

No. J-11015/13/2010-IA.II(M)  
Government of India  
Ministry of Environment & Forests

Paryavaran Bhawan,  
CGO Complex,  
New Delhi-110510.

To

Dated: 23<sup>rd</sup> July 2012

General Manager (Env.),  
**M/s Eastern Coalfields Ltd.,**  
PO Sitarampur, Dist. Burdwan,  
West Bengal 713359.

**Sub: Revised application for TOR for Cluster No.3 Group of Mines (6 mines) of a combined ML area of 1628 ha and prodn. capacity of 2.58 MTPA (normative) and 3.27 MTPA (peak) of M/s ECL, located in Raniganj Coalfields, dist. Burdwan, W.B. - Letter dated 21.04.2012 of M/s ECL seeking modification of the Cluaster-3 details furnished by M/s ECL- reg.**

Sir,

This is with reference to your **incomplete application** received dated 05.01.2010, received without the pre-feasibility report and subsequent letter no. CIL/DLI/ENV/2010/02 dated 05.04.2010 with application for TOR along with pre-feasibility report, which was considered in the EAC (T&C) meeting held on 28<sup>th</sup>-29<sup>th</sup> April 2010 and returned for revisions; and your subsequent letter no. CIL/DLI/ENV/2012/02 dated **07.02.2012** received along with **revised application for TOR for Cluster-3 Group of mines**. It is noted that the revised application consists of Dabor UG (0.070MTPA), Bonjemeheri UG and OC (0.10 MTPA), Sangragarh UG & OC (0.080 MTPA), Dalmiya UG (0.12 MTPA) is located in Raniganj Coalfields, Asansol, dist. Burdwan, West Bengal, and has been made for renewal of lease. The proposal was considered in the EAC (T&C) meeting held on 21<sup>st</sup>-22<sup>nd</sup> February 2012, however, there was a discrepancy in the data furnished in the application and in that presented during the EAC meeting as a result of which TOR was not issued. The clarifications furnished vide letter dated 21.04.2012 were further considered in the EAC (T&C) meeting held on 18<sup>th</sup>-19<sup>th</sup> June 2012.

In the presentation made, it was informed that the cluster consists of 3 mixed mines (UG & OC) rather than 6 separate mines of a combined ML area of 1628 ha and a production capacity of 3.33 MTPA (normative) and 3.97 MTPA (peak). The capacity of Dabor OC has been increased from 1.57 MTPA to 2.30 MTY. It was informed that illegal mining is going on in the seams which have outcropped. In order to extract the coal found in the outcrops, it is proposed to introduce OC mining in the outcropped patches to the depth of 50m. Backfilling of OC voids, thereafter would be started in 2-3 years and after exhaustion of the coal reserves found in these patches, the quarried area would be completely backfilled. The total area mined by OC will be 416 ha. Mineable reserve by OC would be 15.8 MT and OB generated 49.43 Mm<sup>3</sup>. It is also proposed to extend the existing quarries of Bonjemehari & Sangramgarh mines.

The details of Cluster-3 are given below:

S.N.	Name of Mine	Lease Area (ha)		Normative Prod. (MTPA)		Peak prod. (MTPA)		Mine Life (Years)	
		Revised Appl.	Details presented to the EAC	Revised Appl.	Details presented to the EAC	Revised Appl.	Details presented to the EAC	Revised Appl.	Details presented to the EAC
1.	Dabor UG	1204	1204	0.06	0.06	0.07	0.07	>25	>25
	Dabor Ph. I & II OC mine (347 ha)			1.25	2.0	1.57	2.30	10	10
2.	Bonjemehari UG Mine	163	163	0.07	0.07	0.10	0.07	>25	>25

	Bonjemehari OC (50 ha)			0.35	0.35	0.45	0.45	4	4
3.	Sangramgarh UG	261	261	0.05	0.05	0.08	0.08	>25	>25
4.	Sangramgarh Extn. – OC Mine (25ha)			0.80	0.80	1.0	1.0	4	4
	<b>TOTAL</b>	<b>1628</b>	<b>1628</b>	<b>2.58</b>	<b>3.33</b>	<b>3.27</b>	<b>3.97</b>		

DETAILS OF MINES OF CLUSTER-3							
S.N.	Name of Mine	UG/OC	ML area (ha)	Production capacity		Life of the mine (years)	
				Normative	Peak		
1.	Dabor UG	UG	1204	0.06	0.07	>25	
	Dabor Phase I & II OC Mine (347 ha)	OC		2.0	2.30	10	
2.	Bonjemehari UG	UG	163	0.07	0.07	>25	
	Bonjemehari OC (44 ha)-New Proposal	OC		0.35	0.45	4	
3.	Sangramgarh UG	UG	261	0.05	0.08	>25	
	Sangramgarh OC	OC		0.80	1.00	4	
	<b>TOTAL</b>		<b>1628</b>	<b>3.33</b>	<b>3.97</b>		

DETAIL OF OC MINING PROPOSED IN CLUSTER-3							
S.N.	Name of Mine	Area (ha)	Mineable Reserves	OB generation (Mm3)	Life of the mine (years)	Year of Start of Backfilling	Closure Cost @ Rs 6/- lakh/ha
1.	Dabor Phase I & II OC Mine (347 ha)	347	11.78	35.0	10	3 <sup>rd</sup>	2082
2.	Bonjemehari OC (44 ha)-New Proposal	44	1.32	4.05	4	2 <sup>nd</sup>	264
3.	Sangramgarh OC	25	2.70	10.38	4	2 <sup>nd</sup>	150
	<b>TOTAL</b>	<b>416</b>	<b>15.8</b>	<b>49.53</b>			<b>2496</b>

PRODUCTION DURING LAST 5 YEARS (MT)						
S.N.	Name of Mine	2006-07	2007-08	2008-09	2009-10	2010-11
1.	Dabor UG	0.04	0.03	0.03	0.03	0.03
2.	Bonjemehari UG & OC	0.14	0.07	0.03	-	0.03
3.	Sangramgarh UG & OC	0.84	0.53	0.18	-	-
	<b>Total</b>	<b>1.02</b>	<b>0.63</b>	<b>0.24</b>	<b>0.03</b>	<b>0.06</b>

The Committee recommended TOR to Cluster-3 group of mines incorporating the aforesaid modification.

Based on the application along with documents and presentation thereon and discussions held, the Committee prescribed the following TOR:

- (i) An Integrated EIA-EMP for the cluster of mines shall be prepared clearly bringing out the present status of 6 mines in Cluster 6 as above consisting of **Cluster 3 (5 mines - Dabor UG, Dabor Ph. I & II OC**

mine (347 ha), Bonjemehari UG Mine, Bonjemehari OC (50 ha), Sangramgarh UG, Sangramgarh Extn. OC Mine (25ha), **of 3.33 MTPA normative capacity and 3.97 MTPA n a combined ML area of 1628 ha)** - status of env. quality and the extent of pollution load from each mine and the combined pollution load from the cluster of mines that would be reduced by taking suitable mitigative measures for the individual mines and for the cluster and the expected improvement in the environmental quality of the mines in the cluster and within the coalfield after the implementation of the measures through an Integrated Environmental Plan formulated on the aforesaid basis. A fresh baseline data on the env. quality – air, water, land, biotic community, etc. shall be generated through collection of data and information, generation of data on impacts. Baseline data collection can be for any season except monsoon. Details of the present land use and post mining land use of the operating and abandoned mines individually and as a cluster shall be furnished as part of the EIA. A detailed Mine Closure Plan and a Mine Reclamation Plan for the abandoned mines (UG and OC)/pits/quarries found in the cluster shall be furnished as a part of EIA-EMP study. The closure of UG mines should ensure that no illegal mining is done thereafter from the mines. Details of long term benefits to environment because of cluster approach of mining shall be clearly addressed in the EIA-EMP study. In addition to the above, the Committee desired that the PAPs living in unstable locations within the cluster should be rehabilitated. The details of Raniganj Action Plan involving resettlement of habitation from unstable sites within the cluster should be integrated with the EIA-EMP study for the entire cluster along with clear time lines of the schedule of implementation. The Committee desired that subsided areas should be reclaimed with plantation. The details of areas under Mining Rights and under Surface rights and their land use should be provided in the EIA-EMP Report.

- (ii) The Integrated EIA-EMP shall be based on the generic structure specified in Appendix III of the EIA Notification 2006 and incorporate an Environmental Action Plan for mitigating the environmental degradation existing in the cluster and for improvement of the environmental quality (air, water and land) so that the region, which is presently critically polluted, and show by implementation of the issues pertaining to coalmines outlined in the Raniganj Env. Action Plan the discernible improvement of its environmental quality.
- (iii) A map specifying locations of the State, District and Project location. A map showing the Raniganj Coalfields and the locations of the mines in the cluster.
- (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 mines in the cluster, locations of human habitations, major constructions including railways, roads, pipelines, major industries/mines and other polluting sources.
- (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 cluster of mines 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.

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.

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

- (ix) Break up of lease/project area as per different land uses and their stage of acquisition of each mine in the cluster.
- (x) Break-up of lease/project area as per mining operations of each mine in the cluster.
- (xi) 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.
- (xii) Collection of one-season (non-monsoon) primary baseline data on environmental quality - air (PM10, PM2.5, SO<sub>x</sub>, NO<sub>x</sub> and heavy metals such as Hg, Pb, Cr, As, etc), noise, water (surface and groundwater), soil and should be checked for impacts of measures taken on the air quality in view that Asansol is a critically polluted area
- (xiii) 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.
- (xiv) Details of mineral reserves, geological status of the study area and the seams to be worked, ultimate working depth and progressive stage-wise working scheme until 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.
- (xv) 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.
- (xvi) Study on subsidence, measures for mitigation/prevention of subsidence, modelling subsidence prediction and its use during mine operation, safety issues.
- (xvii) Impact of mining on hydrology, modification of natural drainage, diversion and channelling of the existing rivers/water courses flowing through the ML and adjoining the lease/project and the impact on the existing users and impacts of mining operations thereon.
- (xviii) Detailed water balance should be provided. The break up of water requirement for the various mine operations should be given separately for the cluster and for each mine separately.
- (xix) Source of water for use in mine, sanction of the competent authority in the State Govt. and impacts vis-à-vis the competing users.
- (xx) Impact of mining and water abstraction use in mines on the hydrogeology and groundwater regime within the core zone and 10 km buffer zone including long-term modelling studies on. Details of rainwater harvesting and measures for recharge of groundwater should be reflected in case there is a declining trend of groundwater availability and/or if the area falls within dark/grey zone.
- (xxi) Impact of blasting, noise and vibrations.
- (xxii) Impacts of mineral transportation in an integrated manner using road-cum rail or rail network- 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.
- (xxiii) 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 be based on slope stability studies with a max of 28° angle as the ultimate slope. Sections of dumps (ultimate) (both longitudinal and cross section) with relation to the adjacent area should be shown.

- (xxiv) Impact and management of wastes and issues of rehandling and backfilling and progressive mine closure and reclamation for each mine in the cluster.
- (xxv) 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.
- (xxvi) 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.
- (xxvii) Details of fire affected sites and areas affected by subsidence and unstable sites as given in Raniganj Action Plan for Cluster 9 Group of Mines and their management for each along with time schedule for mitigation under the Raniganj Action Plan.
- (xxviii) Integrating in the Env. Management Plan with measures for minimising use of natural resources - water, land, energy, etc.
- (xxix) Progressive Green belt and afforestation plan (both in text, figures as well as in tables prepared by MOEF) for each mine along with selection of species (local) for the afforestation/plantation programme based on original survey/landuse.
- (xxx) Conceptual Final Mine Closure Plan for existing and abandoned mines with specific time lines and costs, post mining land use and restoration of land/habitat to pre-mining for each mine in the cluster. A Plan for the ecological restoration of the area post mining and for land use should be prepared with detailed cost provisions. The Committee desired that the abandoned quarries/mined out pits/voids left over from the pre-nationalisation period should be properly backfilled and biologically reclaimed in to either plantation or restored to agricultural land. The Committee desired that details of land use end of mine life and post mining be furnished in the standard tables prepared by MOEF. In case, exploration does not indicate sizeable reserves, the proponent may consider surrendering the lease after completion of reclamation of the abandoned mines and worked out OC and UG mines.
- (xxxii) Including cost of EMP (capital and recurring) in the project cost and for progressive and final mine closure plan.
- (xxxiii) Details of R&R in Raniganj Action Plan for the cluster and its integration with the EMP. Cluster specific details of 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. R&R package has been prepared for the 11 unstable sites within the cluster involving 24741 PAPs as part of Raniganj Action Plan for dealing fire, subsidence and rehabilitation.  
The Committee desired that CSR@ Rs 5/T of coal produced amounting to Rs 1.5 crores/annum should be prepared. The Committee further desired that for monitoring the proper implementation o CSR activity, a dedicated multidisciplinary team of local people of mixed age group including a sociologist should be created by the company.
- (xxxiv) Public Hearing for the entire cluster 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.
- (xxxv) In built mechanism of self-monitoring of compliance of environmental regulations.
- (xxxvi) Status of any litigations/ court cases filed/pending on the project.
- (xxxvii) 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.
- (xxxviii) Copy of clearances/approvals – such as Forestry clearances, Mining Plan Approval, NOC from Flood and Irrigation Dept. (if req.), etc.
- (xxxix) Grant of EC for the closed mines would be reviewed at the time of application for EC.

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 issues 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) MOEF Circular dated 22.03.2010 may kindly be referred to regarding time limit for validity of Terms of Reference (TOR) prescribed under EIA Notification, 2006 for undertaking detailed EIA studies for development projects requiring environmental clearance.
- (ix) The aforesaid TOR is valid for 2 years only from date of issue.

The following additional points are also to be noted:

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

Yours faithfully,

(Dr.T.Chandini)  
Director

**Copy to:** Member-Secretary, West Bengal State Pollution Control Board, Paribesh Bhawan, 10A- Block LA, Sector –III, Salt Lake City, KOLKATTA – 700 098.