

101-614

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: 3, MCL (0.69 MTPA)

No. & date of MOEF clearance: letter No. J-11015/206/2008-IA.II(M) dtd.12th March 2013

A. Specific Conditions:

Condition No.	Conditions stipulated in the EC	Compliance
1	Coal transportation should be by covered trucks. The loading should be by bulk loaders at Lajkura siding. Coal would be transported by belt conveyor onto surface bunkers from where it would be dispatched directly to small consumers by road using 54 trucks of 18-T capacity, and to major consumers and basket linkage by rail from Orient Railway Siding at a distance of 1.5 km covered by road.	Coal is being transported from underground by belt conveyor onto surface bunkers from where it is dispatched directly to small consumers by road and to major consumers and basket linkage by rail from Orient Railway Siding (which is at a distance of 1.5 km covered by road). Coal transported through trucks by road is covered with tarpaulin.
(i)	No mining shall be undertaken in/under the forestland until prior forestry clearance has been obtained under the provisions of FC Act 1980.	Stage-I forestry clearance has already been obtained for the mine and the action/process for obtaining final forestry clearance has already been initiated.
(ii)	No additional land, manpower and equipment and water shall be used for the expansion project.	No additional land, manpower and equipment and water are being used for the mine at present.
(iii)	Mine closure 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.	Activities of sealing of incline mouth, dismantling of haulage system, clearing and afforestation of coal stock area, plantation on barren land and old abandoned mine shall be done before the mine is closed.
(iv)	Mining shall be carried out as per statuette at a safe distance from	Mining is being done at a safe distance from river/ nallah as per

	river/nallah.	statutory provisions applicable to the mine.
(v)	No mining should be carried out below the railway track.	Presently no mining has been done below any railway track.
(vi)	No depillaring shall be undertaken vertically below and within 60 m of nallas and ponds within the subsidence influence area	No depillaring has been done vertically below and within 60 m of nallahs and ponds within the subsidence influence area.
(vii)	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.	Sufficient coal pillars have been left unextracted around the air shaft.
(viii)	Solid barriers shall be left below the roads falling within the blocks to avoid any damage to the roads.	Solid barriers have been left below the roads falling within the blocks to avoid any damage to the roads.
(ix)	No depillaring operation shall be carried out below habitation.	No depillaring operation has been done below habitation.
(x)	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 subsidence has been found to occur due to mining operation in the mine.
(xi)	Mining shall be carried out as per statuette at a safe distance from river/nail 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.	Presently mining is being done at a safe distance from river/nallah as per statutory provisions applicable to the mine and necessary protective measures as per CMR, 1957 shall be taken at the time of depillaring.

(xii)	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 water bodies over working area.	All the precautions necessary shall be observed as per CMR,1957 in the mine during the extraction of panels in the lower seam.
(xiii)	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.
(xiv)	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 being done. No subsidence has been observed so far, no cracks have been observed anywhere.
(xv)	Garland/surface drains (size, gradient and length) around the safety areas such as mine shaft and low lying areas and sump	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

	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.	time, sufficient number of pumps of adequate capacity have been installed below ground.
(xvi)	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 .	Presently there is no CHP installed for the mine.
(xvii)	Drills shall be wet operated only.	Drills operated in the mine have been fitted with dust control measures.
(xviii)	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.	The major approach roads from ML used for mineral transportation are provided with black topping and a 3-tier avenue plantation.
(xix)	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	Adequate plantation has been done in the mine lease area as per the advice of forest department.

	species in consultation with the local DFO/ Agriculture Department. The density of the trees shall be around 2500 plants per ha.	
(xx)	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 be submitted as part of the Monitoring Report to the MoEF, RO, Bhubaneswar and also regularly (at least once a year) uploaded on the Company's website.	No endangered species inhabited within the study area of the mine. However, a Wildlife Conservation Plan for endangered species is in the process of preparation and implementation.
(xxi)	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.

(xxii)	Monitoring of drinking water should be carried out regularly.	Monthly monitoring of drinking water is being carried out by CMPDIL.
(xxiii)	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 with escalation factor every year be provided under the CSR for the life of the project 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 Piper war area. CSR funds could be utilized for this purpose;	Adequate fund has been allocated for activities under CSR which is being done in the neighboring villages.
(xxiv)	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.	Ponds of the nearby villages are being maintained by the Company under CSR activity and supply of drinking water to the nearby villagers is made during the Summer.
(xxv)	Sewage treatment plant shall be installed in the township. ETP shall also be provided for treating workshop and CHP effluents.	No ETP has been installed as there is no CHP and workshop effluents generated are very negligible in quantity. Installation Sewage Treatment Plant in the township is under process.
(xxvi)	For monitoring land use pattern and for post mining land use, a	A land use map, based on satellite imagery (on a scale of 1:5000) of

	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 anyone particular season which is consistent in the time series), and the report submitted to MOEF and its Regional office at Bhubaneswar.	the core zone and buffer zone is in the process of preparation.
(xxvii)	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.	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.
(xxviii)	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.	The water quality parameters such as F, pH, heavy metals, etc are within the prescribed limits so far.
(xxix)	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	Periodical medical camps are organized in the area for regular check up of villagers.

	MoEF.	
(xxx)	Proponent should make written submission on the compliances/clarifications to the MoEF on the above cited issues.	Compliance Report on the above cited issues is being submitted to MOEF.
(xxxi)	Corporate Environment Responsibility:	
	a) The Company shall have a well laid down Environment Policy approved by the Board of Directors.	The Company has a well laid down approved Environment Policy.
	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.	The Environment Policy of the Company includes 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 shall be furnished.	The hierarchical system or Administrative Order of the company to deal with environmental issues and for ensuring compliance with the environmental clearance conditions is furnished as Annexure-A .
	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 company and/or shareholders or stakeholders at large.	The Company has already a system of reporting of non-compliances/violations of environmental norms to the Board of Directors of the company.

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, SO ₂ and NO _x . 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 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.	Ambient air quality monitoring stations have been established in consultation with State Pollution Control Board.
(iv)	Data on ambient air quality (PM10, PM 25, SO ₂ and NO _x 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	Data of ambient air quality is being submitted (half yearly) to MOEF, State Pollution Control Board & Central Pollution Control Board.

	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,	
(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	Environmental monitoring work is being done through CMPDIL having adequate laboratory facilities as required by State Pollution Control Board.

	and data got analyzed through a laboratory recognized under EP Rules, 1986.	
(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.	Persons working in dusty areas are provided with dust masks and educated on health aspects through training.
(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.	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)	The funds earmarked for environmental protection measures shall be kept in separate account and shall not be diverted for other urpose. Year-wise expenditure shall be reported to this Ministry and its Regional Office at Bhubaneswar.	A separate environment management cell headed by CGM (Envt.) at Company HQ who reports directly to DT(P&P) of Company.
(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	Funds earmarked for environmental protection measures are kept in a separate account head of "Environment". Year-wise expenditure is reported to MOEF, Sate Pollution Control Board by Company HQ.

	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	
(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.	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.09.09.2013.
(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/Tahsildar's Office for 30 days.	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)	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	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.

	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.	
(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.	The environmental clearance letter 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.
(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.	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.
(xviii)	The environmental statement for each financial year ending 31st March in Form-Vis 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	The requisite data/information/monitoring reports is being furnished to the Regional Office of MOEF, Bhubaneswar.

	E-mail.	
		The environmental statement for each financial year ending 31st March in Form-V is being submitted to State Pollution Control Board, Odisha, Bhubaneswar.

R. S. Ram

Colliery Manager,
Orient Colliery Mine No.3.