

101-581

**HALF YEARLY PROGRESS REPORT OF COMPLIANCE WITH  
ENVIRONMENTAL CLEARANCE CONDITIONS  
(HALF-YEARLY ENDING MARCH'2014)**

**Name of the Project:** Orient Colliery U/G Mine No:4, MCL (0.50 MTPA)

**No. & date of MOEF clearance:** Letter No. J-11015/37/2007-IA.II(M) Dated 25<sup>th</sup> February, 2013

**A. Specific Conditions:**

Condition No.	Conditions stipulated in the EC	Compliance
(i)	A Subsidence study shall be carried out before depillaring operations.	A Subsidence prediction study has already been done by CMPDIL and Subsidence Prediction Analysis Report submitted to MOEF along with the forest diversion proposal.
(ii)	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 shall be effectively plugged with ballast and clayey soil/ Suitable/material.	Regular monitoring of subsidence movement on the surface over and around the working area is being done. No subsidence has been observed so far, no cracks have been observed anywhere.
(iii)	Mining shall be carried out as per statute at a safe distance from the river/nallah flowing Within/adjacent to the lease boundary.	Mining is being carried out as per statute at a safe distance from Ib-river flowing adjacent to the lease boundary.
(iv)	High root density tree species Shall be selected and planted over areas likely to be affected by subsidence.	Adequate number of high root density tree species is being planted over the areas likely to be affected by subsidence.

(v)	Coal extraction shall also be optimized in areas where agricultural production is continuing. Some pillars shall be left below the agricultural land. No coal depillaring shall be undertaken below areas of habitation without stowing and with prior approval of DGMS.	No depillaring operation has been carried out so far below agricultural land, villages and other surface structures.
(vi)	Subsidence shall be monitored closely and if subsidence is found exceeding the permitted limits, then the land owners shall be adequately compensated with mutual agreement with the land owners or the land shall be acquired.	Subsidence monitoring shall be done after the commencement of depillaring operation in the mine.
(vii)	Garland 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 an above the peak sudden rainfall and maximum discharge in the area adjoining the mine sites. Sump capacity shall also provide adequate retention period to allow proper settling of silt material.	Garland drains have been provided around mine openings. Sumps of adequate capacity have been established below ground keeping in view of maximum rainfall & adequate retention time, sufficient number of pumps of adequate capacity have been installed below ground.
(viii)	Water sprinkling system shall be provided to check fugitive emissions from loading operations, conveyor system, haulage roads, transfer points, etc. Major approach roads shall be black topped and properly maintained.	To check fugitive emissions water sprinkling system has already been provided at loading points, conveyor system, haulage roads and transfer points. Major approach roads have been black topped and maintained.
(ix)	A progressive afforestation plan shall be prepared and implemented over the mine lease area acquired and shall include areas under green	Adequate plantation has been done in the mine lease area as per the advice of forest department.

	belt development, areas along roads, infrastructure, along ML boundary and township etc, by planting native species in consultation with the local DFO/ Agriculture Department.	
(x)	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.	The groundwater level in the wells of the nearby villages is being monitored by CMPDIL. There has been no change in the water level of the well due to mining.
(xi)	The Company shall put up artificial groundwater recharge measures for augmentation of ground water resource, in case water table shows a declining trend. The project authorities shall meet water requirement of nearby village(s) in case the village wells go dry due to dewatering of mine.	No incident of drying of drinking water well in the nearby village has been reported or observed. Moreover, water to nearby villages is supplied by the project as per their demand.
(xii)	Besides carrying out regular periodic health check-up of their workers, 10% of the workers identified from workforce engaged in active mining operations shall be subjected to health Check-up for occupational diseases and hearing impairment if any, through an	Regular health check up for occupational diseases in respect of all workers engaged in mining operations is being conducted at NSC Hospital at five years interval. No case of occupational disease has been detected so far.

	agency in the district/State and the results. reported to this Ministry and to DGMS.	
(xiii)	Activities under CSR undertaken for the neighboring villages shall be for not less than Rs 5 per tonne of coal and the progress made thereon shall be uploaded on the company annually on the company website.	Adequate fund has been allocated for activities under CSR which is being done in the neighboring villages.
(xiv)	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.	A Progressive Mine Closure Plan has already been submitted to the Ministry of Environment & Forests. The Final Mine Closure Plan along with details of Corpus Fund shall be submitted to MOEF 5 years in advance of final mine closure for approval.

**B. General Conditions:**

Condition No.	Conditions stipulated in the EC	Compliance
(i)	No change in technology and scope of working shall be made without prior approval of the Ministry of Environment and Forests.	There has been no change in mining technology and scope of working so far.
(ii)	No change in the calendar plan including quantum of mineral coal and waste being produced shall be made.	There has been no change in calendar plan of extraction quantum of coal.
(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 with the State	Ambient air quality monitoring stations have been established in consultation with State Pollution Control Board.

	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.	
(iv)	Data on ambient air quality (PM10, PM 25, SO <sub>2</sub> and NO <sub>x</sub> 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 recognized under the EP Rules, 1986 shall be furnished as part of the compliance report.	Data of ambient air quality is being submitted (half yearly) to MOEF, State Pollution Control Board & Central Pollution Control Board.
(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 to reduce noise level below 85 dBA at the working places. Workers exposed to high noise levels are provided with ear plugs.
(vi)	Industrial wastewater (workshop and wastewater from the mine) shall be properly collected, and treated so as to conform 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.	Waste water from the mine is collected in sedimentation ponds and treated suitably before being allowed to discharge on ground. No waste water discharged from workshop.


(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.	Vehicular emissions kept under control by regular checking of exhaust emissions. Vehicles used for transporting coal are optimally loaded and covered with tarpaulins.
(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 analyzed through a laboratory recognized under EP Rules, 1986.	Environmental monitoring work is being done through CMPDIL having adequate laboratory facilities as required by State Pollution Control Board.
(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.	Persons working in dusty areas are provided with dust masks and educated on health aspects through training.
(x)	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.	Periodical occupational health check up of all workers is carried out once in every five years regularly and corrective measures are being taken as when necessary.
(xi)	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 environment management cell headed by CGM (Envt.) at Company HQ who reports directly to DT(P&P) of Company.
(xii)	The funds earmarked for environmental protection measures shall be kept in separate account and shall not be diverted for other	Funds earmarked for environmental protection measures are kept in a separate account head of "Environment".

	purpose. Year-wise expenditure shall be reported to this Ministry and its Regional Office at Bhubaneswar.	Year-wise expenditure is reported to MOEF, State Pollution Control Board by Company HQ.
(xiii)	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 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>	Advertisement relating to the fact that the project has been accorded environmental clearance was made in the Oriya daily "DHARITRI (Sambalpur)" and English Newspaper "NEW INDIAN EXPRESS (Bhubaneswar)" on Dtd.05.03.2013.
(xiv)	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 environmental clearance has been given to the concerned local panchayats and Municipal Corporation and also displayed on the company's website.
(xv)	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/Tahsildar's Office for 30 days.	A copy of the clearance letter has been sent to the State Pollution Control Board, Odisha, Bhubaneswar Regional Office, District Industry Centre, Collector's Office and Tahsildar's Office, Jharsuguda for display of such clearance.
(xvi)	The clearance letter shall be	The environmental clearance letter

	<p>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.</p>	<p>has been uploaded on the company's website. The monitoring data of environmental quality parameters is being displayed at the entrance of the project premises and mines office and in corporate office and on the company's website.</p>
(xvii)	<p>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.</p>	<p>Six monthly reports on the status of compliance of the stipulated environmental clearance conditions (both in hard copy and in e-mail) is being submitted to the respective Regional Office of the MOEF, the respective Zonal offices of CPCB and the SPCB.</p>
(xviii)	<p>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.</p>	<p>The requisite data/ information/ monitoring reports is being furnished to the Regional Office of MOEF, Bhubaneswar.</p>
(xix)	<p>The environmental statement for each financial year ending 31st March in Form-V is mandated to be submitted by the project proponent</p>	<p>The environmental statement for each financial year ending 31st March in Form-V is being submitted to State Pollution</p>



	<p>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.</p>	<p>Control Board, Odisha, Bhubaneswar.</p>
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 Colliery Manager,  
 Orient Colliery Mine No.4  
 खान् प्रबन्धक  
 संख्या-4, ओरिएण्ट उप-क्षेत्र (ओ.क्षे)  
 Colliery Manager  
 Mine.No-4, Orient-Sub Area (OA)