

**Compliance of conditions laid down in Environmental Clearance**

**KUJAM - II BAUXITE MINES ( 157.38 Ha)**

**Period : Oct'11 – Mar'12**

**MoEF Environment Clearance ref. no. : J – 11015/242/2005 – IA.II(M) dated 14 Aug'06**

<b>Sl No</b>	<b>Conditions</b>	<b>Compliance Status</b>
<b>Specific Conditions</b>		
1	All the conditions stipulated by the State Pollution Control Board in their NOC should be effectively implemented.	Complied
2	The mining operations shall not intersect groundwater table. Prior approval of the MoEF and CGWA shall be obtained for mining below water table.	The mining operation is confined to shallow depth (20m max) and as per the study conducted by authorized agency [Center for Ground Water Studies, Kolkata (WB)] during Nov.-Dec '06, the ground water level is in the range of 80-100m from ground level. Mining operation is yet to start.
3	The environmental clearance is subject to approval of the state land use Department, Government of Jharkhand for diversion of agricultural land for non-agricultural use.	This provision has been taken care of during land acquisition with permission of competent authority i.e. concerned Deputy Commissioner (D.C.) and consent of Raiyat (Land Owner) for 20 years period and will return the land so acquired as per the norms set by D.C. in land purchased agreement. All the lands concerned are non-agricultural land <b>(Documents already submitted)</b>
4	Top soil shall be stacked properly with proper slope with adequate measures and should be used for reclamation and rehabilitation of mined out areas.	It is being ensured & the top soil is being used for reclamation & rehabilitation of mined out areas. Details of land reclamation is enclosed as Annexure
5	The waste generated in the initial period shall be dumped temporarily and backfilled in the mined out area. There shall be no permanent external OB dump in the project area. Concurrent backfilling should start from the fifth year onwards. Monitoring and management of rehabilitated areas should continue until the vegetation becomes self-sustaining. Compliance status should be submitted to the Ministry of Environment & Forests on six monthly basis.	complied
6	Catch drains and siltation ponds of appropriate size should be constructed to arrest silt and sediment flows from soil and mineral dump. The water so	Catch drains, siltation ponds, garland drains have been planned to construct in commensuration with the progress of mining activities.

	collected should be utilized for watering the mine area, roads, green belt development etc. The drains should be regularly desilted particularly after monsoon and maintained properly. Garland drain (size, gradient and length) shall be constructed for mine pit and sump capacity should be designed keeping 50% safety margin over and above peak sudden rainfall (based on 50 years data) 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. Sedimentation pits should be constructed at the corners of the garland drains and desilted at regular intervals.	
7	Plantation shall be raised in an area of 43.5 ha including a green belt of adequate width by planting the native species around the ML area, roads, etc. in consultation with the local DFO/Agriculture Department. The density of the trees should be around 1500 plants per ha.	Plantation is being carried out as per the stipulated condition.
8	The project authority should implement suitable conservation measures to augment ground water resources in the area in consultation with the Regional Director, Central Ground Water Board.	A study has been conducted by Centre for Ground Water Studies, Kolkata, a reputed agency in the field. The same is being studied by us and will be sent to Regional Director, Central Ground Water Board along with our observation for his opinion prior to implementation of scheme..
9	Regular monitoring of ground water level and quality should be carried out by establishing a network of existing wells and constructing new piezometers during the mining operation. The monitoring should be carried out four times in a year - pre-monsoon (April-May), monsoon (August), post-monsoon (November) and winter (January) and the data thus collected may be sent regularly to MOEF, Central Ground Water Authority and Regional Director Central Ground Water Board.	It is being monitored. Monitoring report is enclosed as <b>Annexure</b>
10	Prior permission from the competent authority should be obtained for drawl of water from the surface water bodies.	As per Lease agreement, we are having permission of DC for use of water.
11	The project proponent shall monitor the spring discharge on long term basis (at least one major spring) both in terms of quantity and quality of water and records maintained. Six monthly report should be submitted to the Ministry of Environment and Forests and its Regional Office located at Bhubneshwar.	Planned to comply at appropriate time
12	Vehicular emissions should be kept under control and regularly monitored. Measures shall be taken for maintenance of vehicles used in mining	To keep vehicular emissions in vehicles are periodically checked & repaired. All measures are being taken to control vehicular emission.

	operations and in transportation of mineral. The vehicles should be covered with a tarpaulin and shall not be overloaded.	
13	Drills should either be operated with dust extractors or should be equipped with water injection system	Complied.
14	Blasting operation should be carried out only during the daytime. Controlled blasting should be practiced. The mitigative measures for control of ground vibrations and to arrest fly rocks and boulders should be implemented	Blasting time is fixed from 12.00 Noon to 1.00PM. and strictly followed. All mitigative efforts are being done to minimize vibration and control fly rocks due to blasting.
15	Consent to operate should be obtained from SPCB prior to start of production of mine	Consent obtained , ( <b>Annexure</b> )
16	Sewage treatment plant should be installed for the colony. ETP should also be provided for workshop and wastewater generated from mining operations.	No colony is proposed. The domestic waste water from drinking water facility will be treated through soak pit and sullage will be used as manure. There will be no wastewater generation from Mining.
17	Land oustees and land loser/affected people should be compensated and rehabilitated as per the National Policy on Resettlement and Rehabilitation of project Affected Families (NPRR), 2003	All land acquisition activities is done as per CNT Act and project affected people / families as have been compensated and rehabilitated as per State Government's R&R Policy which is in line with NPRR,2003.
18	The higher benches of the excavated void to be converted into water reservoir shall be terraced and afforested to stabilize the slopes. Peripheral fencing shall be done along the excavated area.	Planned to implement the same at appropriate time.
19	A Final Mine Closure Plan along with details of Corpus Fund should be submitted to the Ministry of Environment & Forests 5 years in advance of final mine closure for approval.	Final mine Closure Plan will be submitted at appropriate time. Presently we are having approved progressive mine Closure Plan

### **GENERAL CONDITIONS**

<b>SI No</b>	<b>Conditions</b>	<b>Compliance Status</b>
1	No change in mining technology and scope of working should be made without prior approval of the Ministry of Environment & Forests.	Agreed
2	No change in the calendar plan including excavation, quantum of mineral bauxite and waste should be made	Agreed.

3	Conservation measures for protection of flora and fauna in the core & buffer zone should be drawn up in consultation with the local forest and wildlife departments.	Agreed. To be carried out at appropriate time.
4	Four ambient air quality-monitoring stations should be established in the core zone as well as in the buffer zone for RPM, SPM, SO <sub>2</sub> , NO <sub>x</sub> monitoring. Location of the stations should be decided based on the meteorological data, topographical features and environmentally and ecologically sensitive targets and frequency of monitoring should be undertaken in consultation with the State Pollution Control Board.	Complied. Monitoring report enclosed.
5	Data on ambient air quality (RPM, SPM, SO <sub>2</sub> , NO <sub>x</sub> ) should be regularly submitted to the Ministry including its Regional office located at Bhopal and the State Pollution Control Board / Central Pollution Control Board once in six months.	Monitoring activity initiated, Report annexed.
6	Fugitive dust emissions from all the sources should be controlled regularly. Water spraying arrangement on haul roads, loading and unloading and at transfer points should be provided and properly maintained.	Water tanker with sprinkling facility have been provided along haul roads, loading unloading,& at transfer points.
7	Measures should be taken for control of noise levels below 85 dBA in the work environment. Workers engaged in operations of HEMM, etc. should be provided with ear plugs / muffs.	PPEs provided to all the worker employed in the mine.
8	Industrial waste water (workshop and waste water from the mine) should be properly collected, treated so as to conform to the standards prescribed under GSR 422 (E) dated 19th May, 1993 and 31st December, 1993 or as amended from time to time. Oil and grease trap should be installed before discharge of workshop effluents.	Presently there is no waste water generated from mine.
9	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 program of the workers should be undertaken periodically to observe any contractions due to exposure to dust and take corrective measures, if needed.	Complied PPE's provided and also periodic training on health and safety issues. Occupational health survey has also been done periodically.
10	A separate environmental management cell with suitable qualified personnel should be set-up under the control of a Senior Executive,	Separate Environmental Management Cell (EMC) already formed and informed.

	who will report directly to the Head of the Organization	
11	The project authorities should inform to the Regional Office located at Bhubneshwar regarding date of financial closures and final approval of the project by the concerned authorities and the date of start of land development work.	Final mine closure plan will be submitted at appropriate time. Presently we are having approved progressive mine closure plan.
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 the Ministry and its Regional Office located at Bhubneshwar.	Separate budget has been prepared for the purpose. Copy enclosed
13	The project authorities should inform to the Regional Office located at Bhubneshwar regarding date of financial closures and final approval of the project by the concerned authorities and the date of start of land development work.	Vide Point no. 11 above.
14	The Regional Office of this Ministry located at Bhubneshwar shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the officer (s) of the Regional Office by furnishing the requisite data / information / monitoring reports.	Agreed.
15	A copy of clearance letter will be marked to concerned Panchayat / local NGO, if any, from whom and suggestion / representation has been received while processing the proposal.	Complied
16	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.	Not applicable
17	The project authorities should advertise at least in two local newspapers widely circulated, one of which shall be in the vernacular language of the locality concerned, within 7 days of the issue 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 also at web site of the Ministry of Environment and Forests at <b>http://envfor.nic.in</b> and a copy of the same should be forwarded to the Regional Office of this	Complied. <b>(Documents already submitted)</b>

	Ministry located Bhubneshwar.	
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