



EMP CLEARANCE

(J-11015/421/2008- IA.II(M) )

**PERIOD : October'13 to March'14**

*Ray Bachra U/G Mine*

**(PIPARWAR AREA)**

**CENTRAL COALFIELDS LIMITED**

**Status of compliance of the terms and conditions given in the Environmental clearance letter No. J-11015/421/2008- IA. II (M) dt. 15.02.2013 issued by MOEF , Govt. of India; New Delhi for production capacity of 0.3 MTPA of Ray-Bachra Underground.**

Period – October'2013 To March'2014

**A. SPECIFIC CONDITIONS**

SL.NO	CONDITION	STATUS
(i)	No mining shall be undertaken in / under the forestland until prior forestry clearance has been obtained under the provisions of FC Act 1980.	Agreed.
(ii)	No additional land, manpower and equipment and water shall be used for the expansion project.	Agreed.
(iii)	The 84.75 ha area of old abandoned mine would be reclaimed with plantation.	The surface of the 84.75 ha area of old abandoned mine is covered with plantation.
(iv)	Mine closures activities include sealing of incline mouth dismantling of haulage system, clearing and afforestation of coal stock area, plantation on barren land and old abandoned mine.	Sealing of incline mouth, dismantling of haulage system, clearing as well as afforestation of coal stock area, plantation on barren land and old abandoned mine has been included in the Mine Closure Plan.
(v)	Mining shall be carried out as per statute at a safe distance from river / nallah.	Mining is being carried out as per the statute and the mine is at a distance of about 125 mtr.
(vi)	No mining should be carried out below the railway track.	No mining is being carried out below the railway track.
(vii)	No depillaring shall be undertaken vertically below and within 60 m of nallas and ponds within the subsidence influence area.	No mining has been undertaken below and within 60 mt. of nallahs & ponds within the subsidence area.
(viii)	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.	It is being maintained
(ix)	Solid barriers shall be left below the roads falling within the blocks to avoid any damage to the roads.	This is being implemented.
(x)	No depillaring operation shall be carried out below habitation. Depression due to subsidence resulting in water accumulating within the low lying areas shall be filled up or drained out by cutting drains. Details of extent of subsidence that has occurred and the extent of area under subsidence and measures to be taken therefore be furnished to the ministry for record.	No depillaring has been carried out below habitation. Creation of depression due to subsidence will be taken care of by filling the area with OB / Topsoil and plantation of saplings thereon.
(xi)	Depression due to subsidence resulting in water accumulating within the low lying areas shall be filled up or drained out by cutting drains. Details of extent of subsidence that has occurred and the extent of area under subsidence and measures to be taken therefore be furnished to the ministry for record.	Creation of depression due to subsidence will be taken care of by filling the area with OB / Topsoil and plantation of saplings. Details of extent of subsidence so occurred shall be furnished to the Ministry.
(xii)	Mining shall be carried out as per statute at a safe distance from river / nall following within adjacent to the lease boundary at the time of depillaring, protective bunds and garland drains shall be provided so that no water from the surface enters the subsidence area and the shaft.	Mining is being carried out as per the statute and the mine is at a distance of about 125 mtr. Garland drains has been constructed and maintained.
(xiii)	While extracting panels in the lower seam, all water bodies in the subsidence area shall be drained. Dewatering of the old goaves of the upper seam shall be continued as long as the lower seam is worked to prevent accumulation of large	No water body is present in the likely area of subsidence. Dewatering of the old goaves of the upper seam is done as long as the lower seam is

	water bodies over working area.	worked to prevent accumulation of large water bodies over working area.
(xiv)	High root density tree species shall be selected and planted over areas likely to be affected by subsidence.	Plantation of high root density has been done on the likely area of subsidence.
(xv)	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 surroundings shall be continued till movement ceases completely. 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 developed due to subsidence in underground mining shall be filled with clay and sand suitable material. The area should be reclaimed back to the normal state.	Regular monitoring of subsidence movement on the surface over and around the working area is carried out. After mining is over the area shall be reclaimed back to the normal state. Cracks developed due to subsidence is being filled up with OB / Sand / Topsoil as and when it is observed.
(xvi)	Garland / surface drains (size, gradient and length) around the safety areas such as mine shaft and low lying areas and sump capacity shall be designed keeping 50% safety margin over and above the peak sudden rainfall and maximum discharge in the area adjoining the mine sites. Sump capacity shall also be provided adequate retention period to allow proper settling of silt material. Sufficient number of pumps of adequate capacity shall be deployed to pump out mine water during peak rainfall.	Garland drains as well as surface drains have been made. 7 nos of pumps of 7x500GPS capacity have been installed having proper safety margin ( more than 50%) to meet sudden rainfall. Sump capacity has been provided with adequate retention period to allow proper settling of silt material. Sufficient number of pumps of adequate capacity has also been installed to pump out the mine water during peak rainfall.
(xvii)	CHP shall be operated with high efficiency bag filters, water sprinkling system shall be provided to check fugitive emissions from crushing operations, conveyor system, haulage roads, transfer points, etc.	Coal is not transported to CHP as crushing is not required.
(xviii)	Drills shall be wet operated only.	In underground mines very small dia drill holes are done as the coal seams are generally watery in nature wet drilling is not required.
(xix)	The major approach roads from ML used for mineral transportation shall be black topped and a 3-tier avenue plantation developed using a mix of native species.	Roads used for Coal transportation has been black topped and avenue plantation has been done using a mix of native species.
(xx)	An afforestation plan shall be prepared and implemented for the areas acquired under surface rights and shall include areas along roads, infrastructure, township, CHP, along ML boundary, etc, by planting native species in consultation with the local DFO/Agriculture Department. The density of the trees shall be around 2500 plants per ha.	Afforestation has been carried out with the help of State Forest Department and density of 2500 plants per Ha. is being maintained.
(xxi)	A Conservation Plan for endangered species shall be formulated in case they inhabit/ visit/ reported within the study area and implemented in consultation with the State Forest and Wildlife Departments. A budgetary provision shall be earmarked for its establishment and maintenance and a report thereon submitted as part of the Monitoring Report to the MoEF RO, Bhubaneswar and also regularly (at least once a year) uploaded on the company website.	In the mine leasehold area no endangered species have been found. However plantation of native species in the reclaimed area has been taken up along with other species.
(xxii)	Regular monitoring of groundwater level and quality shall be carried out by establishing a network of existing wells and construction of new peizometers. The monitoring for quantity shall be done four times a year in pre-monsoon (May), monsoon (August), post-monsoon (November) and winter (January) seasons and for quality in May. Data thus collected shall be submitted to the Ministry of Environment & Forests and to the Central Pollution Control Board quarterly within one month of monitoring. Monitoring of drinking water should be carried out regularly.	Monitoring of groundwater level is being carried out with the help of 4 no. of existing wells. Procurement of peizometers is under process. Monitoring of water quality is carried out on quarterly basis by the CMPDIL. Monitoring of drinking water is also carried out by the CMPDIL.

(xxiii)	Monitoring of drinking water should be carried out regularly.	This is being followed.
(xxiv)	Project specific CSR should be prepared & activities under CSR undertaken for the neighboring villages shall be for not less than Rs 5 per tonne of coal or a revenue budget of Rs. 10 lakhs, whichever is more and the progress made thereon shall be uploaded on the company annually on the company website. Green Belt/plantation should be provided on both side of road in Piparwar area. CSR funds could be utilized for this purpose; A provision of Rs. 10 lakhs / year be made for the balance life of 3 years of mine life.	In the Year 2013-14, total Rs. 26.50 Lakhs has been spent under different CSR head. Rs. 11 Lakhs was spent on construction of 2 no. of wells in different villages and Rs. 9 Lakhs was spent on deepening of pond. Rs. 11 Lakhs was spent on construction of PCC roads ( 450 mtrs ), Rs. 4.50 Lakhs was spent on construction of shed, platform in different villages.
(xxv)	The Company shall put up artificial groundwater recharge measures for augmentation of groundwater resource in case monitoring shows a declining trend of ground water level. The project authorities shall meet water requirement of nearby village(s) in case the village wells go dry due to dewatering of mine.	A no. of ponds / water tanks have been constructed so that the ground water is recharged.
(xxvi)	Sewage treatment plant shall be installed in the township. ETP shall also be provided for treating workshop and CHP effluents.	For sewage treatment septic tank and soakpit system are operating in colonies.
(xxvii)	For monitoring land use pattern and for post mining land use, a time series of land use maps, based on satellite imagery (on a scale of 1:5000) of the core zone and buffer zone, from the start of the project until end of mine life shall be prepared once in 3 years (for any one particular season which is consistent in the time series), and the report submitted to MOEF and its Regional office at Bhubaneswar.	Remote sensing is carried out by CMPDIL and the report shall be submitted to MOEF Bhubaneswar.
(xxviii)	A Final Mine Closure Plan along with details of Corpus Fund shall be submitted to the Ministry of Environment & Forests 5 years in advance of final mine closure for approval. Mine closure should ensure that no illegal mining begins after mine is closed	Final Mine Closure Plan has been prepared and this will be complied .
(xxix)	If the water quality parameters such as F, pH, heavy metals, etc exceed the prescribed limits, suitable measures by the proponent be taken to ensure that the local communities are provided alternate source of water for their livelihood.	Water quality monitoring is being carried out by CMPDIL on quarterly basis.
(xxx)	Medical camps should be organized in the area for regular check up of workers/Villagers / population. Detailed prevalent disease pattern in the area should be documented and details of medical facilities provided for the same be made available to the MoEF	Free Medical check-up camps is regularly organized in the area for regular check up of Villagers / population. Certain other medical facilities are also extended to nearby villagers.
(xxxi)	Proponent should make written submission on the compliances/clarifications to the MoEF on the above cited issues.	Agreed.

#### B. GENERAL CONDITIONS

SL.NO.	CONDITION	STATUS
(i)	No change in technology and scope of working shall be made without prior approval of the Ministry of Environment and Forests.	No change in technology and scope of working shall be done without prior approval of the MOEF.
(ii)	No change in the calendar plan including quantum of mineral coal and waste being produced shall be made.	It will be followed.
(iii)	Four ambient air quality monitoring stations shall be established in the core zone as well as in the buffer zone for monitoring PM10, PM2.5, SO2 and NOx. Location of the stations shall be decided based on the meteorological data, topographical features and environmentally and ecologically sensitive targets in consultation	Four no. ambient air quality monitoring stations have been established for air quality monitoring. CMPDIL has been asked for making

	with the State Pollution Control Board. Monitoring of heavy metals such as Hg, As, Ni, Cd, Cr, in particulates shall be carried out at least once in six months.	arrangement for monitoring of PM10 as well as heavy metals such as Hg, As, N, Cd, Cr.
(iv)	Data on ambient air quality (PM10, PM 2.5, SO2 and NOx and heavy metals such as Hg, As, Ni, Cr, etc) 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 recognised under the EP Rules, 1986 shall be furnished as part of the compliance report.	Data on ambient air quality which is monitored by the CMPDIL on quarterly basis is regularly submitted to the Regional office of MOEF at Bhubaneswar and JSPCB.  CMPDIL has been asked for making arrangement for monitoring of PM10 as well as heavy metals such as Hg, As, N, Cd, Cr.
(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.	Adequate measures have been taken for control of noise levels below 85 dBA in the work environment. Workers engaged in blasting and drilling operations, have been provided with ear plugs/muffs.
(vi)	Industrial wastewater (workshop and wastewater from the mine) shall be properly collected and treated so as to confirm to the standards including for heavy metals before discharge prescribed under GSR 422 (E) dated 19th May 1993 and 31st December 1993 or as amended from time to time. Oil and grease trap shall be installed before discharge of workshop effluents.	Water from the mine is collected and treated in the filtration plant so as to confirm to the standards including for heavy metals and is used for residential purpose.
(vii)	Vehicular emissions shall be kept under control and regularly monitored. Vehicles used for transportation of the mineral shall be covered with tarpaulins and optimally loaded.	Vehicles used in transportation are regularly monitored for control of vehicular emission. Further transportation of coal is done in covered trucks.
(viii)	Monitoring of environmental quality parameters shall be carried out through establishment of adequate number and type of pollution monitoring and analysis equipment in consultation with the State Pollution Control Board and data got analysed through a laboratory recognized under EP Rules, 1986.	CMPDIL has been entrusted for monitoring of environmental quality parameters.
(ix)	Personnel working in dusty areas shall wear protective respiratory devices and they shall also be provided with adequate training and information on safety and health aspects. Occupational health surveillance programme of the workers shall be undertaken periodically to observe any contractions due to exposure to dust and to take corrective measures, if needed.	Personnel working in dusty areas are provided with dust masks and are also given regular training at VTC for making them aware about safety, health & other aspects. PME of 1/5 <sup>th</sup> of the workforce are medically examined every year including occupational health surveillance to observe any contractions due to exposure to dust and to take corrective measures.
(x)	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.	A separate environmental management cell has been established at the Project.
(xi)	The funds earmarked for environmental 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.	Funds earmarked for environmental protection measures are not diverted for any other purposes.
(xii)	The Project authorities shall advertise at least in two local newspapers widely circulated around the project, one of which shall be in the vernacular language of the locality concerned within seven days of the clearance letter informing that the project has been accorded environmental	Advertisement has been made in two local newspapers about grant of Environmental Clearance to the project.

	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 <a href="http://envfor.nic.in">http://envfor.nic.in</a>	
(xiii)	A copy of the environmental clearance letter shall be marked to concerned Panchayat / Zila Parishad, Municipal Corporation or Urban Local Body and local NGO, if any, from whom any suggestion/representation has been received while processing the proposal. A copy of the clearance letter shall also be displayed on the company's website.	A copy of the Environmental clearance has been submitted to the local Panchayat however no suggestion / representation has been received from the local Panchayat.
(xiv)	A copy of the clearance letter shall be displayed on the website of the concerned State Pollution Control Board. The EC letter shall also be displayed at the Regional Office, District Industry Centre and Collector's Office/Tehsildar's Office for 30 days.	A copy of the Environmental clearance has been submitted to the Jharkhand State Pollution Control Board, Ranchi.
(xv)	The clearance letter shall be uploaded on the company's website. The compliance status of the stipulated EC conditions shall also be uploaded by the project authorities on their website and updated at least once every six months so as to bring the same in the public domain. The monitoring data of environmental quality parameters (air, water, noise and soil) and critical pollutants such as PM10, PM2.5, SO2 and NOx (ambient) and critical sectoral parameters shall also be displayed at the entrance of the project premises and mines office and in corporate office and on the company's website.	Environmental clearance letter has been uploaded on the company's website. The compliance status has also been uploaded. The monitoring data of environmental quality parameters has been displayed at the entrance of the project premises, mine office as well as on the company's website.
(xvi)	The project proponent shall submit six monthly reports on the status of compliance of the stipulated environmental clearance conditions (both in hard copy and in e-mail) to the respective Regional Office of the MOEF, the respective Zonal offices of CPCB and the SPCB.	Six monthly compliance reports of the Environmental Clearance conditions is regularly submitted to the Regional Office of the MOEF at Bhubaneswar as well as to the Jharkhand State Pollution Control Board.
(xvii)	The Regional Office of this Ministry located at 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.	Full cooperation shall be extended by submitting requisite data / information / monitoring report to the Regional Office of the MOEF at Bhubaneswar.
(xviii)	The environmental statement for each financial year ending 31st March in Form-V is mandated to be submitted by the project proponent to 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.	Environmental statement for the financial year ending 31st March has been submitted to the Jharkhand State Pollution Control Board.

  
 PROJECT OFFICER  
 RAY-BACHRA U/G PROJECT.