

BHARAT COKING COAL LIMITED (A subsidiary of CIL) REGD. Office: Koyla Bhawan, Koyla Nagar, Dhanbad-826005 CIN No. U10101JH1972GO1000918

Office of the General Manager Bastacolla Area

Ref No:BCCL:BA:IX:GM:EC Compliance:14:117

Date: 25.10.2014

To, The Director(s), Ministry of Environment & Forest, Govt. of India, Eastern Region Office, A/3, ChandraShekharPur, Bhubaneshwar-751023 Orissa.

Subject: Six Monthly report on implementation of Environmental Measures for the period of April' 2014 to September' 2014 in respect of cluster VIII group of mines of BCCL.

Ref.: EC Order No J-11015/298/2010-IA.(M) Dated 15.02.2013.

Dear Sir:

Please find enclosed herewith six monthly report on implementation of Environmental Protection Measures for the period from April' 2014 to September' 2014 in respect of cluster VIII group of mines of BCCL. Thanking you,

Encl: As above along with CD.

Yours' Faithfully P

General Manager Bastacolla Area

Copy to:

1. The Director,

1 A Monitoring Cell, Paryavaran Bhawan, CGO Complex, New Delhi-110003.

Deputy General Manager (Environment), BCCL, Koyla Bhawan, Dhanbad.

3. Area Manager (Planning),

Bastacolla Area.

4. Nodal Officer (Environment), Bastacolla Area

5. Office Copy.

## ENVIRONMENTAL CLEARANCE COMPLIANCE OF CLUSTER-VIII (GRANTED VIDE J-11015/298/2010-IA.II(M) Dated 15.02.2013)

	(GRANTED VIDE J-11015/298/2010-IA-II(M) December 1
Sil	(SRANTED VIDE J-11015/298/2010-IA.II(M) Dated 15.02.2013)  (From April' 2014 to September' 2014)
	A. Specific Conditions by MOEF  Maximum productions by MOEF
	waximum production at more 2014)
	Das been that for which environmental flot exceed The production 6.
ii	
	Sevend that for which environmental clearance has been granted.  The production from the cluster is within the limit for which environmental clearance has been granted.  The production from the cluster is within the limit for which environmental should be by mechanically.
-	developed with transportation chart transportation
iii	developed with avenue plantation on both sides.  The company must give priority to capacity   It is being compliant.
	Youth, who are motivated to the local
-	
iv	Details of transportation, CSR, R&R and It is being fetter
	representation of environmental and the second seco
-	a hooklasters should be detroit plan for
V	A study should be initiated to analyse extent of reduction in pollution load every year by reducing  The expertise available internationally about 1 and 1 a
	reduction in pollution in industrial to analyse extent of
-	road transport. Job has been taken by CMPDL
vi	The expertise available in
	utilized for control of fire in the shadow of the shadow o
- 1	for their reclamation and to further the first being complied. Presently Market By
Vii	The expertise available internationally should be for their reclamation and to further minimize time to abandoned pits and subsidence control.
	The abandoned pits and voids should be Backfilling process.
	backfilled with OB and reclaimed with plantation carried out Face.
viii	Backfilling process in abandoned pits and voids are being continuously and or may be used for pisciculture.  Backfilling process in abandoned pits and voids are being continuously sites as per EMP.  Backfilling process in abandoned pits and voids are being continuously sites as per EMP.  Backfilling process in abandoned pits and voids are being continuously sites as per EMP.  Backfilling process in abandoned pits and voids are being continuously sites as per EMP.  Backfilling process in abandoned pits and voids are being continuously sites as per EMP.  Backfilling process in abandoned pits and voids are being continuously sites as per EMP.  Backfilling process in abandoned pits and voids are being continuously sites as per EMP.
_   r	nanagement setting up a separation sites as per EMP solution practices will be carried
	(Environment) along with
	structure for implementing (Environment) along with a suitable qualified multi-disciplinate in the control of t
	(Environment) along with a suitable qualified multi-disciplinary team of

environment policy and	socio-economic issues
and the capacity building r	required in this regard

executives (14 nos.) which includes Environment, Mining, Excavation, Civil, Survey, Electrical & mechanical, Forestry disciplines executives and technicians (4 nos.) has been established in Headquarters. They are also trained in ecological restoration, sustainable development, rainwater harvesting methods etc. At the project level, one Executive in each area harvesting methods as Project Nodal Officer (Environment) and is also entrusted with the responsibility of compliance and observance of measures. The activities are monitored on regular basis at Area and at Headquarter levels. GM (Environment) at head quarter level, coordinates with all the Areas and reports to the Director (Technical) and in the team is multi-disciplinary and very much motivated under the guidance of company's Director (Technical) and CMD. Further capacity

- The locations of monitoring stations in the Jharia Coalfields should be finalized in consultation with the Jharkhand State Pollution Control Board
- The smoke / dust emission vary from source to source (fuel wood, coal, fly ash from TPPs, silica from natural dust, etc.) and a source Apportionment Study should be got carried out for the entire Jharia Coalfields.

   Mineralogical composition study should be
  - Mineralogical composition study should be undertaken on the composition of the suspended particulate matter ( $PM_{10}$  and  $PM_{2.9}$ ) in Jharia Coalfields and also quantified. These studies would help ascertain source and extent of the air pollution, based on which appropriate mitigative

The optimum location of monitoring stations in Jharia Coal Field has been identified with the consultant advisory of CIMFR (A CSIR Laboratory) and also finalized in consultation with the Jharkhand State Pollution Control Board.

For the source apportionment study. A committee has been formed to award the job of study. Draft of tender document has been prepared and after finalization it shall be floated.

The ambient environment monitoring is being done through Central Institute of Mining and Fuel Research (CIMFR), Dhanbad which is a CSIR laboratory recognized under the EP Rules. Final report not yet submitted by the above mentioned agency.

	measures could be taken.
	and previous Coefficients through NRSA to many or NRSC has been engaged for the authority and previous training to the second of
	the Jhariac Coaffields through NRSA to monitor and prevent fire problems in the Jharia Coaffields through NRSA to monitor final report that area of fire has been reduced from 9.00 KM² to 2.18 in temperatures of the coal seams (whether the
	by Isothermal mapping/imaging and monitoring
	remperatures of the coal seams (whether they
	are close to spontaneous ignition temperatures) and based on which areas with the spontaneous institution temperatures)
	and based on which areas with potential fire problems shall be identified:
	XIII Measures to provide
	xiii Measures to prevent ingress of air (Ventilation) in Action is being taken as specified in EC and as per liberia Measures areas, to prevent restart fresh/spread fires Further fire patches as specified in EC and as per liberia Measures areas including in miscape for the patches are specified in EC and as per liberia Measures.
	other areas including in the most responsible to the state of the stat
	shall be undertaken
	spread of the fire O
	xiv Underground mining should be taken up after to should be completion of reclamation of Opencore to the fire. Once the fire, concerning the fire to should be taken up after to should be taken up a
	xv No mining shall be undertaken
	OB dump areas where the fire could start due to presence of coal/shale with sufficient carbon of the fire including in old OB dump areas subject to control, mine fires including in old OB dump areas subject to control, mine fires including old OB dump areas as specified in Jharia Master Plan and the mining content.
	presence of coal/shale with sufficient carbon  The rejects of washeries in Cluster Discontinuous and permissions of Directorate Generation of Mines Safety (DGMS).
	ne rejects of works.
	be send to FBC based plant.  xvii There shall be no external OB dumps. At the end, it shall be no external OB dumps. At the end, it shall be no external OB dumps. At the end, it shall be no external OB dumps. At the end, it shall be not external OB dumps.
	There shall be no external OD +
	and filling there shall be me the shall be complied A
	and ded will be re were
	Areas where opencast mining was carried out and completed shall be reclaimed immediately the experts available in BCCL and in external agencies.
	for OB dumping and backfilling (for OC mines)  Calendar plan has been prepared. Mine closure plan as per the guidelines of Ministry of Coal have been prepared.
	guidelines of Ministry of Coal have been prepared by Central Mine
•	

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	and reclamation and final mine closure plan for Planning and D
	each mine of cluster-VIII shall be drawn up and implemented.  The void shall be converted into the converted
	of a maximum depth of a maximum
	gently sloped and the upper benches and the upper benches the reservoir shall be
	implemented.  Xix The void shall be converted into a water reservoir of a maximum depth of 15-20 m and shall be gently sloped and the upper benches of the reservoir shall be stabilized with plantation and or may be used for piscipitive with the proper possibility of the reservoir fenced. The will obtain an analysis of the reservoir fenced the with obtaining sams. If water reservoirs are allowed to be made, then it will be unsafe and difficult for conducting mining in lower seams. It shall be with obtained and biologically reclaimed with the end of the mining.  Xix The void shall be converted into a water reservoir and shall be depth of 15-20 m and shall be overlying seams. If water reservoirs are allowed to be made, then it will be unsafe and difficult for conducting mining in lower seams. It shall be with obtained and or may be used for piscipitive.
	XX Mining shall be used for piscipular
	XX Mining shall be carried out as per statute from the streams/Nalas flowing within the lease and maintaining a safe distance from the streams as a specific of taken as specific flowing to the streams of the streams
	flowing a safe distance from the group that taken as specified. Action for construction of
	flowing along the lease boundary. A safety maintained along the Nalas/water has been been been boundary. A safety maintained along the Nalas/water has been been been been been been been bee
	Small water be Nalas/water bedien
	should be dumps near water by the
	should be rehandled for backfilling abandoned mine voids. However, those which have been biologically reclaimed need not be district.  XXII Thick creating the property of the
	xxii Thick greated need not be disturbed even restoration work as need further action has been restoration.
	undisturbed and officer of their eco-
	704 48ha are started at the started
	277 27 ha abandoned guera
	building/mine infrastructure area/coal dump etc.
	P CIU,
	4

	108.26 ha green belt around OCP, 196.31 ha
	barren area), by planting 17CP, 196.31 ha
	XXIII The road a total cost Rs. 7202 46 I
	xxiii The road should be provided with avenue It shall be completed.
	ptantation on both side as trees act as sink of   xxiv Specific profiler.
	inario o measures id
	Jharia Coalfields in the Environmental Action Plan prepared for Dhanbad as a critically polluted are and relevant for Cluster VII shall be  Dhanbad Action Plan has been prepared in consultation with Jharkham implemented comprehensively for all the salient actions of the sali
	are and relevant for Cluster VII shall be
	are and relevant for Cluster VII shall be implemented.  Shall be implemented.  Shall be implemented.  Shall be implemented comprehensively for all the mines of BCCL. Some of the salent actions of this cluster are as under:  1. Construction of pucca road.
-	1 Commission this cluster are an une mines of RCC1 in is being
	Cookers of monitoring states
	Coalfields should be finalized in consultation with the Jharkhand State Pollution Control Page 1.
	the Jharkhand State Pollution Control Board. The Inalized with the consultation with Source stated that smoke/dust emission.  Establishment of ambient environment quality monitoring station.
	in Jharia Coalfields and also quantified. These of the air political source and the source and t
	of the air and rielp ascertain source. These
	mitigative bounding, based on which
XX	No groundwater shall be used for the mining activities. Additional water required if an entire to the shall be used for the mining activities. Additional water required if an entire to the shall be used for the mining activities.
	activities. Additional water required, if any, shall be mater from mine water or by recycling ten.
	the water or by seal, if any, shall purpose g complied and mine
	be met from mine water or by recycling/reuse of rainwater harvesting measures.  It is being complied and mine water is being used for the industrial purpose. Further mine water is also utilized for the industrial installation of Press.
	being complied and mine water is being used for the industrial purpose. Further mine water is also utilized for the community and the water from the existing activities and from rainwater harvesting measures.  see The trom mine water is being used for the industrial purpose. Further mine water is also utilized for the community and Installation of Pressure filters for utilization of mine water.
	· · · · · · · · · · · · · · · · · · ·

_	requirement of nearby village(s) in case the village wells go dry to dewatering of mine.  xxvii Regular monitoring of groundwater level and CMPDI RI-Ilhas been available this
	establishing a network of existing wells and for groundwater monitoring numbers and solution of new network of existing wells and
	for quantity shall be done four times a year in pre-monsoon (May), monsoon (August), Post-monsoon (November) and Winter (January)
	Fluoride during the most of the
	Environment & Forest and to the Central
	measures shall be undertaken in account of the control of the cont
X	of water table indicates a declining trend.  xviii Mine discharge water shall be treated to meet standards prescribed standards before discharge into natural water courses/agriculture. The quality of the water discharged shall be monitored at the outlet points and proper records maintained thereof and uploaded regularly on the company website.  Mine discharge water is being allowed to settle down in the mine sump before disposal into natural water bodies. The monitoring of water quality parameters is being done through Central Institute for Mining and Fue website.
x	ETP shall also be provided for workshop, and CHP, if any. Effluents shall be treated to confirm to prescribed standards in case discharge into the natural water course.
×	Regular monitoring of subsidence movement on the surface over and around the working area and impact on natural drainage pattern, water bodies, vegetation, structure, roads, and
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	surroundings shall be continued till movement causes conjustely. In case of observation of any high rate of subsidence movement, appropriate effective corrective measures shall be taken to avoid loss of life and material. Cracks shall be effectively plugged with ballast and clayey soll/suitable material.	
XXXI	Sufficient coal pillars shall be left unextracted around the air shaft (within the subsidence influence area) to protect from any damage from subsidence, if any.	mais lieve been left around air about
XXXII	High root density tree species shall be selected and planted over areas likely to be affected by subsidence.	Identification of high root density Plant and its plantation in subsidence prone area is in the process. The plantation programme will include such plants.
XXXIII	Depression due to subsidence resulting in water accumulating within the low lying areas shall be filled up or drained out by cutting drains.	plants.  It will be complied, where applicable.
XXXiV	Solid barriers shall be left below the roads falling within the blocks to avoid any damage to the roads.	It is being followed. Sufficient barriers are left for saving the surface installation and infra structures as per the statute and DGMS guidelines.
XXXV	No depillaring operation shall be carried out below the township/colony.	It is being followed.
	The Transportation Plan for conveyor-cum-rail for Cluster-VIII should be dovetailed with Jharia Action Plan. Road transportation of coal during Phase-I should be by mechanically covered trucks, which should be introduced at the earliest. The Plan for conveyor-cum-rail for Cluster-VII should be dovetailed with Jharia Action Plan. The road transpiration of coal during phase-I should be by mechanically covered.	Action has been taken for the transportation plan for conveyor cum rail system of dispatch. CMPDIL, RI-II has been requested to conduct study and prepare the plan in this regarding.  Conversion of existing truck in to mechanically covered trucks in a phased manner has been taken up. By that time transportation is being done by covering vehicle with tarpaulin cover.
xxxvii	A study should be initiated to analyze extent of	·

reduction in pollution load every year by reducing road transport.

xxxviii R&R of 4959 nos of PAF's involved. They should be rehabilitated at cost of shifting to safe areas at the cost of Rs 29948 Lakhs as per the approved from the cost of Rs 29948 Lakhs as per the approved from the cost of Rs 29948 Lakhs as per the approved from the cost of Rs 29948 Lakhs as per the approved from the cost of Rs 29948 Lakhs as per the approved from the cost of Rs 29948 Lakhs as per the approved from the cost of Rs 29948 Lakhs as per the approved from the cost of Rs 2015. The cost of Rs 2015 States of Rs 2015 States

xLi xLii	is being carried out through CMPDI, Ranchi using satellite imagery for every 3 years the last map of the year 2010-11 has been uploaded on the official waterlie of company.  Further CMPDI has been requested to prepare "Time series of land use maps based on satellite imagery of the core zone and buffer zone in the scale 1:5000.  CMPDI, Ranchi has prepared "Final Mine Ciosure Plan along with a Plan for Habitat Restoration and with details of Corpus Fund".	
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•			ordinates with all the Areas and reports to the Director (Technical) and in turn he reports to the CNID of the company.  The team is multidisciplinary and very much motivated under the guidance of company's Director (Technical) and CMD. Further capacity building at both corporate and operating level is being done.
	xLiii	Implementation of final mine closure plan for Cluster VIII, subject to obtaining prior approval of the DGMS in regard to mine safety issues.	Final Mine Closure Plan, has been prepared for each Mine in this cluster. Before implementation of final mine closure plan, prior permission from DGMS will be taken in regard to mine safety issues.
	xLiv	Corporate Environment Responsibility:- a) The Company shall have a well laid down Environment Policy approved by the Board of Directors.	A well defined Corporate Environment Policy has already been laid down and approved by the Board of Directors. This is also posted on BCCL website.
		b) The Environment Policy shall prescribe for standard operating process/procedures to bring into focus any infringements/deviation/violation of the environmental or forest norms/conditions.	Complied.
		c) The hierarchical system or Administrative Order of the company to deal with environmental issues and for ensuring compliance with the environmental clearance conditions shall be furnished.	A hierarchical system of the company to deal with environmental issues from corporate level to mine level already exists.
		d) To have proper checks and balances, the company shall have a well laid down system of reporting of non- compliances/violations of environmental norms to the Board of Directors of the	Being complied.

statisholders at large.
No change in minima test disconnections
the Ministry of Environment and First
quantum of mineral coal shall or production for Being followed. Production is half
be established in the core zone as well as in the buffer zone for PM <sub>10</sub> , PM <sub>25</sub> , SO <sub>2</sub> and NOx monitoring. Location of the stations shall be decided based on the meteorological data, topographical features and environmentally and ecologically sensitive to provide the product of the station of the stations shall be producted to provide the product of the product o
heavy metals such as Hg, As, Ni, Cd, Cr, etc
NOx) and heavy metals such as Hg, As, Ni, Cd, Cr and other monitoring data shall be regularly submitted to the Ministry including its Regional Office at Bhubaneswar and to the State Pollution Control Board and the Central Pollution Control Board once in six months. Random verification of samples through analysis from independent laboratories recognized under the EPA rules, 1986 shall be furnished as part of compliance report.
v Adequate measures shall be taken for control of noise levels below 85 dBA in the work environment. Workers engaged in blasting and drilling operations, operation of HEMM, etc shall

		be provided with ear plugs/muffs.	
	vi	from the mine) shall be properly collected	Establishment of monitoring stations is being done and Jharkhand State Pollution Control Report is being
		prescribed under GSR 422 (F) dated 10th Ma	The work of monitoring of ambient environment in her
		from time to time before discharge Oil and	laboratory recognized under the EP Rives Finel recognized the EP Rives Finel Rives Finel recognized the EP Rives Finel R
	Vii	workshop effluents	
		Vehicular emissions shall be kept under control and regularly monitored. Vehicles used for transporting the mineral shall be covered with tarpaulins and optimally loaded.	Being Complied.
	Viii	Monitoring of environmental quality parameters shall be carried out through establishment of	It shall be complied.
		monitoring and analysis equipment in	
		consultation with the State Pollution Control Board and data got analysed through a laboratory recognized under EPA Rules, 1986.	
	ix	Personnel working in dusty areas shall wear protective respiratory devices and they shall also be provided with adequate training and	Being Complied. A separate full-fledgedHuman Resource Development Department is conducting regular training programme on these issues.
		mornation on safety and health aspects.	Apart from this Vocational Training Centers are existing in all the Areas of BCCL, which provides periodical training on the safety and occupational health issue to each of the workers working in the mines.
	x	Occupational health surveillance programme of	Initial Medical Examination (IME) and D. i. III
		and to take corrective measures if pooded and	(PME) of all the personnel is carried out as per the Statutes and Director General of Mines Safety (DGMS) guideline.
Į.		records maintained thereof. The quality of	
		•	

	environment due to outsourcing and the health and safety issues of the outsourced manpower should be addressed by the company while outsourcing.	
xi xii	A separate environmental management cell with suitable qualified personnel shall be set up under the control of a Senior Executive, who will report directly to the Head of the Company.	along with a suitable qualified multidisciplinary team of executives (14 nos.) which includes Environment, Mining, Excavation, Civil, Survey, Electrical & mechanical, Forestry disciplines executives and technicians (4 nos.) has been established in Headquarters. They are also trained in ecological restoration, sustainable development, rainwater harvesting methods etc. At the project level, one Executive in each area has also been nominated as Project Nodal Officer (Environment) and is also entrusted with the responsibility of compliance and observance of the environmental Acts/Laws including environment protection measures. The activities are monitored on regular basis at Area and at Head quarters levels. GM (Environment) at head quarter level, co-ordinates with all the Areas and reports to the Director (Technical) and in turn he reports to the CMD of the company.  The team is multidisciplinary and very much motivated under the guidance of company's Director (Technical) and CMD. Further capacity building at both corporate and operating level is being done
xiii	protection measures shall be kept in separate account and shall not be diverted for other purpose. Year-wise expenditure shall be reported to this Ministry and its Regional Office at Bhubaneswar.	it is being complied.
		It has been complied. Advertisement in local newspaper has also been done.

	vernacular language of the locality concerned	
	within seven days of the clearance letter	
. !	informing that the project has been accorded	
	environmental clearance and a copy of the	
	clearance letter is available with the State	
	Pollution Control Board and may also be seen at	
	the website of the Ministry of Environment &	
	Forests at http://envfor.nic.in.	
xiv	A copy of the environmental clearance letter shall	Complied.
	be marked to concern Panchavat/Zila Parishad	Compiled.
1	Municipal Corporation or Urban local body and	
	local NGO, if any, from whom any	
i	suggestion/representation has been received	
- 1	while processing the proposal. A conv of the	
- 1	clearance letter shall also be displayed on	
`	company's website.	
χV	A copy of the environmental clearance letter shall	Complied.
-	be shall also be displayed on the website of the	
	concerned State Pollution Control Board. The FC	
	letter shall also be displayed at the Regional	
1	Office, District Industry Sector and Collector's	
	Office/Tehsildar's Office for 30 days.	
xvi	The clearance letter shall be uploaded on the	Complied.
	company's website. The compliance status of the	ounpilou.
	stipulated environmental clearance conditions	
	shall also be uploaded by the project authorities	
- 1	on their website and updated at least once every	
	six months so as to bring the same in public	
	domain. The monitoring data of environmental	
	quality parameter (air, water, noise and soil) and	
.	critical pollutant such as PM <sub>10</sub> , PM <sub>2.5</sub> , SO <sub>2</sub> and	
	NOx (ambient) and critical sectoral parameters	
i	shall also be displayed at the entrance of the	

		1	
		project premises and mine office and in	· ·
		corporate office and on company's website.	
•	xvii	The project proponent shall submit six monthly	
	1	compliance reports on status of compliance of	
		the stipulated environmental clearance	
		conditions (both in hard copy and in e-mail) to	
		the respective Regional Office o the Ministry,	
		respective Zonal Office s of CPCB and the	
4		SPCB.	
	xviii	The Regional Office of this Ministry located at	Shall be complied.
		Bhubaneswar shall monitor compliance of the	·
		stipulated conditions. The Project authorities	
		shall extend full cooperation to the office(s) of the	
		Regional Office by furnishing the requisite	
		data/information/monitoring reports.	
	xix	The Environment statement for each financial	Being complied.
		year ending 31 March in For-V is mandated to be	
		submitted by the project proponent for the	
		concerned State Pollution Control Board as	
		prescribed under the Environment (Protection)	
		Rules, 1986, as amended subsequently, shall	
		also be uploaded on the company's website	
		along with the status of compliance of EC	
		conditions and shall be sent to the respective	
		Regional Offices of the MoEF by E-mail.	
	С	Other Conditions by MOEF	
	i	The Ministry or any other Competent Authority	Agree.
		may stipulate any further condition(s) for	. 4
		environmental protection.	
	ii	Failure to comply with array of the conditions	Agree.
		mentioned above may result in withdrawal of this	
		clearance and attract the provisions of the	
		Environment (Protection) Act. 1986.	
			The same of the sa
		•	•

iv	Control of Poll (Prevention & Cor Environment (Pre Public Liability in their amendments shall ensure to ucosts incurred for case of soil cor groundwater are occupational and mining operations.  The Environmenta outcome of the W. Coking Coal Limit closure orders iss	other diseases due to Il Clearance is subject to ift Petition filed by M/S Bha ed (BCCL) in response to ued by the Jharkhand St loarn which is pending it	Air the the with the sin of and the the Agree.		
	oject Officer	Project Officer	Project Officer	Project Officer	Project Officer
	acolla Colliery	Bera/Dobari Colliery	Kuya/KOCP Colliery	Ghanoodih Colliery	Kujama Colliery