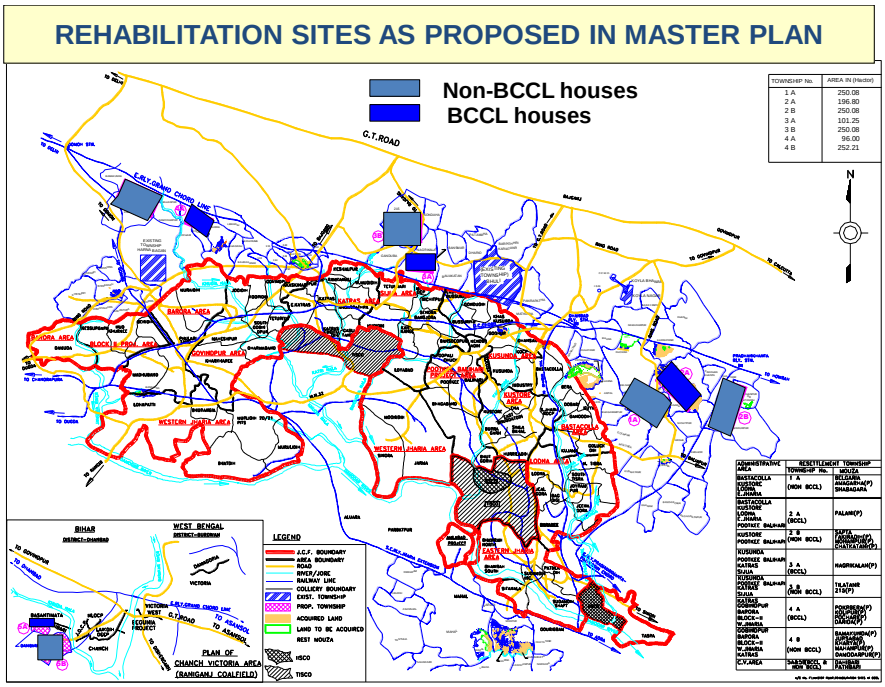


Figure 8

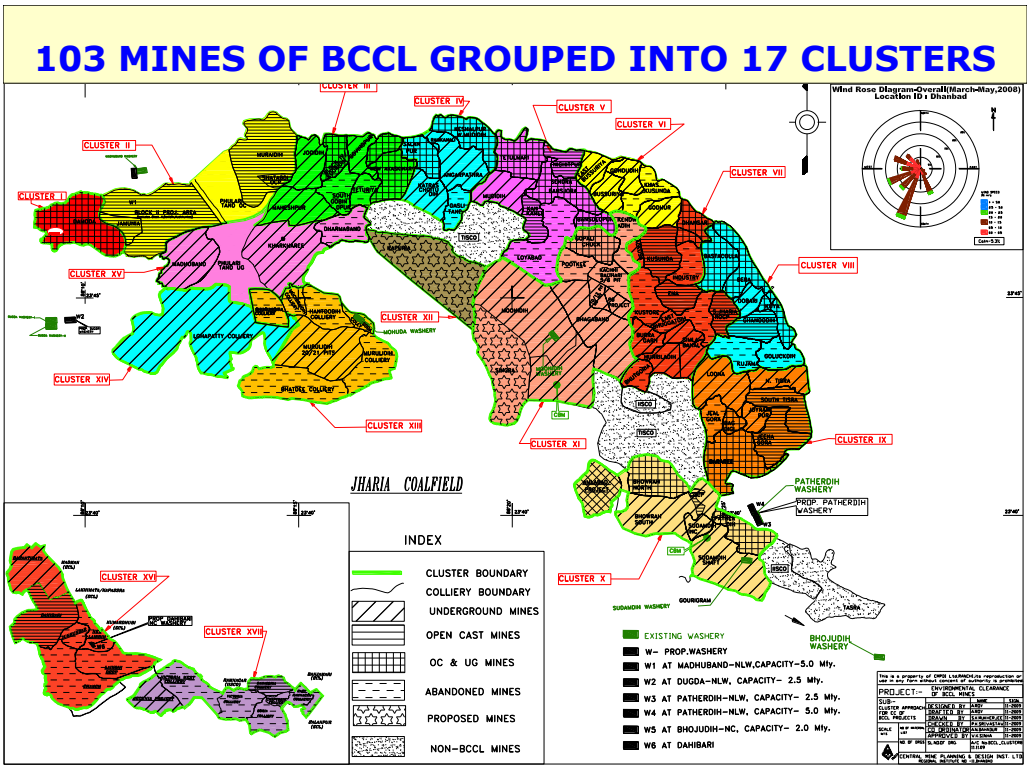


Figure 9

Figure 10: Ecologically restored OBD at Sijua coal field by FRI. Note the resence of invasive grass species.

Figure 11A: Six-month old ecologically restored OBD at Damoda mines by CEMDE under MoEF programme. Note the presence of native grasses.

Figure 11B: Coal mine fire at Shatabdi coal field.

Figure 12: Quenching of coal mine fire at Rajapur fire area.

Figure 12A: Smoke and other gaseous emissions from OBD at Rajapur coal mine fire Area.

Figure 12B: EAC members at Rajapur OCP fire area.

Figure 13: Cracks developed due to coal mine fire at Ghanoodih fire area.

Figure 14: Encroachment on the underground coal mine fire area at Ghanoodih fire area. Note the settlement is continuously exposed to toxic fumes from coal mine fire situated 100m from the settlement.

Figure 15: Subsidence caused by coal mine fire at Ghanoodih fire area.

Figure 16: Women making paper bags at R&R site of Belgaria. Note EAC interacted with them.

Figure 17: A live exhibit developed by BCCL at its township locality to demonstrate ecological restoration to the public as well as BCCL workers.

Figure 18: Interactive session with stakeholders.

Figure 19: Members of EAC at the interactive session with stakeholders.

Figure 20:Interactive session with stakeholders.

Annexure IV

प्रभात खबर

धनबाद, रविवार, 28 अक्तूबर, 2012

एमओइएफ की एप्रेजल कमेटी धनबाद में

वीपी राजा कर रहे नेतृत्व

इकोलॉजिकल रेस्टोरेशन का लेगी जायजा

मुख्य संवाददाता ■ धनबाद

केंद्रीय वन व पर्यावरण मंत्रालय की एप्रेजल कमेटी शनिवार की देर शाम बीसीसीएल पहुंची. कमेटी का नेतृत्व अध्यक्ष वीपी राजा कर रहे हैं. तकनीकी निदेशक डीसी झा कमेटी के साथ रांची से पहुंचे. बीसीसीए गेस्ट हाउस में कमेटी की अगवानी की गयी. कमेटी नई दिल्ली से हवाई मार्ग से रांची पहुंची. कमेटी पर्यावरण संरक्षण व पुनर्स्थापन(रिस्टोरेशन) के क्षेत्र में बीसीसीएल की ओर से उठाये कदमों का जायजा लेगी.

क्यों महत्वपूर्ण है दौरा : नयी परियोजनाओं के लिहाज से कमेटी का बीसीसीएल दौरा अत्यंत महत्वपूर्ण है. इन्वायरमेंट क्लीयरेंस में विलंब की वजह से नयी परियोजनाएं शुरू नहीं हो पा रही हैं. कई परियोजनाओं का विस्तारीकरण भी रुका पड़ा है. कमेटी की रिपोर्ट पर ही इन दोनों बिंदु पर हरी झंडी मिलने का दारोमदार है. टीम बीसीसीएल के साथ बैठक कर कई महत्वपूर्ण मुद्दों पर चर्चा करेगी.

कहां-कहां जायेगी : मुनीडीह, पश्चिमी झरिया के अलावा अग्नि प्रभावित क्षेत्रों का भी दौरा करेगी. सीबीएम प्रोजेक्ट का दौरा करने का भी कमेटी का कार्यक्रम है. दौरे को लेकर बीसीसीएल ने व्यापक तैयारी की है. वहां चल रहे पुनर्वास कार्यों में भी कमेटी की दिलचस्पी है. कमेटी बीसीसीएल सीएमडी टीके लोहिड़ी के साथ बैठक भी करेगी. कमेटी में डॉ आरसी बाबू, जेएल मेहता, प्रो रूनवल, डॉ दत्त,-डॉ एम होटा, डॉ गर्ग शामिल है. कमेटी के साथ निदेशक तकनीकी अशोक सरकार, ब्लॉक-टू महाप्रबंधक पीएस मिश्रा, कुसुंडा महाप्रबंधक एके सिंह, एस सूद, संदीप गंगुली, विजय कुमार खरे भी मौजूद थे.

बीसीसीएल के गेस्ट हाउस में एप्रेजल कमेटी के साथ डीटी डीसी झा व अशोक सरकार.

टीम ने लिया जायजा

बस्ताकोला ■ कोयला व पर्यावरण मंत्रालय की उच्चस्तरीय टीम के आगमन को देख शनिवार को कोयला भवन मुख्यालय के पर्यावरण विभाग के महाप्रबंधक पीके साहा, महाप्रबंधक (उत्पादन) एसपी सिंह, बस्ताकोला महाप्रबंधक सीसी नायक, स्टेट ऑफिसर एमओ सिंह ने राजापुर परियोजना स्थित ट्रेंच कटिंग स्थल का जायजा लिया.

ट्रांसपोर्टिंग की आड़ में प्रदूषण का कारोबार

सिजुआ ■ सिजुआ व कतरास क्षेत्र की विभिन्न साइडिंग से होने वाली ट्रांसपोर्टिंग के फलस्वरूप प्रदूषण से लोगों का जीना मुहाल हो गया है. ट्रांसपोर्टर नियमों का खुला उल्लंघन कर रहे हैं. ऐसे में केंद्रीय प्रदूषण टीम के सिजुआ क्षेत्र के दौरे से लोगों में आशा की किरण जगी है. ट्रांसपोर्टर इस पर अंकुश लगायेंगे या नहीं, यह तो वक्त बतायेगा. जानकारी के अनुसार, कोयला ट्रांसपोर्टिंग के दौरान डंपर को तिरपाल से ढक कर ले जाना है.

- सिजुआ व कतरास क्षेत्र में उड़ रही नियमों की धज्जियां
- ट्रांसपोर्टर करते हैं प्रदूषण नियमों की अनदेखी

साथ ही ओवरलोडिंग नहीं करनी है. लेकिन इन नियमों को ताक पर रख कर ट्रांसपोर्टर अपना धंधा बखूबी कर रहे हैं. बीसीसीएल प्रबंधन भी इससे चुप्पी साधे हुए है. टकई ऐसे डंपर है, जिनके पास प्रदूषण विभाग का अनापत्ति प्रमाण पत्र नहीं है. यदि इसकी जांच की जाये, तो ऐसे डंपर सड़क पर नहीं दौड़ेंगे. कतरास बाजार, अंगारपथरा, सिजुआ, जोगता, तेतुलमारी, बाऊडीह, कलकली आदि जगहों की हजारों की आबादी प्रदूषण की चपेट में है.

काश ! रोज होतीं यह बेमौसम बारिश

श्रीकांत गिरि ■ केंदुआ

धनबाद-बोकारो नेशनल हाइवे-32 पर शनिवार को चे मौसम व बिन बादल बरसात से कोयलांचलवासी अचंभित थे. हर दिन धूल के उड़ते गुब्बारे के बीच रोड से गुजरने की आदत बना चुके लोग आज सुकून महसूस कर रहे थे. कारण कि बीसीसीएल द्वारा मुनीडीह-पुटकी-केंदुआ व मटकुरिया में विशेष तौर पर जल छिड़काव सुबह से लेकर देर रात तक किया गया, क्योंकि रविवार को इसी मार्ग से केंद्रीय प्रदूषण टीम के सदस्यों को गुजरना है. इनके समक्ष बीसीसीएल को अपनी साख बचानी है. अगर रास्ते में धूल उड़ी तो कंपनी की साख पर बट्टा लगेगा. वेस्टर्न एरिया झरिया मुनीडीह, पुटकी, बलिहारी एरिया एवं कुसुंडा एरिया के अधिकारी इस काम को लेकर दिन भर परेशान रहे. सड़कों को पूरे दिन सूखने नहीं दिया गया. इसके लिए आधा दर्जन से ज्यादा टैंकरों को लगाया गया. आउटसोर्सिंग के वाहन भी सहयोग कर रहे थे. रास्ते से गुजरनेवालों झड़कों पर पानी के छिड़काव से अचंभित होने के बावजूद बीसीसीएल को धन्यवाद दे रहे थे. लोगों का कहना था कि पर्यावरण कमेटी के जाने के बाद भी काश ऐसे ही पानी का छिड़काव होता.

पानी का छिड़काव होता रहेगा

कुसुंडा क्षेत्र के महाप्रबंधक एके सिन्हा ने कहा कि नेशनल हाइवे-32 पर जहां कोयला लदे भारी वाहनों का आवागमन होगा, उक्त मार्ग पर पानी का छिड़काव होगा. क्षेत्र को प्रदूषण मुक्त रखा जायेगा.

दैनिक जागरण

रविवार 28 अक्टूबर 2012: आश्विन शुक्ल 14, वि. 2069

पर्यावरण मंत्रालय की टीम धनबाद पहुंची

■ इलाके को चमकाकर खामियां छिपाने में जुटा बीसीसीएल प्रबंधन ■ प्रदूषण नियंत्रण के उपाय से रूबरू होगा दल

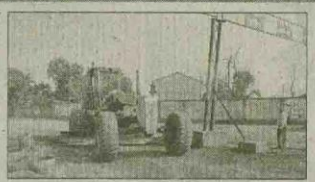
धनबाद : केंद्रीय पर्यावरण एवं वन मंत्रालय की हाइ पावर टीम शनिवार की रात धनबाद पहुंची। तकनीकी निदेशक डीसी झा ने बताया कि टीम तीन दिन तक यहां रुकेगी। इस दौरान टीम मुनीडीह खदान, अग्नि प्रभावित क्षेत्रों के अलावा बीसीसीएल में हो रहे इकोलाजिकल रिस्टोरेशन कार्य भी देखेगी। यह टीम केंद्रीय एप्रेजल कमेटी है जो कि देशभर की पर्यावरण प्रबंधन योजनाओं को अंतिम मंजूरी देती है। टीम अपनी बैठक में कई जगहों के पर्यावरण योजनाओं की सुनवाई भी करेगी। टीम में चेयरमैन श्री राजा समेत कई सदस्य शामिल हैं।

केंदुआ में जल छिड़काव

केंदुआ : केन्द्रीय वन एवं पर्यावरण मंत्रालय टीम के सदस्यों के धनबाद आगमन को लेकर बीसीसीएल प्रबंधन ने शनिवार को केंदुआ-करकेंद-गोधर एनएच 32 मार्ग पर भारी मात्रा में जल छिड़काव किया। कुसुंडा एवं पीबी एरिया प्रबंधन द्वारा कई टैंकरों व ट्रैक्टरों को लगाया गया है। बीसीसीएल के अधिकारी लगातार इस बात का जायजा ले रहे हैं कि छिड़काव के बाद धूल नहीं उड़े। बीसीसीएल मुख्यालय द्वारा पर्यावरण नियंत्रण को लेकर आवश्यक दिशा निर्देश कुसुंडा, पीबी एरिया व मुनीडीह प्रबंधन को दि गया है।

बरोरा क्षेत्र के अधिकारी सक्रिय

बाघमारा : वन व पर्यावरण मंत्रालय की केंद्रीय टीम का बरोरा क्षेत्र में निरीक्षण को लेकर चाक चौबंद व्यवस्था की गयी है। टीम क्षेत्र के मुराईडीह, शताब्दी तथा दामोदा परियोजना का दौरा करेगी। रविवार शाम चार बजे टीम के यहां पहुंचने की सूचना है। इसको लेकर मुराईडीह तथा शताब्दी परियोजना में हॉल रोड व विद्युत प्रकाश व्यवस्था को दुरुस्त करने का कार्य किया जा रहा है। मशीनों के रखरखाव पर विशेष ध्यान दिया जा रहा है। महाप्रबंधक पीएस मिश्र ने अधिकारियों के साथ सभी परियोजनाओं का जायजा लिया। 11 सदस्यीय उक्त टीम में मंत्रालय के एक्सपर्ट अप्रेजल कमेटी के चेयरमैन बीपी राजा, उप चेयरमैन डॉ. सीआर बाबू, डायरेक्टर डॉ. मनोरंजन होता, सीआइएल के एडवाईजर डॉ. आरके गर्ग आदि होंगे।



झरिया कोयलांचल भी तैयार

धनसार: झरिया कोयलांचल में पर्यावरण व अ की स्थिति का आकलन करने दिल्ली से पर्याव व वन मंत्रालय की टीम सोमवार को दो दिवस दौरे पर आयेगी। परियोजनाओं, कोलियरी दौरा कर पर्यावरण की सुरक्षा में बीसीसीएल ओर से किये प्रयासों को टीम देखेगी। बीसीसी प्रबंधन ने पुख्ता तैयारियों में कोई कोर कसर न छोड़ी है। बस्ताकोला की आग प्रभावित राजा परियोजना में शनिवार को कोयला भवन पर्यावरण महाप्रबंधक पीके साहा व उत्पाद महाप्रबंधक एसपी सिंह पहुंचे। संसदीय टी लोदना क्षेत्र का भी दौरा करेगी। नार्थ तिस डीबी रोड में विस्थापन को लेकर स्थानीय लो से टीम के सदस्य रूबरू हो सकते हैं।

कोयलांचल संवाद

धनबाद, सोमवार 29 अक्टूबर 2012

वन एवं पर्यावरण मंत्रालय की एप्रेजल कमेटी ने किया बीसीसीएल के कई क्षेत्रों का निरीक्षण

धनबाद। बीसीसीएल के दौरे पर आयी केन्द्रीय वन व पर्यावरण मंत्रालय की एप्रेजल कमेटी ने आज कम्पनी के कई क्षेत्रों का निरीक्षण किया और आवश्यक दिशा–निदेश दिया। श्री वी पी राजा की अध्यक्षता वाली कमेटी आज सर्व प्रथम बीसीसीएल के पश्चिमी झरिया क्षेत्र की मुनीडीह माइन्स गयी, जहां कमेटी के सदस्यों ने सीबीएम का निरीक्षण किया। उसके पश्चात वे मुनीडीह की भूमिगत खदान के अंदर जाकर स्थिति का जायजा लिया। उल्लेखनीय है कि केन्द्रीय वन व पर्यावरण मंत्रालय की एप्रेजल कमेटी बीसीसीएल प्रबंधन द्वारा पर्यावरण संरक्षण व पुनर्स्थापन के क्षेत्र में किये जा रहे कार्यों का निरीक्षण कर रही है। कमेटी की रिपोर्ट के बाद बीसीसीएल की कई नयी परियोजनाओं को हरी झंडी मिलने की उम्मीद है। कमेटी के सदस्य मुनीडीह माइन्स का निरीक्षण करने के बाद सिजुआ क्षेत्र की तेतुलमारी कोलियरी गयी। उसके बाद बरोरा एरिया की शताब्दी परियोजना जाकर वहां अग्नि प्रभावित क्षेत्रों में किये जा रहे इकोलॉजिकल रेस्टोरेशन कार्यों का जायजा लिया। कमेटी में श्री वी पी राजा के अलावे डा. आर सी बाबू, जे एल मेहता, प्रो. रूनवल, डा. दत्त, डा. एम होटा एवं डा. गर्ग शामिल हैं। निरीक्षण के दौरान कमेटी के सदस्यों को विस्तृत जानकारी देने के लिए बीसीसीएल के निदेशक(तकनीकी) संचालन श्री डी सी झा एवं निदेशक(तकनीकी) योजना व परियोजना श्री अशोक सरकार के अलावे क्षेत्रीय अधिकारी भी उनके साथ थे।

हिन्दुस्तान

धनबाद • सोमवार • 29 अक्तूबर 2012

झरिया में भू धंसान सबसे बड़ी समस्या : वीपी राजा

धनबाद | वरीय संवाददाता

आग देखकर टीम दंग

- मास्टर प्लान के क्रियान्वयन पर दिया जोर
- पर्यावरण के साथ पुनर्वास योजना भी महत्वपूर्ण

पर्यावरण मंत्रालय की एक्सपर्ट अप्रेजल कमेटी रविवार को बीसीसीएल दौरे के दौरान क्षेत्र की भूमिगत आग को मुराइडीह में देख दंग रह गई। आग के बीच खनन एवं गैस रिसाव से उत्पन्न स्थिति को देख कमेटी के चेयरमैन वीपी राजा ने कहा कि झरिया कोयलांचल में आग व भूधंसान की समस्या जटिल है। इससे निपटने के लिए बने मास्टर प्लान के क्रियान्वयन पर भी उन्होंने जोर दिया।

कहा कि पर्यावरण संरक्षण के साथ इनके प्रति भी गंभीरतापूर्वक पहल होनी चाहिए। बता दें कि सात सदस्यीय कमेटी बीसीसीएल में तीन दिन के दौरे पर आई है।

प्राकृतिक जंगल की योजना : बीसीसीएल के निदेशक तकनीक डीसी झा ने कहा कि दामोदा व सिजुआ में पायलट प्रोजेक्ट के तहत थ्री-टीयर वानिकीकरण प्राकृतिक जंगल की योजना है। सिजुआ में फॉरेस्ट रिसर्च इंस्टीट्यूट देहरादून व दामोदा में दिल्ली विवि के विशेषज्ञों के मार्गदर्शन में योजना चल रही है। • **पर्यावरण मंत्रालय की टीम ने की दावों की जांच-पेज 2**

आज सोमवार २९ अक्तूबर २०१२ सौर १२ कार्तिक सं. २०६९ वि.

यला उत्पादन जोखिम भरा कार्य: राजा

न एवं पर्यावरण मंत्रालय की टीम सीबीएम प्लांट, मुनीडीह खदान लॉजिकल रेस्टोरेशन का निरीक्षण संरक्षा के क्षेत्र में किये जा रहे बीसीसीएल की सराहना

न्द्रीय वन व ... की सात ... बीसीसीएल ... दिनेश चन्द्र ... नीडीह पहुंची, ... क्षेत्र के महा... ने मुके देकर ... या। इसके बाद ... के चेयरमैन ... मार बाबू सहित ... बेड मिथेन ... का महत्वपूर्ण ... की जानकारी ... टीम के सदस्य ... भीतर गये तथा ... डीआर 3 फेस ... जहां कोल्को रिलाइन्ड मशीन द्वारा कोल कटिंग व अन्य कार्यों को नजदीक से देखा तथा उसके बारे में जानकारी प्राप्त की। महाप्रबंधक एके दत्ता ने टीम को उत्पादन के साथ मुनीडीह व भाटडीह लोहापट्टी में पर्यावरण की संरक्षा और सुरक्षा हेतु किये जा रहे कार्यों की जानकारी ली। निदेशक तकनीक डीसी झा ने पत्रकारों को बताया कि मंत्रालय से आयी टीम को भू-धंसान व अग्नि प्रभावित क्षेत्रों में पर्यावरण की सुरक्षा हेतु किये जा रहे प्रयासों का अवलोकन कराने के साथ जानकारी दी जा रही है। उन्होंने कहा कि बीसीसीएल द्वारा 12 हेक्टेयर बंजर जमीन पर वृक्षारोपण किया गया है। प्रतिवर्ष 50 हेक्टेयर जमीन पर थ्री टीयर पद्धति से वृक्षारोपण किया जाता है। 1 हेक्टेयर में वृक्षारोपण पर ढाई लाख रुपये खर्च आयेंगे। इकोलॉजिकल सिस्टम से नेचुरल फॉरेस्ट का विकास का कार्य एफआरआई देहरादून की देखरेख में होना है। वन एवं पर्यावरण मंत्रालय टीम के अध्यक्ष वीपी राजा ने कहा कि कोयले का उत्पादन करना काफी जोखिम भरा कार्य है। इस कार्य में लगे अधिकारी बहुत ही अच्छा और सराहनीय कार्य कर रहे हैं। आज ऊर्जा के क्षेत्र में बहुत ही दबाव है, जबकि ऊर्जा के लिए अन्य स्रोतों पर भी खोज और प्रयास हो रहा है। उन्होंने कहा कि झरिया पुनर्वास हेतु किये जा रहे कार्यों को भी टीम द्वारा समीक्षा की जायेगी। इस मौके पर मुनीडीह महाप्रबंधक द्वारा टीम के सदस्यों को मोमेंटो प्रदान किया गया। कार्यक्रम को सफल बनाने में कोलियरी के अधीक्षक जोसेफ महापात्रा, कोलियरी प्रबंधक एके दास सहित अन्य अधिकारियों और सुरक्षाकर्मियों का महत्वपूर्ण योगदान रहा। इसके बाद टीम तेतुलमारी के लिए रवाना हो गयी, जहां ओबी डंप की 8 हेक्टेयर भूमि पर फॉरेस्ट रिसर्च इन्स्टीच्यूट देहरादून द्वारा जुलाई 2011 में किये गये वृक्षारोपण स्थल का निरीक्षण किया। उक्त स्थल पर पूर्व में खेती होती थी। बाद में बीसीसीएल द्वारा जमीन अधीग्रहण कर कोयला उत्पादन किया गया और ओबी डंप किया गया। उक्त अनुपयोगी जमीन पर 7 हजार फलदार और छायादार वृक्ष के अलावा बांस व झाड़ी लगाये गये। टीम में आये वैज्ञानिकों ने कहा कि यहां लगे वृक्ष के सूखे पत्तों से जमीन की उर्वरा शक्ति पुनः वापस आ जाती है, नाइट्रोजन मिलता है तथा ये पौधे धूलकण व प्रदूषण से बचाते हैं। इस वन से ग्रामीण बाद में फल का सेवन के साथ जलावन के लिए लकड़ी और जानवरों के लिए चारा प्राप्त कर सकते हैं। आने वाले समय में इस जगह किये गये प्रयोग को दूसरी कम्पनियां भी अपना सकती हैं। टीम ने यहां इकोलॉजिकल रेस्टोरेशन पर संतोष जताते हुए एफआरआई देहरादून तथा बीसीसीएल के प्रयास की सराहना की। उन्होंने बताया कि उत्पादन के दौरान विकृत भूमि को उपयोगी और उर्वरक बनाने के लिए उक्त कदम उठाया गया है। इससे पूर्व देहरादून में भी चूना और स्टोन वाली भूमि पर इस तरह का प्रयोग किया जा चुका है। इस मौके पर चेयरमैन वीपी राजा के साथ वाइस चेयरमैन सीआर बाबू, ... मेहता, प्रो. सीएस ... डा. सीबीएम दास, मनोरंजन हाता, सीआईएल के आईएसएल एडवाइजर आरके ..., एफआरआई के वैज्ञानिक डा. एचबी वशिष्ठ, डा. मृदुला नेगी, जेआरएस ... मुर्मू, के अलावा बीसीसीएल के डीटी पीएण्डपी अशोक सरकार, मुख्यालय के महाप्रबंधक पर्यावरण पीके साहा, कार्यक्रम के नोडल ऑफिसर संजय कुमार सिंह, सीआईएमएफआर के अजीत कुमार सिंह, सिजुआ जीएम बीसी माली, कतरास जीएम सुधीर दास, सिजुआ एजीएम जेके ..., तेतुलमारी एजेंट डी मिश्रा, मैनेजर आरके सेठ, चन्दन भट्टाचार्य, जेके झा सहित अन्य लोग उपस्थित थे।

मुनीडीह खदान में जाने को तैयार और तेतुलमारी में मिट्टी का निरीक्षण करते टीम के सदस्य। छाया: नवीन/जीतु

दैनिक भास्कर

धनबाद. सोमवार. 29 अक्टूबर, 2012

गड़बड़ी पर भड़की केंद्रीय टीम

भूमिगत खदान का लिया जायजा | केंद्रीय वन एवं पर्यावरण मंत्रालय की अप्रेजल कमेटी ने कोयलांचल का किया दौरा

भास्कर न्यूज | पुटकी/तेतुलमारी/बरोरा, धनबाद

केंद्रीय वन एवं पर्यावरण मंत्रालय की सात सदस्यीय विशेषज्ञ अप्रेजल कमेटी रविवार को पश्चिमी झरिया क्षेत्र मुनीडीह पहुंची। केंद्रीय टीम का नेतृत्व टीम के चेयरमैन वीपी राजा कर रहे थे। टीम ने मुनीडीह में कोल बेड मिथेन एवं मुनीडीह परियोजना की भूमिगत खदान का मुआयना किया। इस दौरान टीम के सदस्य फेज में भी गए और उत्पादन के अलावा सुरक्षा से संबंधित जानकारियां लीं। बीसीसीएल के निदेशक तकनीकी (ऑपरेशन) डीसी झा के नेतृत्व में क्षेत्र के महाप्रबंधक एके दत्ता ने टीम को कोल बेड मिथेन की उपयोगिता एवं खदान के अंदर की पूरी जानकारी विस्तारपूर्वक दी। टीम के सदस्य तेतुलमारी दौरे के दौरान वहां सूखे पेड़ों को देख कर नाराज हो गए और स्थिति ठीक करने के निर्देश दिए।

ऑफिसर्स क्लब में हुआ स्वागत

ऑफिसर्स क्लब, मुनीडीह में अधिकारियों का स्वागत करते हुए क्षेत्र के महाप्रबंधक एके दत्ता ने क्लब के अंदर माइंस एवं पर्यावरण से संबंधित बनाए गए मॉडल की विस्तृत जानकारी दी। दत्ता ने मुनीडीह कोल माइंस की उत्पादन क्षमता, विशेषता एवं आसपास के क्षेत्रों में प्रदूषण रोकने के लिए किए गए उपाय, खदान से निकले पानी की उपयोगिता की जानकारी टीम को दी।

तेतुलमारी में पौधों की जानकारी लेते कमेटी के सदस्य।

तेतुलमारी

मुनीडीह खदान के निरीक्षण के बाद टीम के सदस्य तेतुलमारी उत्खनन परियोजना के ओबीआर पर लगाए गए पौधों को देखने पहुंचे। गड़बड़ी देख नाराज सदस्य ने कहा कि नीम के पौधे को लगाने की जरूरत यहां नहीं है। सदस्यों ने देहरादून के विशेषज्ञों से मिल जानकारी ली।

बरोरा

अप्रेजल टीम के सदस्य दामोदा कोलियरी के निरीक्षण के बाद बरोरा क्षेत्र की मुराईडीह परियोजना का जायजा लेने देर शाम पहुंचे। इस दौरान टीम के सदस्यों को जोरदार स्वागत किया गया। स्वागत करने वालों में महाप्रबंधक पीएस मिश्रा, परियोजना पदाधिकारी एसके सिरंगी आदि शामिल थे।

सिर्फ दौरे के समय पानी का छिड़काव

केंद्रीय टीम के दौरे का विरोध करते हुए भूमिपुत्र अधिकार मंच ने कहा कि बीसीसीएल ने दौरे को देखते हुए 27 और 28 अक्टूबर को सड़कों पर टैंकर से पानी का छिड़काव किया।

पर्यावरण मंत्रालय की एक्सपर्ट टीम ने की बीसीसीएल के दावों की जांच

धनबाद | हिन्दुस्तान टीम

तीन दिनी बीसीसीएल दौरे पर धनबाद आई पर्यावरण मंत्रालय की एक्सपर्ट अप्रेजल कमेटी ने रविवार को कई क्षेत्रों का भ्रमण किया। खदानों को पर्यावरण स्वीकृति के लिए बीसीसीएल की ओर से किए गए दावों की जांच की। कमेटी के चेयरमैन वीपी राजा ने बीसीसीएल के क्रियाकलापों पर संतोष व्यक्त करते हुए कहा कि मौजूदा समय में बीसीसीएल की ओर से अच्छा काम किया जा रहा है। दामोदा में राजा ने कहा कि वन व पर्यावरण मंत्रालय द्वारा कोयला उत्खनन क्षेत्र में पहले की तरह पर्यावरण संतुलन बनाए रखने की कोशिश की जा रही है। इसी दिशा में बीसीसीएल की ओर से रेस्टोरेशन पार्क एक प्रयोग है।

कमेटी के चेयरमैन की यह टिप्पणी नये खदानों को पर्यावरण स्वीकृति मिलने की दिशा में शुभ संकेत कहा जा सकता है। इसी साल अप्रेजल कमेटी की अनुशंसा पर ही 50 से अधिक

रविवार को मुनीडीह खदान में उतरने की तैयारी में एक्सपर्ट टीम। • हिन्दुस्तान

खदानों को एनओसी मिला है। कई पाइप लाइन में हैं। इधर बीसीसीएल की ओर से कमेटी के दौरे को देखते हुए काफी सतर्कता बरती गई। दौरा स्थलों पर पानी का छिड़काव सहित सभी खनन मानकों का पालन किया गया है।

पूर्व की तरह धूल और काले डस्ट उड़ते नहीं दिखा। दौरे के दौरान बीसीसीएल के निदेशक तकनीक डीसी झा एवं अशोक सरकार टीम के साथ थे। कहा गया कि दामोदा एवं सिजुआ में चल रहे इकोलॉजिक रेस्टोरेशन कार्यक्रम से ग्रामीणों को रोजगार भी मिलेगा।

सात सदस्यीय कमेटी का नेतृत्व वीपी राजा कर रहे हैं। उपाध्यक्ष सीआर बाबू, सदस्य जे एल मेहता, जी एस रुनवाला, डॉ सी बी एस दत्त, डॉ मनोरंजन होता एवं कोल इंडिया के एडवाइजर डॉ आर के गर्ग शामिल हैं। सबसे पहले टीम कोयलानगर स्थित शहीद स्मारक पर माल्यार्पण कर मुनीडीह पहुंची। सीबीएम प्रोजेक्ट का निरीक्षण किया एवं मुनीडीह भूमिगत खदान में उतरी। ढाई घंटे तक खदान का निरीक्षण किया।

फेस तक लोग पहुंचे। इसके बाद सिजुआ एवं दामोदा में इकोलॉजिकल रेस्टोरेशन यानी पर्यावरण संरक्षण के लिए आधुनिकक वानिकीकरण कार्यक्रम का निरीक्षण किया। इसके बाद टीम मुराइडीह स्थित फायर प्रोजेक्ट पहुंची। आग के बीच खनन को देख लोग आश्चर्यचकित हुए। भूमिगत आग को करीब से टीम के सदस्यों ने देखा। मौके पर पश्चिम झरिया क्षेत्र के महाप्रबंधक एके दत्त भी थे। टीम ने चुटके के ओबी डम्प के 4 हेक्टर क्षेत्र में इकोलॉजिकल रेस्टोरेशन पार्क का निरीक्षण किया। 18 हजार पौधरोपण किया गया है।

कल आग और पुनर्वास पर होगी बात

बीसीसीएल में अग्नि प्रभावित क्षेत्र का पुनर्वास सबसे प्रमुख मुद्दा है। अप्रेजल कमेटी भी इस मामले की विस्तृत जानकारी लेगी। मंगलवार को जेआरडीए, सिंफर, आइएसएम, डीजीएमएस के साथ कमेटी की बैठक है। पुनर्वास से संबंधित सभी मुद्दों पर बात होगी। इसके अलावा बेलगढ़िया का भी टीम दौरा करेगी।

आज पर्यावरण का पाठ पढ़ेंगे कोयला अधिकारी

सोमवार को अप्रेजल कमेटी झरिया एवं राजापुर खनन क्षेत्र का दौरा करेगी। वहीं अपराह्न में कोयलानगर स्थित कम्युनिटी हॉल में बीसीसीएल के सभी एरिया के जीएम ,प्रोजेक्ट ऑफिसर आदि के साथ पर्यावरण पर चर्चा होगी।

प्रभात खबर

धनबाद, सोमवार, 29 अक्तूबर, 2012

एप्रेजल कमेटी ने लिया पर्यावरण का जायजा

टीम ने कतरास, डब्ल्यूजे एरिया मुनीडीह, दामोदा व जमुनिया कोलियरी का किया दौरा

प्रभात खबर टोली ■ धनबाद

केन्द्रीय वन एवं पर्यावरण मंत्रालय के चैयरमैन वीपी राजा के नेतृत्व में एप्रेजल कमेटी ने रविवार को बीसीसीएल के कई क्षेत्रों का दौरा कर पर्यावरण संबंधी जानकारी ली. इस क्रम में डब्ल्यूजे एरिया मुनीडीह का दौरा किया. दौरा के क्रम में कमेटी कोल बेड मिथेन प्लांट के उत्पादन तकनीकी की जानकारी ली और मुनीडीह प्रोजेक्ट खदान भी देखा. टीम ने आज मुनीडीह प्रोजेक्ट खदान का जायजा लिया. टीम करीब दो घंटे तक खदान में रही. टीम ने 500 मीटर के आठ नंबर डीप का मुआयना किया.

बरोरा क्षेत्र में किया पौधरोपण : कमेटी देर शाम बरोरा क्षेत्र की दामोदा कोलियरी पहुंची. कोल डंप के पास बनाये प्लांटेशन पार्क में पौधरोपण किया. पार्क में कुल नौ तरह के 1840 पौधे लगाये गये हैं. वीपी राजा ने पार्क को समतलीकारण करने तथा लगाये गये पौधों को सही तरह से संरक्षण करने का निर्देश प्रबंधन को दिया. पौधारोपण के बाद कमेटी ने ब्लॉक दो एवं बरोरा क्षेत्र की कोलियरियों की जानकारी ली.

दामोदा एवं जमुनिया दोनों कोलियरी जमुनिया नदी से सटी हुई है. टीम ने दोनों कोलियरियों के विस्तारीकरण का जायजा लिया. मुराइडीह अग्नि प्रभावित क्षेत्र के उत्पादन कार्य को देखा. बीसीसीएल सिजुआ क्षेत्र के तेतुलमारी ओसीपी कार्यालय के समीप इकोलोजिकल रेस्टोरेशन प्रोजेक्ट साइट का भी निरीक्षण किया. टीम ने देहरादून के वैज्ञानिक डॉ मृदुला नेगी, डॉ एचबी वशिष्ठ से इकोलोजिकल रेस्टोरेशन तथा ओवरबर्डन में विभिन्न पौधों की जानकारी ली. कमेटी में वाइस चैयरमैन डॉक्टर आरसी बाबू, जेएल मेहता, प्रोफेसर जी एस रुनवल, डॉक्टर सीबीएस दत्त, डॉक्टर मनोरंजन होटा, डॉक्टर आरके गर्ग शामिल थे. इनके साथ विशेष रूप से बीसीसीएल के तकनीकी निदेश डीसी झा, निदेशक(पीएफपी) एके सरकार के अलावा सभी क्षेत्र के महाप्रबंधक व अन्य कोल अधिकारी थे.

(इनपुट: पुटकी, केंदुआ, बाघमारा, बरोरा व तेतुलमारी प्रतिनिधि)

तेतुलमारी में रेस्टोरेशन प्रोजेक्ट साइट का दौरा करती टीम.

मुनीडीह माइंस में जाने की तैयारी में सदस्य. फोटो : प्रभात खबर

जवाब नहीं दे पाये पी कुमार

सीबीएम देखने पहुंची पर्यावरण टीम की पूछताछ के क्रम में कोल अधिकारी पी कुमार के कई सवालों का जवाब नहीं दे पाये. टीम यह जानना चाह रही थी कि फ्रैक्चरिंग के दौरान क्या कैमरा का इस्तेमाल होता है? काफी साल बीतने के बावजूद बिजली का उत्पादन कम क्यों है?

आग व भूधंसान की समस्या गंभीर : राजा

◆ मुनीडीह खदान में उतरी केंद्रीय टीम

मुनीडीह खदान पहुंची केंद्रीय टीम के सदस्य जागरण

पुटकी : केन्द्रीय वन एवं पर्यावरण मंत्रालय की एप्रेजल कमेटी ने रविवार को पश्चिमी झरिया क्षेत्र के मुनीडीह परियोजना खदान एवं कोल बेड मिथेन प्रोजेक्ट का दौरा कर इसका जायजा लिया। टीम खदान में करीब ढाई घंटे रुकी। इस मौके पर कमेटी के चेयरमैन वीपी राजा ने कहा कि झरिया कोयलांचल में आग और भूधंसान गंभीर समस्या है। ये समस्याएं राष्ट्रीयकरण के पहले माइनिंग से उत्पन्न हुई हैं। इस समस्याओं को दूर करने के लिए काफी कमेटियां भी बनी थीं और वर्तमान में झरिया एक्शन प्लान के तहत कार्य किया जा रहा है। झरिया एक्शन प्लान में अब तक क्या काम हुआ, आगे क्या करना होगा एवं प्लान की वर्तमान स्थिति आदि को समीक्षा करेंगे। बीसीसीएल में पर्यावरण के लिए किये जा रहे कार्यों में इंप्रूवमेंट हो रहा है। टीम में डा. सीआर बाबू, जेएल मेहता, डा. सीबीएस दत्त, डा. मनोरंजन होदा, डा. आरके गर्ग के अलावा मौके पर डीटी बीसीसीएल डीसी झा, एके सरकार पश्चिमी झरिया क्षेत्र के महाप्रबंधक एके दत्ता, क्षेत्रीय सुरक्षा पदाधिकारी राहुल सरकार आदि उपस्थित थे।

पहली बार तैयार हो रहा प्राकृतिक जंगल : निदेशक तकनीकी डीसी झा ने कहा कि कंपनी पर्यावरण सुरक्षा के प्रति काफी गंभीर है। बीसीसीएल में पहली बार इकोलॉजिकल रेस्टोरेशन तीन स्तरीय प्राकृतिक जंगल तैयार किया जा रहा है। सिजुआ व दामोदा में पायलट प्रोजेक्ट के तहत यह काम हो रहा है। इसमें बड़े वृक्षों के साथ छोटे और मंझोले पेड़ भी होंगे। छोटे जीव-जंतु के पनपने की भरपूर संभावना होगी।

एफआरआइ के वैज्ञानिक डॉ. मृदुला नेगी व डॉ.एचबी बशिष्ठ

मौके पर डीटी द्वय डीसी झा, अशोक सरकार के अलावा बरोरा क्षेत्र के महाप्रबंधक पीएस मिश्रा, ब्लाक दो के महाप्रबंधक सौमेन चटर्जी, एजीएम आरबी कुमार बीके दूबे, पीओ अरूण कुमार, एस के सिरंगी थे।

आज बस्ताकोला व बेलगढ़िया का दौरा

तिसरा : केंद्रीय कमेटी सोमवार को बस्ताकोला क्षेत्र के अग्निप्रभावित इलाके, ट्रेंच कटिंग स्थल व बेलगढ़िया का दौरा करेगी। प्रबंधन ने तैयारी पूरी कर ली है। राजापुर, धनुडीह, गोलकडीह, नार्थ तिसरा के कई मार्ग को समतल कराया गया। झरिया-बलियापुर मार्ग के अनेक गड्ढों की भराई की गयी है। जल छिड़काव किया जा रहा है। बस्ताकोला क्षेत्र में राजापुर व धनुडीह को प्वाइंट बनाया गया है। टीम इसी रास्ते से बेलगढ़िया जाएगी। दीवारों पर रंग रोगन कर पेड़ों की गहता वाले स्लोगन लिखे गये हैं।

प्रभात खबर
धनबाद, सोमवार, 29 अक्तूबर, 2012

झरिया की स्थिति जटिल एक्शन प्लान अहम

धनबाद ■ बीसीसीएल दौरे पर पहुंचे केंद्रीय वन व पर्यावरण मंत्रालय एप्रेजल कमेटी के चेयरमैन वीपी राजा की नजर में झरिया की स्थिति जटिल(कांपलेक्स) है. पुरानी कोलफील्ड होने की वजह से ऐसे हालात पैदा हुए हैं. केंद्र सरकार की चिंता है कि कैसे यहां के वाशिंदों का सुरिक्षत पुनर्वास किया जाये. इसके लिए तैयार किया गया झरिया एक्शन प्लान बेहद महत्वपूर्ण है. बीसीसीएल गेस्ट हाउस में बातचीत में उन्होंने जहां पर्यावरण पुनर्स्थापना(इकोवलॉजिकल रिस्टोरेशन) के लिए कंपनी की ओर से उठाये गये कदमों को सराहा. लगे हाथ उन्होंने यह भी कहा कि मंत्रालय लगातार इस पर नजर रखी हुई है. शेष पेज 12 पर

बरोरा क्षेत्र में किया पौधरोपण

- एमओइएफ एप्रेजल कमेटी के चेयरमैन वीपी राजा बोले, सरकार चिंतित, बीसीसीएल में पर्यावरण की स्थिति में सुधार

झरिया की स्थिति...

झरिया की आग से रूबरू हुए : बातचीत में डॉ राजा ने कहा- आज झरिया की आग से रूबरू होने का मौका मिला. इस बारे में पहले काफी कुछ पढ़ा और सुना था. लोग जिस हालात में यहां रह रहे हैं. वह बेहद चिंताजनक है. वैसे सरकार और कंपनी की ओर से पहल शुरू की गयी है, लेकिन इसमें तेजी लाने की आवश्यकता है. झरिया के लोगों में विस्थापन को लेकर चिंता है. इसका समाधान झरिया एक्शन प्लान के जरिए ढूंढने की जरूरत है. पर्यावरण के लिहाज से भी झरिया फायर चिंता का विषय है. इससे न सिर्फ यहां रहने वाले लोगों का नुकसान हो रहा है, बल्कि पर्यावरण पर भी असर पड़ रहा है. वन व पर्यावरण मंत्रालय ने यहां वृक्षारोपण व इकोलॉजिकल रिस्टोरेशन में विशषज्ञता की पहल की है.

दैनिक जागरण
सोमवार 29 अक्टूबर 2012 : आश्विनी पूर्णिमा, वि. 2069

बंजर पर हरियाली

- हाईपावर केंद्रीय पर्यावरण कमेटी ने देखा बीसीसीएल का पायलट प्रोजेक्ट

तेतुलमारी/निचितपुर/बाघमारा : केंद्रीय पर्यावरण व वन मंत्रालय की हाईपावर एप्रेजल कमेटी ने रविवार को बीसीसीएल की तेतुलमारी व दामोदा के घुटवे में कोयला खनन के बाद बंजर हुई जमीन पर उगाये गए प्राकृतिक जंगल का जायजा लिया। देश में पहली बार पारिस्थितिकीय पुर्नस्थापना परियोजना (इकोलोजिकल रिस्टोरेशन) के तहत यह कार्य हो रहा है। एफआरआइ देहरादून के वैज्ञानिकों की देखरेख में ओवर बर्डेन पर उगायी गई ■ शेष पृष्ठ 15 पर

संतोषप्रद कार्य : राजा

कमेटी के चेयरमैन वीपी रजा ने कहा कि बंजर भूमि में प्रयोग के तौर पर बीसीसीएल द्वारा एफआरआइ के मार्गदर्शन में किया गया पौधरोपण सराहनीय व संतोषप्रद है। यहां की सफलता के बाद कंपनी के अन्य क्षेत्रों में भी ओबी डंपों में हरियाली का प्रयास होगा।

संबंधित खबरें पेज-04 पर

बंजर पर हरियाली ...

विभिन्न प्रजातियों के पौधों व घासों को देख कमेटी के सदस्य गदगद नजर आए। वहीं विशेषज्ञों ने देशी मूल के ऐसे पौधों को लगाने की सलाह दी, जो कम समय में तैयार हो जाए। इससे भूमि में उर्वरा शक्ति के साथ पहले जैसी हरियाली आएगी। समिति ने प्राकृतिक संपदा से स्थानीय लोगों को लाभ सुनिश्चित कराने पर जोर दिया। टीम के चेयरमैन वीपी राजा समेत सभी सदस्यों ने घुटवे पार्क में पौधरोपण भी किया। बरगद, शीशम, नीम लगाने पर जोर दिया। टीम में चेयरमैन वीपी रजा, प्रो. सीआर बाबू, जेएल मेहता, डॉ. सीबीएस दत्त, प्रो. जीएस रुनवल, मनोरंजन होता, आरके गर्ग, जेके झा, अमित कुमार आदि शामिल थे। उनके साथ निदेशक द्वय डीसी झा व अशोक सरकार के अलावा महाप्रबंधक वीसी माजी, सुबीर दास, पीके साहा, एजीएम जेके बोरा, परियोजना पदाधिकारी डी मित्तल, आरके सेठ, एचके चौधरी, दिलीप सिंह, संजय कुमार आदि मौजूद थे।

कोयलांचल संवाद

धनबाद, मंगलवार 30 अक्टूबर 2012

एप्रेजल कमेटी ने भू-धंसान एवं अग्नि प्रभावित क्षेत्रों का जायजा लिया

धनबाद। केंद्रीय वन एवं पर्यावरण मंत्रालय की एप्रेजल कमेटी ने बीसीसीएल दौरे के दूसरे दिन आज कई कोलियरी क्षेत्रों का दौरा कर भू-धंसान एवं अग्नि प्रभावित क्षेत्रों का निरीक्षण किया और बीसीसीएल द्वारा आग बूझाने के लिए किए जा रहे प्रयासों की समीक्षा की। श्री बी पी राजा की अध्यक्षता वाली कमेटी के सदस्यों ने पर्यावरण संरक्षण के क्षेत्र में बीसीसीएल द्वारा किये जा रहे कार्यों पर संतोष जाहिर किया। कमेटी आज बीसीसीएल के सी के साइडिंग, राजापुर कोलियरी, बस्ताकोला क्षेत्र के भू-धंसान एवं अग्नि प्रभावित क्षेत्रों में गई और करीब से उन केंद्रों का निरीक्षण किया जहां से आग निकल रही है और भू-धंसान हो रही है। इसके अलावे इकोलोजिकल रेस्टोरेशन के लिए हो रहे कार्यों का भी जायजा लिया। इसके बाद कमेटी के सदस्य झरिया विहार बेलगडिया गये जहां उन्होंने विस्थापितों के रहन-सहन एवं बेलगडिया कालोनी में कंपनी द्वारा मुहैया की गयी सुविधाओं की जानकारी ली। सदस्यों ने बेलगडिया पुनर्वास कालोनी को देखकर अत्यंत प्रसन्नता जाहिर की। आज अपराह्न में कमेटी की मौजूदगी में ब्रह्मा कुमारी की ओर से पर्यावरण संरक्षण पर आयोजित सांस्कृतिक कार्यक्रम किया गया। कमेटी के साथ बीसीसीएल के वरीय पदाधिकारी भी थे।

आवाज

धनबाद, मंगलवार, 30 अक्टूबर 2012

कोल इंडिया की पर्यावरण टीम ने किया कोलियरियों का दौरा

बंद प्रोजेक्ट में ओबी भराई करा लगाये जाएंगे पेड़

(झरिया कयालय)

धनुडीह , तिसरा 29 अक्टूबर। कोल इंडिया के पर्यावरण विभाग की टीम ने सोमवार को बी.सी.सी.एल की कई कोलियरियों का दौरा किया और पर्यावरण पर बहुत ही गंभीरता पूर्वक निरीक्षण किया। इस दौरान धनुडीह लालटेनगंज भूमिस्थल पहुंचने पर भव्य स्वागत किया गया। इस दौरान अधिकारियों ने कहा कि फिलहाल कोयले के उत्पादन के लिए कुछ पेड़ पौधे काटे जा रहे है जिससे पर्यावरण पर खतरा बढ़ता जाएगा। जिससे प्रदूषण व्यापक पैमाने पर फैल रहा है। उन्होंने कहा कि कोयले से निकलने वाले ओ.बी.के उसी प्रोजेक्ट पर मिट्टी भराई कर पुनः पेड़ पौधा लगाया जाएगा। यहां के प्रिबंधकों से बैठकर बात चीत कर सामाधान निकाला जासकता है। पर्यावरण को अच्छा रखने के लिए जो भी बजट होगा उसे दिया जाएगा। माइन्स के बारे में पूछे जाने पर कहा कि यहां पर जहां तहां कोयले में आगलगी हुई है। कोयला जल रहा है उसपर काबू पाकर कोयला निकाला जाएगा।

पानी छिड़काव देख लोगों को हुआ अचम्भा

स्थानीय लोगों में अधिकारियों की टीम के आने से काफी हर्ष देखा गया। कारण कि अधिकारियों को आने से कमसे कम सड़क पर पानी का छिड़काव तो हुआ। यह भी एक प्रदूषण का ही कारण कहा जा सकता है। सुबह से ही झरिया-बलियापुर मार्ग पर पानी का छिड़काव किया गया था। इससे पहले तो कभी ऐसी स्थिति में पानी का छिड़काव नहीं किया गया था जो कि काफी चर्चा का विषय रहा। टीम में पी.पी.राज, सी.आर.बाबू, प्रबंधक आर.के.गर्ग, सी.बी.एस.दत्ता, मनोरंजन होण्डा के अलावे सस्ताकोला क्षेत्रीय महाप्रबंधक बी.सी. नायक, ए.के.दूबे, धनुडीह परियोजना पदाधिकारी गंगाधर महतो, कार्मिक पी.के.मिश्रा, गोलकडीह परियोजना ए.सी.मिश्रा, आर.सी.पासवान, धनुडीह ओ.पी. प्रभारी रविन्द्र क0 सिन्हा आदि मौजूद थे।

दैनिक भास्कर
धनबाद, मंगलवार, 30 अक्टूबर, 2012

एप्रेज़ल कमेटी को लोगों से प्रबंधन ने मिलने नहीं दिया

बोकापहाड़ी, आरएसपी व बेलगड़िया के लोगों ने विरोध में की नारेबाजी

भास्कर न्यूज | झरिया/तिसरा/मनतांड़ीह/बलियापुर

केंद्रीय वन एवं पर्यावरण मंत्रालय की एप्रेजल कमेटी ने सोमवार को बस्ताकोला क्षेत्र के विभिन्न स्थानों एवं बेलगड़िया टाउनशिप का निरीक्षण किया। निरीक्षण में बीसीसीएल के वरीय अधिकारियों के दल ने कमेटी को संतुष्ट करने की पूरी कोशिश की। अधिकतर स्थानों पर टीम से स्थानीय लोगों को मिलने नहीं दिया गया। इसको लेकर विरोध के स्वर उठे। एप्रेजल कमेटी सबसे पहले बस्ताकोला क्षेत्र की राजापुर परियोजना के एल सिक्स में करीब 10:20 में पहुंची। यहां प्रबंधन द्वारा

धनुडीह के लालटेनगंज में प्रबंधन के साथ भूमिगत आग की स्थिति पर चर्चा करने बैठे टीम के सदस्य।

आग पर कैसे काबू पाया जा रहा है का दृश्य दिखलाया गया। टीम ने भी दृश्य को देखा। झरिया एक्शन प्लान में व्याप्त खामियों के सवाल पर राजा ने कहा कि बीसीसीएल कुछ जरूर कर रहा है, लेकिन अभी बहुत कुछ करने की जरूरत है।

चंद मिनट में ट्रेंच कटिंग स्थल से निकल पड़े अधिकारी

झरिया के धरोहर आरएसपी कॉलेज, जलमीनार एवं झरिया-धनबाद मुख्य मार्ग बचाने के लिए बंद पड़ा ट्रेंच कटिंग स्थल पर टीम के सदस्य जरूर पहुंचे। लेकिन प्रबंधन ने यहां पर भी बड़ी चालाकी से उन्हें मैप दिखलाने में उलझाए रखा और चंद मिनट बाद उन्हें लेकर धनुडीह परियोजना के लिए रवाना हो गया।

पुलिस बल ने रोके रखा लोगों को

राजापुर परियोजना में एप्रेजल टीम निरीक्षण कर रही थी। इधर, बोकापहाड़ी के लोग एवं आरएसपी कॉलेज के छात्र बीसीसीएल प्रबंधन का विरोध कर रहे थे। वे टीम से मिलकर अपनी बातों को रखना चाहते थे। जिन्हें सीआईएसएफ, प्रबंधन के लोग एवं झरिया पुलिस ने रोके रखा। ट्रेंच कटिंग स्थल पर पानी में डूबकर रेहला की मौत हो गई थी।

भूमिगत आग देख चकित हुए वीपी राजा

टीम 11:10 मिनट पर सीकेडब्ल्यू साइडिंग पहुंची। यहां पर रैक लोडिंग को देखा। कोयला भवन से आए डीटी डीसी झा, सीएमपी अशोक सरकार, क्षेत्र के महाप्रबंधक वीपी नायक आदि से जानकारी ली।

दैनिक जागरण धनबाद, 30 अक्टूबर 2012

दहकती आग व गैस को देख कमेटी दंग

- आग रोकने व पर्यावरण संरक्षण के प्रयास पर टीम संतुष्ट

दरार से निकलती गैस की तपिश को महसूस करते कमेटी के विशेषज्ञ

कमेटी के सदस्यों से बात करते कोफीबस के प्रतिनिधि जागरण

धनसार/तिसरा : केन्द्रीय वन एवं पर्यावरण मंत्रालय की एक्सपर्ट एप्रेजल कमेटी ने सोमवार को झरिया कोयलांचल का दौरा किया। राजापुर व घनुडीह में आग की तपिश व गैस की गंध को महसूस कर टीम दंग दिखी। कमेटी के चेयरमैन वीपी राजा जब राजापुर पहुंचे तो वे बोल उठे यहां तो सल्फर डाई आक्साइड की गंध है। नियंत्रण के लिए वैज्ञानिकों के साथ विमर्श करें। फायर फाइटिंग व ओबी डंप को और बेहतर करें। अधिकारियों ने बताया कि इलाके में कई बोर होल हैं। सिंफर की टीम आग की स्थिति जानने को समय- समय पर नमूने लेती है। जल छिड़काव की आज की अच्छी व्यवस्था पर कहा कि राजा ने कहा कि यही हमेशा रहनी चाहिये।

अंग्रेजों के समय से आग : घनुडीह परियोजना की आग को देख राजा ने कहा कि यह समस्या अंग्रेजों के समय से है। कई कमेटियों ने आग की जांच की। सेटेलाइट से भूमिगत आग की छानबीन की गई है। इसे रोकना चुनौती है। बीसीसीएल की ओर से आग रोकने व पर्यावरण सरक्षण के लिये पौधरोपण व अन्य प्रयासों को संतोषजनक बताया। वन व पर्यावरण विभाग की ओर से भी काम हो रहा है। टीम सीके साइडिंग भी गई। टीम में प्रो. सीआर बाबू, जेएल मेहता, जीएस रुनवाल, डा मनोरंजन होता, डा. आरके गर्ग, डा.सीबीएस दत्त थे। बीसीसीएल के डीटी डीसी झा व अशोक सरकार, जीएम वीसी नायक, एके सिंह, आरके तिगास, एके दुबे, पी चंद्रा, एससी मित्रा, एसपी मिश्रा, एमके सिन्हा, यूके माजी, जरेडा अधिकारी गोपाल सिंह थे।

बेलगढ़िया के विस्थापितों ने बताई समस्याएं

बलियापुर : एप्रेजल कमेटी ने बेलगढ़िया झरिया विहार न्यू टाउनशिप का दौरा किया। टीम विस्थापितों की समस्याओं से रूबरू हुई। टीम का नेतृत्व कर रहे वीपी राजा ने पुनर्वासित लोगों से जानकारी ली कि पुनर्वास के पूर्व उनका रोजगार क्या था। वर्तमान में रोजी-रोटी के क्या साधन हैं। कालोनीवासियों ने कमेटी अध्यक्ष के समक्ष लालकार्ड नहीं बनने एवं बेरोजगारी की समस्या को रखा। जरेडा के गोपालजी ने लोगों को स्वरोजगार की दिशा में सरकार एवं नारी शक्ति समिति की ओर से चलाये जा रहे कार्यक्रमों की जानकारी दी।

पुनर्वास में लायें तेजी : घनुडीह परियोजना के समीप रहने वालों को देख कहा कि लोगों को विश्वास में लेकर पुनर्वास में तेजी लायें। इंसान की जान अहम है। प्रशासन के साथ हम बैठक करेंगे। स्थानीय लोगों को सही जानकारी दें।

माडा कॉलोनी को भी हटायें : कमेटी ने राजापुर में ट्रेंच कटिंग का नक्शा देखा। बंद होने का कारण पूछा तो अधिकारियों ने ट्रेंच के बारे में पूरी जानकारी देने के बाद बताया कि बोका पहाड़ी व भगतडीह के 285 आवास, माडा की पाइप लाइन, हाई टेंशन लाइन बाधक बनी है। पाइप लाइन की वैकल्पिक व्यवस्था को नब्बे लाख माडा को दे दिये गये हैं। नक्शा में ट्रेंच कटिंग स्थल के समीप की माडा कालोनी को देख टीम भड़क गई कहा कि इसे भी तो यहां से हटायें। अधिकारियों ने बताया कि माडा कालोनी के परिवारों को जल्द पुनर्वास करेंगे। राजापुर में ट्रेंच कटिंग के कारण बने तालाब में गिरकर मरने वाली बालिका रेहाना के परिजन व आरएसपी कालेज के छात्र नेता अमित कुमार टीम से मिलने गये पर पुलिस ने उन्हें टीम के पास फटकने नहीं दिया।

कमेटी से मिले कोफीबस के सदस्य

कोल फील्ड बचाओ समिति के शिव बालक पासवान व अशोक अग्रवाल ने टीम को बताया कि आग, गैस व पेड़ों की कटाई के कारण ही देश का सबसे प्रदूषित इलाका झरिया हो गया है। लोग बीमारियों से ग्रसित हो रहे हैं। बेलगढ़िया जहां पुनर्वास हो रहा है वह रहने लायक नहीं है। टीम ने अलग से वार्ता का आश्वासन दिया है।

बोकापहाड़ीवासियों ने सुनाया दर्द

बोकापहाड़ी के नसीम, मुन्ना, लुकमान, जब्बार, राजू आदि ने बस्ताकोला जीएम वीसी नायक व कुसुंडा जीएम का घेराव कर टीम से मिलाने को कहा पर श्री नायक ने यह कहकर उन्हें टाला कि समस्या समाधान के लिये हम बात कर लेंगे। तब काफिले को लोगों ने राजापुर मार्ग पर रोक लिया। झरिया पुलिस ने हटाने की कोशिश की पर वह सफल नहीं हुई। लोगों ने कहा कि गैस रिसाव के बीच रह रहे हैं। पुनर्वास को भूली का विकल्प दिया था वहां मकान नहीं दिया गया। धनबाद इलाके में जमीन दे दें हम चौबीस घंटे में बोका पहाड़ी खाली कर देंगे तब डीसी झा ने कहा कि 31 अक्टूबर को कोयला भवन में इस मुद्दे पर वार्ता करेंगे।

हिन्दुस्तान

धनबाद • मंगलवार • 30 अक्तूबर 2012

बोकापहाड़ी-बेलगढ़िया के लोगों का फूटा गुस्सा

राजापुर परियोजना में सोमवार को निरीक्षण करती एक्सपर्ट टीम।

अप्रेजल कमेटी के समक्ष सोमवार को विरोध-प्रदर्शन करते ग्रामीण।

धनबाद/बलियापुर | हिन्दुस्तान टीम

बोकापहाड़ी एवं बेलगढ़िया के लोगों ने एक्सपर्ट टीम के समक्ष विरोध जताया। काफी देर तक अधिकारियों को घेर आपबीती सुनाई और नारेबाजी भी की। बोका पहाड़ी के लोगों ने भूली में बसाने या फिर घर के लिए जमीन और पैसे की मांग की।

आक्रोश को शांत करते हुए डीटी आपरेशन डीसी झा ने 31 अक्टूबर को वार्ता के लिए कोयला भवन बुलाया है। टीम के आगमन की सूचना मिलते ही लोग जमा हो गए और लौटते वक्त टीम मेंबरों को घेर दुखड़ा सुनाने लगे। बोका पहाड़ी के लुकमान अंसारी, वसीर अंसारी, कुनैन अंसारी, डा. जब्बार, अनवर अंसारी, रहमत अंसारी, नासिर, मो. नसीम, राजू, रजिया खातून, उमेश, अमित सिंह, सकिला खातून सहित काफी संख्या में महिला, पुरुष थे। ट्रेंच कटिंग पर बीसीसीएल अधिकारियों से कई सवाल किए गए।

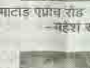
पूछा कि बोका पहाड़ी और अन्य बस्तियों के रहते ट्रेंच कटिंग कैसे शुरू किया गया। शुरू किया गया तो शिफ्टिंग क्यों नहीं की गई। ट्रेंच कटिंग को बीच में ही क्यों रोक दिया गया। इसपर डीटी झा ने कहा कि पाइप लाइन और आवास शिफ्ट होने के बाद ट्रेंच कटिंग का काम शुरू कर दिया जाएगा।

इधर बेलगढ़िया में भी अप्रेजल कमेटी के समक्ष विस्थापितों का उबाल देखने को मिला। सामुदायिक विकास भवन में कार्यक्रम अभी शुरू भी नहीं हुआ था कि सुरक्षा गार्डों द्वारा अंदर प्रवेश करने से रोके जाने पर कालोनीवासी भड़क उठे। गुस्साए लोग रोड पर आ गए। लोदना क्षेत्र के जीएम आरके निगम ने समझाने- बुझाने का प्रयास किया। लोगों ने निगम को आधे घंटे तक घेरे रखा। जरेडा प्रभारी गोपाल जी व बीसीसीएल प्रबंधन के खिलाफ जमकर नारेबाजी की।

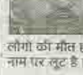
टीम के वहां से वापस लौटने तक नारेबाजी चलती रही। लोगों का कहना था कि जरेडा व बीसीसीएल प्रबंधन कोलोनीवासियों के साथ वादाखिलाफी कर रहे हैं। कोलोनी में सुविधाएं नदारद हैं। चेयरमैन ने लोगों को समस्याओं के निदान का भरोसा दिया।

कहते हैं बेलगढ़िया के लोग

बीसीसीएल व जरेडा कॉलोनी वासियों से धोखा कर रहे हैं। कोई सुनने वाला नहीं है। कॉलोनीवासी समस्याओं से त्रस्त हैं। -अजय पासवान



कॉलोनी में श्मशान, कब्रिस्तान तक नहीं है। रोजगार के साधन नहीं है। बरमसिया-कुसमाटांड एप्रोच रोड जर्जर है। -महेश साव



कॉलोनी में सुविधाएं नदारद है। आर्थिक संकट के कारण कई लोगों की मौत हो गई है। पुनर्वास के नाम पर लूट है। -नन्दकिशोर पांडेय

हम अधिकारियों को अपनी व्यथा सुनाना चाहते थे, पर हमें उनसे मिलने तक भी नहीं दिया गया। भला हमारी समस्या कौन सुनेगा। -प्रमोद चौरसिया

हिन्दुस्तान
धनबाद • मंगलवार • 30 अक्तूबर 2012

झरिया की हवा में भी खतरा

धनबाद | हिन्दुस्तान टीम

झरिया कोयला क्षेत्र के राजापुर एवं घनुडीह में गोफ, गैस और धुआं देख पर्यावरण मंत्रालय की एक्सपर्ट अप्रेजल कमेटी सोमवार को आश्चर्यचकित रह गई।

आग की स्थिति, फायर फाइटिंग प्रोजेक्ट तथा गैस रिसाव के बीच बेदम जिंदगी को देख कमेटी के अध्यक्ष डॉ. बीपी राजा ने बीसीसीएल के अधिकारियों को कई निर्देश दिए। टीम के विशेषज्ञों ने कहा कि सल्फर डाइ-आक्साइड, कार्बन मोनोआक्साइड, कार्बन डाईआक्साइड गैस खतरनाक हैं। बीसीसीएल तथा झारखंड सरकार को इस दिशा में गंभीर पहल करनी चाहिए। कैंसर सहित कई रोग हो सकते हैं।

टीम ने माना

- सल्फरडाइऑक्साइड समेत कई गैसों से स्वास्थ्य को खतरा
- जांच के लिए टीम ने पत्थर और घास के सैंपल लिए
- दहकते ओबी को देख भड़की एक्सपर्ट टीम


भ्रमण करती एक्सपर्ट अप्रेजल कमेटी।

डॉ. राजा ने कहा कि इन मुद्दों पर वैज्ञानिकों की सलाह ली जाएगी। राजापुर परियोजना में जलते चट्टान का टुकड़ा व घनुडीह से घास का सैंपल लिया। टीम घनुडीह साइडिंग, घनुडीह पांच नंबर पर भी गई। दहकते ओबी को देख डॉ. राजा ने सवाल किया कि आग बुझा कर डंप क्यों नहीं करते, आग फैल सकती है।

झरिया शहर की तरफ नहीं बढ़ रही है आग : अप्रेजल कमेटी के सवाल पर बीसीसीएल ने बताया कि जलाशय के पानी के कारण आग झरिया शहर की तरफ नहीं बढ़ रही है। कोलफील्ड बचाओ समिति अध्यक्ष अशोक अग्रवाल और शिव बालक पासवान बीपी राजा से मिले। • **लोगों का गुस्सा फूटा-पेज 6**

प्रभात खबर | कोयला जगत
धनबाद, मंगलवार, 30 अक्तूबर, 2012

बीसीसीएल के 17 प्रोजेक्ट को मंजूरी : चेयरमैन

एप्रेजल कमेटी ने किया कोलियरियों का निरीक्षण

प्रतिनिधि ■ झरिया/बरसाकोला

कोयला को बचाने व इसे सावधानीपूर्वक निकालने के लिए बीसीसीएल द्वारा भेजे गये 17 परियोजनाओं के प्रोपोजल को मंजूरी देना जरूरी हो गया है. टीम लौटते ही सबसे पहले यह काम करेगी. यह बातें इएसी व एमओइएफ के चेयरमैन बीपी राजा ने घनुडीह परियोजना के निरीक्षण के क्रम में लालटेनगंज में प्रेसवार्ता में कहीं. श्री राजा ने कहा कि टीम ने आग की गर्मी मापी है. इसमें आग के साथ कौन-सी गैस है. इसे भी जांचा गया. आग स्थल पर कार्बन मोनोऑक्साइड, कार्बन डाइऑक्साइड गैस का असर है. इससे आसपास रहने वाले लोगों की सेहत पर असर पड़ेगा. इन्हें हटाने की योजना है. गैर बीसीसीएल लोगों को झरिया विहार बेलगड़िया टाउनशिप में बसाया जा रहा है. कर्मियों के प्रति कंपनी की जवाबदेही बनती है कि उन्हें कहां क्वार्टर उपलब्ध कराया जायेगा? आग से होने वाले प्रदूषण से बचने के लिए पौधरोपण जरूरी है. इसकी जवाबदेही सभी की बनती है. वैसे बीसीसीएल के नन कोल बेयरिंग एरिया में अधिक से अधिक पौधा लगाना होगा. आरएसपी कॉलेज व झरिया शहर को बचाने के लिए बीसीसीएल के पास कौन-सी कार्ययोजना है? घनुडीह में बचे गैर बीसीसीएलकर्मियों को हटाने सहित अन्य बातों पर 30 अक्तूबर को बैठक में विस्तृत चर्चा की जायेगी.


बेलगड़िया कॉलोनी में नारेबाजी करते लोग व निरीक्षण करते टीम के सदस्य.


फोटो | प्रभात खबर

बेलगड़िया टाउनशिप का लिया जायजा

बलियापुर ■ चेयरमैन बीपी राजा के नेतृत्व में एप्रेजल कमेटी ने बेलगड़िया टाउनशिप का जायजा लिया. टीम ने कॉलोनी की बिजली, पानी आदि समस्याओं की जानकारी ली समस्याओं के समाधान का भरोसा दिलाया. मौके पर एरिया दस के जीएम आरके निगम, एरिया नाइन के जीएम बीसी नायक, डीपी अशोक सरकार, बीसीसीएल नारी शक्ति समिति की महिलाएं मौजूद थी. टीम के बेलगड़िया कॉलोनी पहुंचते ही कॉलोनीवासियों ने हंगामा शुरू कर दिया. सैकड़ों की संख्या में लोग बीसीसीएल व जेआरडीए के खिलाफ जम कर नारेबाजी की. कॉलोनीवासियों का कहना था कि चेयरमैन के आगमन को लेकर लोगों को बीसीसीएल व जेआरडीए ने कोई जानकारी नहीं दी. मौके पर अजय पासवान, नंदकिशोर पांडेय, चंदन सिंह, कुंदन सिंह, शिवशंकर मिस्त्री, दिनेश दास, विनोद दास, संजय रवानी, पुन्नू अंसारी, हारू अंसारी, नईम अंसारी, मो शमीम मौजूद थे.

साइडिंग व प्रोजेक्ट का निरीक्षण

टीम राजापुर परियोजना, घनुडीह परियोजना डीबी क्वायरी, सीके साइडिंग घनुडीह पहुंची. उसने रैक से कोयला ट्रांसपोर्टिंग के बारे में जानकारी ली. टीम को बताया गया कि अधिकतर कोयला पावर प्लांट व वाशरी को भेजा जाता है. इसमें कोयला की गुणवत्ता पर विशेष ध्यान दिया जाता है. गड़बड़ी की सूचना या शिकायत पर तुरत कार्यवाही की जाती है. कोल डस्ट को उड़ने से रोकने के लिए सड़क, हॉल रोड, साइडिंग में पानी का स्प्रे कराने की बात भी टीम को बतायी गयी. जानकारी बीसीसीएल के डीटीओपी डीसी झा व बरसाकोला क्षेत्र के महाप्रबंधक बीसी नायक ने टीम को दी.

आग व गैस रोकने के लिए वैज्ञानिक तरीका

चेयरमैन श्री राजा ने राजापुर परियोजना के दौरे के क्रम में कहा कि आग व गैस रोकने के लिए वैज्ञानिकों की राय लेना सबसे जरूरी है. आग पुरानी है. बीसीसीएल ने जो कदम उठाया है, उससे आग पर पूर्णतः रोक लगायी जा सकती है. टीम झरिया शहर की ओर बढ़ रही भूमिगत आग पर काबू पाने के लिए हो रहा ट्रेंच कटिंग स्थल पर भी गयी. वहां सदस्यों ने नक्शा का अवलोकन किया और भावी योजना की जानकारी ली. डीटी ओपी डीसी झा ने टीम को बताया कि कटिंग सीएमआरआइ की गाइडलाइन पर हो रही है, जो एक हजार चालीस मीटर लंबा व 70 मीटर गहरा है.

ग्रामीणों ने टीम को घेरा

टीम के सदस्यों को बोका पहाड़ी वासियों ने घेर लिया. उन्होंने अपना व मसजिद का हाल बताया. इस पर डीटी श्री झा ने 31 तारीख को उन्हें अपने कार्यालय बुलवाया. इस दौरान लुकमान मियां, रहमत अली, नासिर, राजकिशोर पांडे, शंकर पांडे, आशा खातून, रेखा देवी, शहजादी,जेबुन निशा, शकीला खातून मौजूद थी.

माडा पाइप का मामला सरकार के पास

पाइप लाइन हटाने के लिए बीसीसीएल ने माडा को 92 लाख रुपये अगस्त माह दिये. इसका टेंडर कराने के लिए माडा ने झारखंड सरकार को योजना बना कर भेज दिया है. जल्द ही टेंडर हो जायेगा.

समस्या से अवगत कराया

झरिया कोलफिल्ड बचाओ समिति के अध्यक्ष अशोक अग्रवाल व उपाध्यक्ष शिवबालक पासवान ने एप्रेजल कमेटी को बोकापहाड़ी में भूमिगत आग, गैस रिसाव व विस्थापन की भयावह स्थिति से अवगत कराया. मौके पर बोकापहाड़ी के मो. लुकमान, मो. गाजी मिस्त्री, मो. असगर, डॉ. जब्बार, मो. रहमत अंसारी, मो. नासिर अंसारी, मो. राजू मौजूद थे.

टीम में जो लोग शामिल थे

वाइस चेयरमैन प्रो सीआर बाबू, सदस्य जेएल मेहता, डायरेक्टर एमओइएफ डॉ मनोरंजन होता, सदस्य इएसी व एमओइएफ प्रो. जीएस र नवाल, एडवाइजर सीआइएल डॉ आरके गर्ग, सदस्य इएसी व एमओइएफ डॉ सौवीएस दत्ता कोलकाता व कुसुंडा क्षेत्र के जीएम एके सिंह, लोदना जीएम आरके निगम, बरसाकोला जीएम बीसी नायक, एजीएम पी चंद्रा, वरीय प्रबंधक कार्मिक व प्रशासन एके दुबे, जीएम एक्सप्लोरेशन एसएस झा, एरिया मैनेजर इएंडएम एमके दास, सेल्स मैनेजर एसके बोस, ओम नारायण सिंह, घनुडीह के एजीएम गंगाधर महतो, गोलकडीह के उप महाप्रबंधक एससी मिश्रा, पीएम पीके मिश्रा, बीबी सिंह, अजय कुमार, रामसागर शामिल थे.

बचते रहे बीसीसीएल अधिकारी : कमेटी ने राजापुर परियोजना के एल सिक्स पैच में फायर फाइटिंग, भूमिगत व ओबी से गैस रिसाव का अवलोकन किया. इस दौरान आरएसपी छोर से ट्रेंच कटिंग के औचित्य व इसके वैज्ञानिक आधार पर कई सवाल पूछे. सदस्यों ने लोगों को बगैर हटाये ट्रेंच कटिंग शुरू करने पर भी कई सवाल किये. लेकिन बीसीसीएल के अधिकारी हर सवाल का जवाब देने से बचते रहे.

बिहार ऑबजर्वर, धनबाद 31 अक्तूबर, 2012 बुधवार

कोयलांचल में पर्यावरण रखें संतुलित : डॉ. वीपी राजा

पर्यावरण की टीम ने की सीएमडी टीके लाहिड़ी के साथ बैठक झरिया की स्थिति खतरनाक

धनबाद : दिल्ली से आयी पर्यावरण एवं वन मंत्रालय की जांच टीम के चैयरमैन वीपी राजा ने कहा है कि कोयलांचल क्षेत्रों में पर्यावरण को संतुलित रखना जरूरी है। प्रदूषण पर काबू पाना अति आवश्यक है। बीसीसीएल की विभिन्न कोलियरियों में कोयला उत्पादन के क्रम में हरे पेड़ों को नष्ट किया जा रहा है। इससे क्षेत्र में पर्यावरण असंतुलित होने की आशंका दिखाई दे रही है। जहां आउटसोर्सिंग के जरिए कोयला निकाला जा रहा है वहां ओबी डंप किया जा रहा है। उन्होंने ओबी वाले क्षेत्रों में पेड़ पौधे लगाने का निर्देश बीसीसीएल को दिया है। श्री राजा ने कहा कि झरिया की स्थिति दिनों दिन खराब होती जा रही है। वह अग्नि प्रभावित क्षेत्र हो गया है। मास्टर एक्शन प्लान के तहत लोगों का विस्थान शीघ्र होना चाहिए। झरिया क्षेत्र अग्नि प्रभावित होने के कारण वहां की वायु प्रदूषित हो गयी है। विभिन्न प्रकार की गैसे वहां निकल रही है। गैसों से आबादी को नुकसान पहुंच रहा है। सुरक्षा की दृष्टिकोण से लोगों को वहां से हट जाना ही बेहतर है। मंगलवार को कोयला भवन के सभागार में टीम के चैयरमैन डॉ. वीपी राजा पत्रकारों को संबोधित कर रहे थे। इसके पहले टीम के सभी सदस्यो ने बीसीसीएल के सीएमडी टीके लाहिड़ी के साथ बैठक की। बैठक में टीम के चैयरमैन डॉ. वीपी राजा ने कोयलांचल में पर्यावरण संतुलित रखने पर जोर देते हुए ओबी डंप पर अधिक से अधिक पेड़ लगाने का निर्देश बीसीसीएल पदाधिकारियों को दिया है। बसीसीएल में तीन दिनों के दौरे पर आयी पर्यावरण एवं वन मंत्रालय की जांच टीम ने सीएमडी के साथ बैठक कर मंगलवार को दिल्ली वापस लौट गयी। बैठक में बीसीसीएल की ओर से सीएमडी टीके लाहिड़ी, निदेशक बीसी झा समेत अन्य पदाधिकारी, जबकि पर्यावरण टीम की ओर से वीपी राजा (चैयरमैन), प्रो. सीआर बाबू, डॉ. जीबीएस दत्त, जीएस रेन्डव, जीएस मेहता, जेएल मेहता आदि उपस्थित थे। पर्यावरण की जांच टीम ने बीसीसीएल के प्रायः सभी कोलियरियों में पर्यावरण की जांच की। टीम ने ओबी डंप पर लगाए पेड़ों का भी निरीक्षण किया। जांच टीम रविवार को तेतुलमारी कोलियरी पहुंची। जहां करीब 8 हेक्टेयर ओबी डंप (ओभर बर्डेन) पर लगाए गए 7 हजार पेड़ों का निरीक्षण किया। निरीक्षण के दौरान 2 हजार पेड़ उचित रख रखाव के अभाव में नष्ट पाया गया। ऐसा दिल्ली से आयी पर्यावरण टीम के सदस्यों ने बताया। ओबी डंप पर देहरादून के फोरेस्ट रिसर्च इन्स्ट्रीच्यूट (एफआरआई) द्वारा वर्ष 2011 में तकरीबन 7 हजार फलदार के पौधे लगाया गया था। तीन सालों तक पौधों की देखभाल की जिम्मेवारी एफआरआई को सौपी गयी थी। बीसीसीएल में यह पहला प्रयोग है, जब ओबी डंप पर हरे पेड़ उगाया जा रहा हो। ऐसा पर्यावरण को संतुलित रखने के उदेश्य से किया जा रहा है। विभिन्न कोलियरी क्षेत्रों में आउटसोर्सिंग का काम चल रहा है। आउटसोर्सिंग से निकलने वाला मिट्टी, पत्थर तथा छाई आदि ओबी कहलाता है। उसे खदानों के आसपास गिराया जाता है। पर्यावरण विभाग ने ओबी डंप पर हरे पेड़ उगाकर क्षेत्र में पर्यावरण संतुलित कायम रखने का प्रयोग किया है। एफआरआई की ओर से डॉ. एचबी वशिष्ट, मृदुला नेगी तथा एडमीन मुर्मू आदि मौजूद थे।

आज

बुधवार ३१ अक्तूबर २०१२ सौर १४ कार्त्तिक सं. २०६९ वि.

मंत्रालय को सौंपेंगे रिपोर्ट: राजा

- उड़ती धूल से कैंसर का खतराः दत्त
- आग पर बंद हो गयी राजनीतिः लाहिड़ी
- अग्नि प्रभावित क्षेत्रों का सर्वे पूर्ण
- कटघरे में जेआरडीए

धनबाद। कोयला भवन के सभागार में आज केन्द्रीय पर्यावरण एवं वन मंत्रालय की एप्रेजल कमिटी के अध्यक्ष **बीपी राजा** ने पत्रकारों के साथ अनौपचारिक बातचीत के दौरान बीसीसीएल के कार्यों की प्रशंसा की तथा कहा कि डा. तापस कुमार लाहिड़ी के नेतृत्व में नये इनोशियम शुरू हुआ है। उन्होंने कहा कि पहले दिन के दौरे में तीन घंटे तक मुनीडीह के अण्डरग्राउण्ड माइंस का निरीक्षण किया। पूरा एरिया का दौरा करने के बाद उन्होंने संतोष जाहिर की। उन्होंने कहा कि दो इकोलॉजिकल रेस्टोरेशन पर हस्ताक्षर हुआ था, जिसमें बीसीसीएल के साथ एमओयू किया गया। दूसरे साइड में कमिटी के सदस्य प्रो. सीआर बाबू का इकोलॉजिकल रेस्टोरेशन होता है। ओबी डम्प के साइड में इकोलॉजिकल रेस्टोरेशन का कार्य ठीक-ठाक देखा गया। उन्होंने कहा कि पहले एक ही किस्म का पेड़ लगाया जाता था, लेकिन इकोलॉजिकल रेस्टोरेशन एक दूसरा तरीका है। पेड़ ऐसा हो, जिसमें बाहरी पक्षी भी आकर शरण ले सकें। इस क्षेत्र में बीसीसीएल का सराहनीय कार्य है। **डा. सीबीएस दत्त** ने पूछे गये सवाल का जवाब देते हुए कहा कि सबसे पहले उड़ती हुई धूल से कैंसर जैसी बीमारियां फैलने की आशंका है, क्योंकि कुछ गैस जो ऑक्सीजन साइज का बनता है, उसी में ऑक्सीजन भी बढ़ जाता है। बीसीसीएल के **सीएमडी तापस कुमार लाहिड़ी** ने कहा कि झरिया बारूद के ढेर पर पहले था, लेकिन अब वैसी स्थिति न के बराबर है। आग पर अब राजनीति भी होनी बन्द हो चुकी है। पुनर्वास के सवाल पर उन्होंने जेआरडीए को आड़े हाथों लेते हुए कहा कि जबतक जेआरडीए अपने पैरों पर खड़ा नहीं होती, तबतक लोगों को अग्निप्रभावित क्षेत्र से बाहर निकालकर बसाने का सपना पूरा नहीं होगा। उन्होंने कहा कि अग्निप्रभावित क्षेत्रों का सर्वे भी हो चुका है, लेकिन लोग अच्छे ढंग से जीवन जीने की बात को समझ ही नहीं पा रहे है। आग, धुंआ, गैस का खतरा पालने की क्या जरूरत है। उक्त मौके पर बीपी राजा एवं श्री लाहिड़ी के अलावे ईएसी पर्यावरण के जेएल मेहता, प्रो. जीएम रूनवाल, डा. सीवीएस दत्त, डा. एम मेहता, डा. आरके गर्ग, सतीशचन्द्र राय, प्रशांत कुमार, दिनेशचन्द्र झा, अशोक सरकार, ए कुमार, डा. ए सिन्हा, प्रो. डीसी पणिग्रहि, एम रजक बीसीसीएल के जनसम्पर्क प्रमुख आरआर प्रसाद सहित अन्य उपस्थित थे।

एप्रेजल कमिटी के साथ बैठक में शामिल डीसी, सीएमडी, डीटी व अन्य।

कई विभागों के साथ एप्रेजल कमिटी की बैठक

धनबाद। आज बीसीसीएल के अध्यक्ष सह प्रबंध निदेशक तापस कुमार लाहिड़ी, धनबाद उपायुक्त प्रशांत कुमार, डयूटी डीजी, सेन्ट्रल जोन, डीजीएमएस, डिविजनल रेलवे मैनेजर, चेयरमैन झारखंड, निदेशक आईएसएम, निदेशक सिम्फर, डीएफओ, आरईओ जेएमपीसी, जेआरडीए प्रबंधक गोपालजी के साथ बैठक हुई, जिसमें 11 मुद्दों पर चर्चा की गयी तथा उसमें सुधार लाने को पेशकश की गयी। उन्होंने कहा कि इसके उपरान्त वे अपने सदस्यों के साथ बैठक कर मंत्रालय को स्थिति का रिपोर्ट सौंपेंगे। श्री राजा ने कहा कि झरिया मास्टर प्लान के

- 11 मुद्दों पर हुई चर्चा
- जरेडा की कार्य में तेजी का निर्देश

इम्प्लीमेन्टेशन को बढ़ाना पड़ेगा, क्योंकि जेआरडीए द्वारा कराये जा रहे कार्यों का प्रवाह काफी धीमा है। उन्होंने कहा कि पुनर्वास बहुत ही मुश्किल काम है। उनकी पूरी देखभाल करना पड़ती है। कार्य में तेजी लाने के लिए झरिया कमिटी के सलाह को भी मानना पड़ेगा। श्री राजा ने कहा कि उक्त मुद्दे पर ज्यादा टिप्पणी करना उचित नहीं होगा। वन विभाग भी अपना काम ठीक कर रहा है। उनसे चर्चा जरूरी है और डा. गर्ग से बातचीत किया जायेगा। नये प्रोजेक्ट टेक मास्टर प्लान खोलने के सवाल पर श्री राजा ने कहा कि पहले दूसरे परिणाम क्या हो सकता है, उसको देखना पड़ेगा। अग्नि प्रभावित क्षेत्र तथा आग के सवाल पर उन्होंने कहा कि काफी खतरा है।

दैनिक भास्कर

धनबाद. बुधवार, 31 अक्टूबर, 2012

फायर एरिया में लोगों का जीवन देख आश्चर्यचकित रह गई एप्रेजल कमेटी, कहा

पुनर्वास योजनाओं की रफ्तार काफी धीमी

भास्कर न्यूज | धनबाद

केंद्रीय पर्यावरण एवं वन मंत्रालय की हाईपावर एप्रेजल कमेटी बीसीसीएल के फायर एरिया को देखकर आश्चर्यचकित रह गई। कोयला भवन में बातचीत के दौरान कमेटी के सदस्यों ने 27 से 30 अक्टूबर तक अपने धनबाद प्रवास के अनुभवों को पत्रकारों के समक्ष बांटा। अपने विजिट के फाइंडिंग पर चर्चा करते हुए कहा कि फायर एरिया में लोग मुश्किल में जी रहे हैं। वहां कभी भी बड़ी दुर्घटना हो सकती है। जबकि पुनर्वास योजनाओं की गति काफी धीमी है।

कमेटी के चेयरमैन बीपी राजा के अनुसार आग पर जिंदगी देखने का उनका यह पहला मौका था। यह अपने आप में एक आश्चर्य है। बकौल राजा, लोग वहां कैसे रहते हैं, मैं इसकी कल्पना करते हुए भी सिहर उठता हूं। काफी खतरनाक तरीके से जी रहे हैं लोग। कभी भी वे बड़ी दुर्घटना के शिकार हो सकते हैं। इसके अलावा फायर एरिया से निकलने वाली जहरीली गैसों से उन्हें कैंसर या उससे भी खतरनाक किसी बीमारी हो सकती है। इस मुद्दे पर गंभीरता से विचार करते हुए ठोस निर्णय लेने की जरूरत है। पुनर्वास को लेकर की गई अब तक की पहल का नाकाफी बताते हुए राजा ने कहा कि फायर एरिया से सुरक्षित स्थान पर लोगों को शिफ्ट करने की गति काफी धीमी है। जरेडा की कार्यप्रणाली पर सवाल खड़ा करते हुए उन्होंने जरूरत के हिसाब से उसकी रफ्तार को काफी कम बताया। राजा के अनुसार जरेडा में कमियों की घोर कमी है। पुनर्वास के कार्य में यह एक बड़ी समस्या है।

कोयला भवन में एप्रेजल कमेटी के सदस्यों के साथ बीसीसीएल के सीएमडी।

कमेटी के मुद्दों को मोड़ दिया अतिक्रमण की ओर

पुनर्वास के मुद्दे को बीसीसीएल के सीएमडी टीके लाहड़ी ने अतिक्रमण की ओर मोड़ दिया। उन्होंने अतिक्रमण पर कड़ी प्रतिक्रिया देते हुए कहा कि आग को चुनावी मुद्दा बना दिया गया है। यहां इसे आधार बनाकर चुनाव लड़ी जाती है। फायर एरिया में अवैध तरीके से रह रहे लोगों पर कड़ी प्रतिक्रिया व्यक्त करते हुए उन्होंने कहा कि लोगों को स्वयं कोल बैरिंग एरिया से दूर चले जाना चाहिए, ताकि उनका जीवन सुरक्षित हो सके। जब अवैध तरीके से ही रहना है, तो फायर एरिया क्यों। किसी भी सरकारी या अन्य किसी जमीन पर रह सकते हैं। बीसीसीएल अपने स्तर से उनके पुनर्वास का प्रयास कर रही है। लेकिन इसमें समय लगेगा।

HINDUSTAN TIMES, RANCHI
WEDNESDAY, OCTOBER 31, 2012

Jharia rehabilitation delay annoys central govt team

UNHEALTHY Experts say the gas coming out of mines can cause health hazards

HT Correspondent
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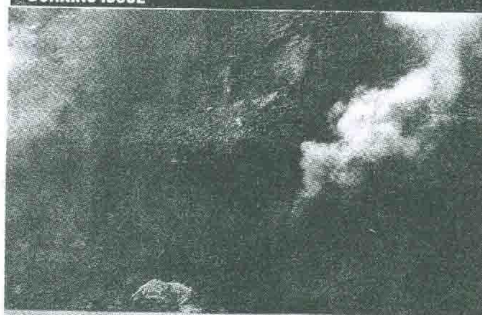
DHANBAD: The Expert Appraisal Committee (EAC) under Union forest and environment ministry has expressed disappointment over the delay in implementation of rehabilitation work undertaken by the Jharia Rehabilitation and Development Authority (JRDA) under the multi-crore Jharia Action Plan (JAP).

The entire Jharia area is polluted due to emission of poisonous gases from the underground mines, said the EAP members who visited the fire affected areas of the Bharat Coking Coal Limited (BCCL).

Committee chairman Dr PY Raja told the mediapersons on Tuesday that the committee is going to send its recommendations to the forest and environment ministry that in turn would refer the matter to the Jharkhand government. The staff strength that the authority requires to implement the project is also not enough and hence this could also be one of the reasons for the rehab work getting delayed. Moreover, the plan is also not that strong as it has to rehabilitate atleast a lakh people and that needs a proper planning," he said.

BURNING ISSUE



The residents of Jharia are living on a boiling cauldron. FILE PHOTO

- The entire Jharia area is polluted due to emission of poisonous gases from the underground mines, said the EAP members who visited the fire affected areas of the Bharat Coking Coal Limited (BCCL).
- Committee chairman Dr PY Raja told the mediapersons on Tuesday that the committee is going to send its recommendations to the forest and environment ministry that in turn would refer the matter to the Jharkhand government.

Dr Raja said that after visiting the underground fire-affected localities of Jharia, he realised in what difficult situation the residents were living their lives.

Another committee member Dr CBS Dutta said several gases that are coming out of the fire-hit locations could turn poisonous when mixes with oxygen. It can also cause skin cancer besides other ailments.

The EAC also expressed satisfaction over successful implementation of the ecological restoration projects being taken up by the BCCL with the help of Forest Research Institute, Dehradun.

Dhanbad deputy commissioner Prashan Kumar, BCCL chairman-cum-managing director PK Lahari, general managers of BCCL and JRDA officials were present during the meeting with the EAC.

■ झरिया पुनर्वास पर बैठक में बोले एप्रेजल कमेटी के चेयरमैन वीपी राजा

जेआरडीए को मजबूत बनाना होगा

मुख्य संवाददाता ■ धनबाद

समीक्षा बैठक में उपस्थित वीपी राजा, डीसी प्रशांत कुमार, बीसीसीएल के सीएमडी टीके लाहिड़ी व अन्य.

केंद्रीय वन एवं पर्यावरण मंत्रालय की एक्सपर्ट एप्रेजल कमेटी ने झरिया पुनर्वास विकास प्राधिकार (जेआरडीए) को और संसाधनयुक्त व सक्षम बनाने की सलाह दी है. मंगलवार को कोयला भवन में जेआरडीए बोर्ड के साथ समीक्षा बैठक में कमेटी के चेयरमैन वीपी राजा ने कहा कि पुनर्वास का सारा दारोमदार जेआरडीए पर है. इसे मजबूत किये बिना पुनर्वास योजना में तेजी नहीं लायी जा सकती. कमेटी बीसीसीएल के दो दिवसीय दौरे पर आयी हुई थी. आज अंतिम दिन झरिया पुनर्वास मसले पर बैठक हुई.

पुनर्वास आसान नहीं

चेयरमैन ने कहा- वे जेआरडीए की स्थिति का जिक्र केंद्र सरकार को सौंपी जाने वाली रिपोर्ट में करेंगे. राज्य सरकार भी जेआरडीए को सशक्त बनाने के लिए गंभीरता से सोचे. झरिया पुनर्वास का काम आसान नहीं है क्योंकि इसका सीधा सरोकार लोगों से है. यहां केवल घर नहीं खाली कराने हैं बल्कि वहां के लोगों के जीविकोपार्जन की भी व्यवस्था करनी होगी. इसके लिए जेआरडीए को मजबूत करने की जरूरत है. कमेटी की कोशिश होगी कि अपनी रिपोर्ट के जरिए वह झरिया के लोगों में विश्वास पैदा करे.

झरिया का विशिष्ट इतिहास

[illegible] बोले- झरिया का विशिष्ट इतिहास है. यह यहां आकर देखने पर पता चला. कमेटी झरिया की जमीनी सच्चाई से रू-ब-रू हुई. कमेटी ने लोगों से भी मुलाकात की ताकि उनमें विश्वास [illegible] जा सके. उनकी राय भी रिपोर्ट का महत्वपूर्ण हिस्सा होगी. पर्यावरण संबंधी मसलों को सुलझाने के लिए जन सुनवाई (पब्लिक हियरिंग) का प्रावधान किया है. इसका एक ही मकसद है कि लोगों के विचार, उनकी परेशानियां जानी जायें. उन्होंने यह भी कहा कि मुंबई की झोपड़पट्टी को खाली कराने के लिए छह साल का समय लग गया. इसलिए विस्थापन के मुद्दे पर भी संयम, सोच-समझ व सभी बिंदुओं को ध्यान में रख कर फैसला लेने की जरूरत है. जन भावनाओं का भी ख्याल रखना होगा.

कैंसर का खतरा

झरिया में भू-धंसान व आग ही खतरा नहीं है. यहां से निकलने वाली गैस से स्वास्थ्य संबंधी परेशानियां भी हैं. इनमें कैंसर जैसे रोग शामिल हैं. लोगों को इस लिहाज से भी सोचने की जरूरत है. मानव जीवन सबसे महत्वपूर्ण है. कमेटी क्षेत्र में नयी परियोजनाओं को शुरू करने संबंधी समस्याओं पर भी गंभीरता से विचार कर रही है.

आदमी बचायें

बोर्ड की बैठक में सीएमडी टीके लाहिड़ी ने कहा- कोयला नहीं चाहिए, आदमी बचायें. बीसीसीएल ने यह भी प्रस्ताव दिया है कि खतरनाक इलाके में बसे लोगों को नॉन कोल बियरिंग एरिया में बसाया जाये.

इसके लिए कंपनी की ओर से भी मदद की पेशकश की गयी है. जेआरडीए सर्वे में भी इस बिंदु को शामिल किया गया है. कंपनी ने पर्यावरण के क्षेत्र में भी महत्वपूर्ण प्रयास किये हैं. इकोलॉजिकल रिस्टोरेशन इस दिशा में महत्वपूर्ण पहल है. बीसीसीएल के प्रयास से झरिया फायर पर होने वाली बेवजह की राजनीति पर भी विराम लगा है.

इन बिंदुओं पर चर्चा हुई

- झरिया एक्शन प्लान की क्रियान्वयन की मौजूदा स्थिति
- आग बुझाने की बीसीसीएल की पहल
- गैर-बीसीसीएल कर्मियों के लिए आर एंड आर नीति
- बीसीसीएल परिवारों के लिए पुनर्वास नीति
- पर्यावरण क्लीयरेंस के लिए कंपनी की ओर से उठाये गये कदम
- रांची हाइकोर्ट में दर्ज बीसीसीएल खदानों की बंदी संबंधी मामले
- इकोलॉजिकल रिस्टोरेशन

अल्ट्रा वॉयलेट रेडिएशन का खतरा

कमेटी के विशेषज्ञ डॉ सीबीएस दत्ता ने आगाह किया- झरिया की भूमिगत आग से अल्ट्रा वॉयलेट रेडिएशन का भी खतरा है. इस वजह से हवा में भी जहर है. इस कारण लोगों को त्वचा संबंधी बीमारियां भी हो सकती हैं. इस बिंदु पर भी ध्यान देना होगा.

बीसीसीएल की पहल महत्वपूर्ण

चेयरमैन ने पर्यावरण के क्षेत्र में बीसीसीएल की ओर से किये जा रहे प्रयासों की सराहना की. उन्होंने स्वयं भी कई इकोलॉजिकल साइट का भ्रमण किया. उन्होंने कहा कि इससे तस्वीर बदलेगी. कोल कंपनियों को लेकर आम लोगों में जो धारणा है, उसमें भी बदलाव आयेगा. यह सकारात्मक संकेत है कि कोल कंपनियां पर्यावरण को लेकर गंभीर हुयी हैं.

डीटी के प्रयासों को सराहा

एप्रेजल कमेटी ने सीएमडी टीके लाहिड़ी के कुशल नेतृत्व क्षमता के अलावा डीटी डॉ [illegible] व उनकी पूरी टीम की ओर से इकोलॉजिकल रिस्टोरेशन के क्षेत्र में उठाये गये कदमों की विशेष तौर पर सराहा. विशेषकर इनवायरमेंट डिपार्टमेंट की ओर से थ्री-टियर प्लांटेशन व इनवायरमेंट क्लीयरेंस के क्षेत्र में उठाये गये कदमों की भूरि-भूरि प्रशंसा की. वीपी राजा ने कहा- बीसीसीएल ने शानदार काम किया है.

ये मौजूद थे

डीसी प्रशांत कुमार, डीडीजी (सेंट्रल जोन) अखिलेश कुमार, आइएसएम व सिंफर निदेशक, डीएफओ, डीआरएम, ब्लॉक-2 जीएम पीएस मिश्रा, कुसुंडा जीएम एके सिंह, जीएम इनवायरमेंट, जीएम (एडमिनिस्ट्रेशन), चीफ पीआरओ आर आर प्रसाद.

दैनिक जागरण

बुधवार 31 अक्टूबर 2012 : कार्तिक कृष्ण 2, वि. 2069

पुनर्वास में जेआरडीए कमजोर

- खतरे में लाखों की जिंदगी, लोगों को हटाने में हो रहा विलंब
- ताकतवर बनाने को केंद्रीय पर्यावरण कमेटी सरकार को करेगी सिफारिश

जेआरडीए की बैठक में एक्सपर्ट कमेटी के सदस्य, डीसी, सीएमडी व डीटी जागरण

जागरण संवाददाता, धनबाद : केंद्रीय पर्यावरण एवं वन मंत्रालय की हाईपावर एक्सपर्ट एप्रेजल कमेटी ने धनबाद कोयलांचल में आग-भूधंसान के खतरे को काफी गंभीर मानते हुए कहा है कि लाखों लोगों के पुनर्वास के लिए झरिया पुनर्वास एवं विकास प्राधिकार (जेआरडीए) काफी कमजोर साबित हो रही है। इसे ताकतवर व शक्ति संपन्न बनाने के लिए कमेटी केंद्र के साथ-साथ राज्य सरकार से जल्द ही ठोस सिफारिश करेगी।

कमेटी के चेयरमैन वीपी राजा ने मंगलवार को पत्रकारों से कहा कि झरिया कोयलांचल की आग के बारे में बहुत सुना था मगर यहां आकर महसूस हुआ कि समस्या कितनी गंभीर है। अग्निक्षेत्र में बसी लाखों की आबादी के जान-माल की सुरक्षा को जल्द से जल्द पुनर्वास होना चाहिए। मगर जेआरडीए का मौजूदा स्थिति कारगर नहीं है। इसके पास स्वीकृत मानव संसाधन भी नहीं है। कमेटी ने पुनर्वास कार्यों के रास्ते में आ रही कठिनाइयों को लेकर जेआरडीए बोर्ड के साथ विशेष बैठक की। इसमें कमेटी के जेएल मेहता, प्रो.जीसी रूनवाल, डॉ. सीवीएस दत्त, डॉ. एम होता, डॉ. आरके गर्ग के अलावा जेआरडीए के एमडी डीसी प्रशांत कुमार,आरएंडआर प्रभारी गोपालजी, सीएमडी टीके लाहिड़ी, डीटी डीसी झा ने भी भाग लिया।

कैंसर का भी खतरा : कमेटी के सदस्य डॉ. सीवीएस दत्त ने बताया कि अग्निक्षेत्र से निकल रहीं विभिन्न तरह की गैसें निकल रही हैं। इससे कैंसर का भी खतरा हो सकता है? ओजोन परत को नुकसान से अल्ट्रावायलेट किरणें से नुकसान पहुंचेगा। इस पर अध्ययन की जरूरत है। सीएमडी टीके लाहिड़ी ने बताया कि जो लोग बेलगड़िया गए हैं वे महसूस कर रहे हैं कि उनका स्वास्थ्य अच्छा हो रहा है। पुनर्वास के प्रति लोगों के रूख में भी सकारात्मक परिवर्तन हुआ है।

धनबाद में पर्यावरण संरक्षण को बेहतरीन प्रोजेक्ट

धनबाद : चेयरमैन वीपी राजा ने बताया कि कमेटी ने बीसीसीएल के तेतुलमारी व दामोदा इलाके का दौरा किया है जहां ओबी डंप पर इकोलोजिकल रिस्टोरेशन का काम चल रहा है। फारेस्ट रिसर्च इंस्टीच्यूट देहरादून व पर्यावरण मंत्रालय के वैज्ञानिकों की मार्गदर्शन में काम हुआ है। सीएमडी टीके लाहिड़ी के नेतृत्व में बीसीसीएल ने काफी अच्छा काम किया है। त्रि स्तरीय जंगल तैयार हो रहा है। इसे सभी ओवरबर्डेन डंपों पर लागू किया जाएगा। इससे धनबाद कोयलांचल के पर्यावरण में काफी सुधार होगा। राज्यों के वन विभाग को इस संबंध में सलाह दी जाएगी।

हिन्दुस्तान
धनबाद • बुधवार • 31 अक्तूबर 2012

झरिया मास्टर प्लान बदलने की तैयारी

धनबाद | वरीय संवाददाता

पर्यावरण मंत्रालय की एक्सपर्ट अप्रेजल कमेटी के चेयरमैन वीपी राजा ने मंगलवार को कोयला भवन में बातचीत में दो टूक कहा कि पुनर्वास के लिए जेआरडीए को सक्षम बनाना होगा। यह काम झारखंड सरकार को करना है। एक्सपर्ट कमेटी जेआरडीए को सक्षम बनाने के लिए केंद्र से अनुशंसा करेगी।

लोगों की मांग को देखते हुए मास्टर प्लान में संशोधन के संकेत भी दिए गए। तीन दिनों के दौरे पर बीसीसीएल पहुंची सात सदस्यीय एक्सपर्ट कमेटी ने मंगलवार को जेआरडीए (डीसी), बीसीसीएल, डीजीएमएस, सिंफर, आइएसएम समेत संबंधित सभी पक्षों के साथ साढ़े तीन घंटे तक बैठक की।

कोयला भवन में मंगलवार को बैठक में शामिल वीपी राजा, डीसी प्रशांत कुमार व अन्य।

डॉ. राजा ने कहा कि आग प्रभावित क्षेत्रों की स्थिति ठीक नहीं है। पुनर्वास का काम तेजी से होना चाहिए। इसके लिए लोगों को विश्वास में लेकर काम करना होगा। लोगों की अपेक्षाओं पर भी ध्यान देना चाहिए। बैठक में मास्टर प्लान में संभावित बदलाव तथा प्रभावितों की मांग पर भी चर्चा हुई। संकेत के मुताबिक कमेटी मास्टर प्लान में संशोधन की सिफारिश भी कर सकती है। जेआरडीए की खामियों या कमियों पर कुछ बोलने से इनकार किया। बैठक में मौजूद आधिकारिक सूत्रों ने बताया कि चर्चा के दौरान जेआरडीए के उपाध्यक्ष सह डीसी धनबाद ने कमेटी के चेयरमैन से कई बिंदुओं पर बात की। डीसी ने घर बना देने के बाद मेंटेनेंस, बिजली कनेक्शन आदि का प्रावधान नहीं होने का मुद्दा उठाया।

बोले वीपी राजा

- जेआरडीए के बारे में केंद्र से करेंगे अनुशंसा, प्रभावितों को विश्वास में लेकर करना होगा काम
- आग प्रभावित क्षेत्र की स्थिति ठीक नहीं, मांग के अनुरूप मास्टर प्लान में संशोधन के संकेत

बैठक में सीएमडी टीके लाहिड़ी, डीटी डीसी झा एवं अशोक सरकार, आइएसएम के निदेशक डीसी पाणिग्रही, डीजीएमएस सेंट्रल जोन ए कुमार, निदेशक एन रजक, सिंफर के डॉ. एन सिन्हा समेत बीसीसीएल के सभी एरिया के जीएम-सीजीएम तथा जेआरडीए के अधिकारी मौजूद थे। • एक्सपर्ट अप्रेजल कमेटी का दौरा कई मामलों में महत्वपूर्ण-पेज 6

एक्सपर्ट अप्रेजल कमेटी का दौरा अहम

धनबाद | वरीय संवाददाता

एक्सपर्ट अप्रेजल कमेटी का बीसीसीएल दौरा कई मामलों में महत्वपूर्ण है। पर्यावरण के साथ-साथ कमेटी बीसीसीएल से संबंधित कई मुद्दों पर गंभीर दिखी। खासकर पुनर्वास मुद्दे को लेकर कई स्तरों पर जानकारी ली गई एवं समीक्षा की गई।

कमेटी से जुड़े आधिकारिक सूत्र का कहना है कि कमेटी में प्रशासनिक पदाधिकारी, शिक्षाविद्, पर्यावरणविद्, वैज्ञानिक, अभियंता सहित अन्य क्षेत्रों से जुड़े सात विशेषज्ञ शामिल हैं। पहली बार टीम बीसीसीएल के अग्निप्रभावित क्षेत्र के दौरे पर आई है।

दिल्ली बैठक में निष्कर्ष

दिल्ली में एक्सपर्ट कमेटी की बैठक में निष्कर्ष निकाला जाएगा। दौरे के दौरान टीम के सदस्यों ने काफी लिखित जानकारी एवं सैंपल जुटाए हैं। कईयों के बयान लिए गए हैं। इसके बाद केंद्र (पर्यावरण मंत्रालय) को रिपोर्ट दी जाएगी। रिपोर्ट गोपनीय होगी। एक्सपर्ट कमेटी कई मामलों में शक्ति संपन्न है और कोल एवं थर्मल के मामलों में यह कमेटी निर्णायक है। बीसीसीएल एवं झरिया एरिया पर कमेटी की रिपोर्ट के आधार पर कार्रवाई तय है। संभावना है पुनर्वास से संबंधित कई महत्वपूर्ण सिफारिश कमेटी करने जा रही है।

तथ्य संकलन

- क्षेत्र भ्रमण : अग्निप्रभावित एरिया, इकोलॉजिकल रेस्टोरेशन साइट, भूमिगत खदान, ओसीपी
- पब्लिक ओपिनियन : बोकापहाड़ी, झरिया बचाओ कोलफिल्ड समिति, बेलगड़िया के लोग
- विशेषज्ञ की राय : सिंफर, आइएसएम, डीजीएमएस तथा जेआरडीए एवं बीसीसीएल अधिकारियों के साथ बैठक

इन मुद्दों पर कमेटी गंभीर

• मास्टर प्लान के क्रियान्वयन की वर्तमान स्थिति • बीसीसीएल की ओर से [illegible] • फिर बीसीसीएल के लिए जेआरडीए की [illegible] • बीसीसीएल द्वारा पर्यावरण स्वीकृति संबंधी प्रक्रिया • बीसीसीएल खदानों की [illegible] • झरिया पुनर्वास की जमीनी सच्चाई • इकोलॉजिकल रेस्टोरेशन प्रोजेक्ट की [illegible]

ऑक्साइड खतरनाक : डॉ. दत्त

धनबाद। [illegible] से जुड़े एक्सपर्ट कमेटी के सदस्य डॉ. एसबीएस दत्त ने कहा कि प्रथमदृष्टया अग्निप्रभावित क्षेत्रों में गैस ऑक्साइड रूप में है। ऑक्सीजन से ऑक्साइड बनता है। इससे अल्ट्रावायलेट रेडिएशन का खतरा होता है। स्किन कैंसर सहित कई रोग हो सकते हैं। बीसीसीएल एवं संबंधित पक्षों को इस बाबत अध्ययन का सुझाव दिया और और पर्यावरण मंत्रालय से भी इसकी सिफारिश करने की बात कही।

बचाव समिति ने किया विरोध

बैठक में पहुंचे झरिया कोलफिल्ड बचाओ समिति के प्रतिनिधियों ने बीसीसीएल एवं जेआरडीए की पुनर्वास संबंधी नीतियों का विरोध किया। आरोप लगाया कि सिर्फ कोयला निकालने की कवायद की जा रही है। लोगों की पीड़ा और परेशानी से किसी को मतलब नहीं है। इसपर डॉ. राजा ने कहा कि झरिया बचाओ समिति, बेलगड़िया या बोकापहाड़ी के लोगों के कथन या बातों को विरोध के रूप में नहीं लिया जाना चाहिए।

Annexure V

Jharia Raniganj Coal Fields Underground Coal Fire Characterisation towards Scientific investigations on to identify Precursors and tracers for coal fires

A scientific proposal for large scale experiment

A Concept Paper

Jharia Raniganj Coal Field extends in an area of 500 kms in Dhanbad district of Chattishgarh State. The coal mining historically has started way back in 1804. In the initial periods only open cast mining was in vogue and the indiscriminate unscientific mining practices have led to coal fires believed to have started long ago. Since then the underground and open cast mines are under fire in an uncontrolled manner. Coal India Ltd (CIL) has given emphasis since 50 years in a modest way and identified the concerns of abundant loss of high grade cooking coal. Of late, the increased demand for accelerated production of high grade coal has opened up several open cast mines. The recent visit by Expert Appraisal Committee (EAC) of coal and thermal projects expressed the unprecedented urgency to be attached for containing and controlling the underground coal fires. Though BCCL in association with CMPDI, DGMS, CIMFR etc., have attempted to characterize the fuel characteristics and associated emissions is to be supplemented with additional investigations for detailed understanding the *pyrolytic* processes and precursors involved.

EAC (Coal and Thermal) of MOEF strongly recommends the launching of a comprehensive scientific programme for understanding genesis of underground coal fires through multi institutional participation. The underlying scientific baseline information required probably is:

The combustion in a high grade coal environment when it catches fire results in emission of carbonaceous and non-carbonaceous gases of varying degree, concentration, intensity and more importantly the emission of methane, Carbon dioxide

etc the Green House Gases (GHG's). The results presented by DGMS by controlled simulation on the emission of various carbonaceous gases may require further insights on the total composition both in simulating scenario and in-situ conditions from the coal fields.

At several locations underground coal bed seams are catching fire by 30-50 mtrs below ground due to unaccounted geological fractures and fissures leading to oxidation when in contact with ambient Oxygen. This oxidizing process result in slow and steady spread of coal combustion horizontally in the seam beneath 30-50 meters below the ground. It is also possible some of the exothermally active elements like Barium (Ba), Calcium (Ca), Cesium (Cs), Hydrogen (H_2), Lithium (Li), Potassium (K), Sodium (Na), Strontium (Sr), Phosphorous (P), Magnisium (Mg) etc. and their compositions need to be studied. Over these areas occasionally there were **instances of land subsidence** primarily caused due to total combustion of coal seam and collapsing the overhead mass of the earth. This in addition atmospherically the internally combusted GHG's and other trace gases of oxidizing in nature are emitted continuously for almost since 4-5 decades or even more. This will have certain regional climate impact which needs to be ascertained.

The present open cast mining and Over Burden Dumps (OBD) are also under constant fires, resulting emission of various GHGs and trace gases. Paradoxically it is understood that the comprehensive understanding and the process of underground coal fires is partially known in spite of immense efforts being made by Coal India Ltd., DGMS and CMPDI in the area. It is also given to know that the similar is the case across the world on similar fires.

It is apparent in future the possible impending catastrophe of large scale spread of underground coal fires compounded by heavy demand for coal production may further accelerate and advance the disaster and loss of high grade coal. **In essence presently EAC perceives this issue as expressly URGENT and strongly underline the emergency to fully investigate the processes and to develop "Precursors and Tracers for the underground coal fires detection**". This effort is to be facilitated

through launch of carefully designed multi-institutional scientific programme for a period of 5 years fully funded by MOENF. This programme is to be coordinated by Coal India Ltd., MOENF and BCCL with lead role from PRL, Prof MM Sarin, Senior Professor.

Brief Scientific Approach:

Coal India Ltd., and BCCL may take urgent initiative through involvement of PRL as a lead Centre with active participation from IIT Kanpur (Prof.SN Tripathi), IISc, Bangalore (Prof SK Satish/Prof GS Bhat), Space Physics Lab, Trivandrum (Dr Krishna Moorthy/Dr Suresh Babu), IITM, IMD, CMPDI, DGMS, CIMFR Dhanbad, ARIES Nainital, BARC Mumbai, IIMT Bhubaneswar, IICT Hyderabad, ISER Mohali, NRSC Hyderabad, TIFR-BF, NARL Gadanki etc.. Initially PRL, NRSC, MOENF, CIL and BCCL may organize as peer group 2-3 times brain storming sessions among all the participating institutions to formulate the science plan and approach and to develop the observational network in the area. It may be noted the comprehensive analysis and characterization of precursors **urgently require considerable infrastructure and instrumentation.** However Peer group would consider the participating institutional support and availability of their existing infrastructure in the country. The interpretative ability and intense scientific understanding is already available within the country with the institutions mentioned above. It is also important to note that the area of coal fires falls in the zone of CTCZ and will have considerable regional climate implications also need to be addressed through modeling procedures and enhanced vertical characterization of atmosphere. This obviously calls for atmospheric sounding as well as boundary layer studies. We certainly see from this environmental hot spot a possible role in the regional impact and climate forcing to a certain degree offsetting from the normal climate. The important forcing may be troposphere ozone formation, elevated levels of green house gases, unprecedented levels of oxidizing trace gases both scattering type of black carbon (OC) which may be a surprising element and highly varying boundary layer dynamics, surface reflectance , modification in the regional climate etc., compounding the regional characteristics beyond the mine resource.

In the context of above, it is evident to take a major step forward to "***identify the precursor conditions of underground coal fires and associated impact on regional climate"***, as the goal for the National Coordinated Scientific Experiment for a period of 5 years or more. This experiment would provide basic insights hitherto unknown on characterization and identification of possible tracers of coal fires for planning safety and security of our Indian coal reserves in the Jharia Raniganj coal bed.

The area also has large reserves of Coal Bed Methane (CBM) and efforts are being made to utilize the CBM based power generation initially for a period of 4 hours a day. Noting the purity of methane at 98% is a matter of great excitement and procedures can be parallelly evolved as complementary experiment by the possible blending of low molecular hydrogenated gases externally (viz: Butane, Propane etc.) and to ensure sustained generation of power feeding to few selected villages in and around. This would also be one of the consistent high impact social responsibilities of coal mines and the people living in the nearby villages. This study may need to be coordinated by CIMFR, CMPDI, and ONGC etc.

Possible Steps involved in formulation of a nationally coordinated Experiment:

Apex body:

Secretary, CIL, CMD-BCCL, MOENF, DG-DGMS, DG-CIMFR, Dir-CMPDI, Advisor-CIL

Formation of Peer Group: PRL, CMPDI, DGMS, BCCL, NRSC, MOENF, CIL etc.

National team of Institutions:

PRL (Prod MM Sarin, senior Professor) as a lead Centre, IIT Kanpur (Prof.SN Tripathi), IISc, Bangalore (Prof SK Satish/Prof GS Bhat), Space Physics Lab, Trivandrum (Dr KrishnaMoorthy/Dr Suresh Babu), IITM, IMD, CMPDI, DGMS, CIMFR Dhanbad, ARIES Nainital, BARC Mumbai, IIMT Bhubaneswar, IICT Hyderabad, ISER Mohali, NRSC Hyderabad, TIFR-BF, NARL Gadanki etc..

Programme funding and support: MOENF, CIL, MOES, DST, ISRO, CSIR etc..