

**CONDITIONS TO BE COMPLIED AS PER ENVIRONMENTAL CLEARANCE APPROVAL
KATHAUTIA OPEN CAST COAL MINE, DALTONGANJ**

EC . No. J-11015 /61//2006-IA.II(M) dated 19th June, 2006

A. SPECIFIC CONDITIONS

Sl. No.	Condition	Compliance
01	All the conditions stipulated by SPCB shall be effectively implemented	Will be complied as applicable
02	The bund/embankment shall be designed taking into account the highest flood level, based on past data, of the drainage of the water bodies in the buffer zone which impact the mining operations so as to guard against mine inundation	Will be complied as applicable
03	Topsoil should be stacked properly with proper slope at earmarked site(s) and should not be kept active and shall be used for reclamation and development of green belt.	Topsoil will be stacked properly with proper slope at earmarked site(s) only. It will be used for reclamation and development of green belt
04	OB should be stacked at earmarked external OB dumpsite (s) within ML area and shall be a maximum height of 60 m only and consist of benches of 10 m each. The ultimate slope of the dump shall not exceed 28°. Backfilling shall begin at the end of 3 rd year in the decoaled area. Monitoring and management of existing reclaimed dumpsites should continue until the vegetation becomes self-sustaining. Compliance status should be submitted to the Ministry of Environment & Forests and its Regional Office located at Bhubaneswar on yearly basis.	Will be complied as applicable.
05	Catch drains and siltation ponds of appropriate size should be constructed to arrest silt and sediment flows from soil, OB and mineral dumps. The water so collected should be utilised for watering the mine area, roads, green belt development, etc. The drains should be regularly desilted and maintained properly. Garland drains (size, gradient and length) and sump capacity should be designed keeping 50% safety margin over and above the peak sudden rainfall and maximum discharge in the area adjoining the mine site. Sump capacity should also provide adequate retention period to allow proper settling of silt material.	Will be complied as applicable.

06	Dimension of the retaining wall at the toe of the dumps and OB benches within the mine to check run-off and siltation should be based on the rainfall data.	Will be complied as applicable
07	No ancillary operations shall as crushing , screening and washing of coal shall be done within the lease	Will be complied as applicable
08	Crushers at the CHP should be operated with high efficiency bag filters, water sprinkling system should be provided to check fugitive emissions from crushing operations, conveyor system, haulage roads, transfer points	Will be complied as applicable
09	Drills should be wet operated only.	Drills will be wet operated only when the mining will be in operation
10	Surface Miners shall be used for coal and OB extraction. Controlled Blasting should be limited to hard strata only and practiced only during daytime with use of delay detonators. The mitigative measures for control of ground vibration and to arrest the fly rocks and boulders should be implemented.	Coal and OB will be extracted by drilling & Blasting with shovel dumper combination
11	Area brought under afforestation shall cover a total area of 802.03 ha and includes reclaimed external OB dump (73.97 ha), reclaimed topsoil dump (4 Ha), backfilled area (683.97 ha), 18.65 ha along excavated area, along ML boundary, along roads (14.80 ha) 6.64 ha along thr river and in undisturbed area 1.14 ha) within the lease by planting native species in consultation with the local DFO/Agriculture department. The density of the trees should be around 2500 plants per ha.	Afforestation programme will be undertaken in defined areas and species will be selected in consultation with DFO/ Agriculture department.
12	A progressive closure Plan shall be implemented by reclamation of quarry area of 683.97 ha shall be backfilled and afforested by planting native plant species in consultation with the local DFO / Agriculture Department. The density of the trees should be around 2500 plants per ha. The balance 3.96 ha of decoaled area shall be converted into a water reservoir, the upper benches of which shall be gently sloped and stabilised and reclaimed with plantation.	Will be complied as applicable
13	Conservation Plan for endangered species, found in and around the project area shall be formulated, if required, in consultation with the State Forest and Wildlife Departments.	Will be complied as applicable.

14	The company shall obtain prior approval of CGWA/CGWB Regional Office for use of groundwater if any, for mining operations.	Will be complied as applicable.
15	Regular monitoring of groundwater level and quality should be carried out by establishing a network of existing wells and construction of new peizometers. The monitoring for quantity should 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 should be submitted to the Ministry of Environment & Forests and to the Central Pollution Control Board quarterly within one month of monitoring.	Will be complied as applicable
16	The company shall put up artificial groundwater recharge measures for augmentation of groundwater resource. The project authorities should meet water requirement of nearby village(s) in case the village wells go dry due to dewatering of mine.	Will be complied as applicable.
17	ETP should also be provided for workshop and CHP waste water	Will be complied as applicable.
18	R & R shall not be less than the norms laid down by the State Government and National R & R Policy and shall be completed within a specified time-frame.	R& R will be as per Government policy.
19	A Final Mine Closure Plan along with details of Corpus Fund should be submitted to the Ministry of Environment & Forests for approval 5 years in advance of final mine closure for approval.	Will be complied as required.
20	Consent to operate shall be obtained before starting mining operations	Will be complied as required.

B. GENERAL CONDITIONS

Sl. No.	Condition	Compliance
01	No change in mining technology and scope of working should be made without prior approval of the Ministry of Environment and Forests.	Will be complied as applicable

02	No change in the calendar plan including excavation, quantum of mineral coal and waste should be made.	Will be complied as applicable
03	Four ambient air quality monitoring stations should be established in the core zone as well as in the buffer zone, for SPM, RPM, SO ₂ and NO _x monitoring. Location of the stations should be decided based on the meteorological data, topographical features and environmentally and ecologically sensitive targets in consultation with the State Pollution Control Board.	Being complied.
04	Fugitive dust emissions (SPM and RPM) from all the sources should be controlled regularly monitored and data recorded properly. Water spraying arrangement on haul roads, wagon loading, dump trucks (loading and unloading) points should be provided and properly maintained.	Will be complied as advised.
05	Data on ambient air quality (SPM, RPM, SO ₂ and NO _x) should be regularly submitted to the Ministry including its Regional Office at Bhubaneswar and to the State Pollution Control Board and to the Central Pollution Control Board once in six months.	Being complied. Report attached
06	Adequate measures should 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 should be provided with ear plugs/muffs.	Will be complied as applicable
07	Industrial wastewater (workshop and wastewater from the mine) should be properly collected, treated so as to conform to the standards prescribed under GSR 422 (E) dated 19 th May 1993 and 31 st December 1993 or as amended from time to time before discharge. Oil and grease trap should be installed before discharge of workshop effluents.	Will be complied as applicable
08	Vehicular emissions should be kept under control and regularly monitored. Vehicles used for transporting the mineral should be covered with tarpaulins and optimally loaded.	Will be complied as applicable
09	Environmental laboratory should be established with adequate number and type of pollution monitoring and analysis equipment in consultation with the State Pollution Control Board.	Will be complied as applicable
10	Personnel working in dusty areas should wear protective respiratory devices and they should also be provided with adequate training and information on safety and health aspects. Occupational health surveillance programme of the workers should be undertaken periodically to observe any contractions due to exposure to dust and to take corrective measures, if needed.	Will be complied

11	A separate environmental management cell with suitable qualified personnel should be set up under the control of a Senior Executive, who will report directly to the Head of the company.	Will be complied as applicable
12	The funds earmarked for environmental protection measures should be kept in separate account and should not be diverted for other purpose. Year-wise expenditure should be reported to this Ministry and its Regional Office at Bhubaneswar.	Will be complied as applicable
13	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.	Agreed Full cooperation will be extended. The Regional office has been shifted from Bhubaneswar to Ranchi
14	A copy of the will be marked to concerned Panchayat/Local NGO, if any, from whom any suggestion/representation has been received while processing the proposal.	Will be complied as applicable
15	State Pollution Control board should display a copy of the clearance letter at the regional Office, District Industry Centre and Collector's Office / Tehsildar's Office for 30 days.	Will be complied as applicable
16	The project authorities should 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 http://envfor.nic.in	Will be complied as applicable