

Compliance of conditions laid down in Environmental Clearance

SHRENGDAG BAUXITE MINES(155.81 Ha)

Period : Oct'11 – Mar'12

| Sl No | Conditions | Compliance Status |
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| | Specific Conditions | |
| 1 | All the conditions stipulated by SPCB in their NOC shall be effectively implemented. | Being Complied. |
| 2 | 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. | Mining Lease is granted/renewed by the State Govt. after due consideration and Cabinet approval on recommendation of District Collector who is the competent authority to give permission for using the agricultural land for non-agricultural purpose |
| 3 | The exploration shall be completed within 2.5 years and thereafter the proponent shall come up with a firm proposal for mining, based on the estimated reserves. The reclamation plan, post mine land use and progressive greenbelt development plan shall also be prepared and submitted with the revised proposal. | Mining is going on. |
| 4 | Mining shall not intersect groundwater. The mine working shall be restricted to ground water table. Prior approval of the Ministry of Environment & Forests and Central Ground Water Authority shall be obtained for mining below water table. | Now, maximum depth of mining is 15 m. As per the survey, the ground water table is at 45-60 m below ground level. Hence there will be no intersecting of the ground water table due to mining activities. |
| 5 | The Project proponent shall ensure that no natural watercourse shall be obstructed due to any mining operations. | It is being ensured. No natural water course has been obstructed as yet. |
| 6 | Top soil shall be stacked properly with proper slope with adequate measures and should be used for reclamation and rehabilitation of mined out areas. | Sequential backfilling and reclamation of the mined out area are being exercised during mining operation. Whenever backfilling will be done to the mined out area, subsoil will be used for backfilling to reclaim and restore the damage area upto the extent possible. |
| 7 | The waste generated shall be concurrently backfilled in the mined out area. There shall be no external OB dump. Monitoring and management of rehabilitated areas should continue until the vegetation becomes self-sustaining. Compliance status should be submitted to the Ministry of Environment & Forest on six month basis. | Overburden and waste rock from the crushing pit are being used for back filling. Year wise backfilling and plantation raised over the back filled area is provided. (enclosed Annexure). |

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| 8 | <p>Catch drains and siltation ponds of appropriate size should be constructed to arrest silt and sediment flows from mine working. The water so 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.</p> <p>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 setting of silt material. Sedimentation pits should be constructed at the corners of the garland drains and desilted at regular intervals.</p> | <p>No run off is being generated from mining activities. However, to collect and manage rainwater during monsoon, part of mined out area is used as settling tank. Settled water is being used for sprinkling of quarry, roads, green belt development, etc.</p> |
| 9 | <p>Plantation shall be raised in an area of 70.68 ha including a green belt of adequate width by planting the native species around the ML area, roads, reclaimed area etc. in consultation with the local DFO / Agriculture Department. The density of the trees should be around 1500 plants per ha.</p> | <p>In 2011, we have plantation on 3.5 acres land has been done. Rest to be complied during the life of project.</p> |
| 10 | <p>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.</p> | <p>A plan has already been prepared on the basis of discussions with Scientists of State unit office of Central Ground Water Board, Ranchi to implement suitable conservation measures to augment ground water resources in the area and is also submitted to the Regional Director, Central Ground Water Board, Patna, for any suggestions. Recommendation of CGWB shall be implemented to augment the ground water resources of the area. Copy of letter already submitted to regional office.</p> |
| 11 | <p>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.</p> | <p>It is being monitored. Monitoring report is enclosed as Annexure</p> |

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| 12 | Prior permission from the competent authority should be obtained for drawl of water from the surface water bodies. | Rainwater harvested during rainy season is being used for sprinkling on haul roads and raising plantation. Spring water is drawn from the down the hill pockets ponds for drinking purposes. Hence, as per the terms and conditions in Part III, Clause 6 of Mining lease deed, we have obtained permission from the Deputy Commissioner for drawal of water from the surface water bodies. |
| 13 | Water monitoring both for quality and quantity shall be carried out at four locations namely one spring and three streams. Sixmonthly report should be submitted to the Ministry of Environment and Forest and its Regional Office located at Bhubneshwar. | Analysis of water quality at four locations is being carried out. Analysis data for period of reporting is enclosed in Annexure |
| 14 | Vehicular emissions should be kept under control and regularly monitored. Measures shall be taken for maintenance of vehicles used in mining operations and transportation of mineral. The vehicles should be covered with a tarpaulin and shall not be overloaded. | To keep vehicular emissions in control, company vehicles are periodically checked and repaired as and when required. All the transporters have been instructed to obtain PUC for their vehicles from the competent authority and submit to the concerned officer for verification |
| 15 | Drills should either be operated with dust extractors or should be equipped with water injection system. | Drilling is being done with water pouring in the drill holes intermittently for dust suppression which is the best method for jackhammer drilling. |
| 16 | Blasting operation should be carried out only during the daytime. Controlled blasting should be practiced. The mitigative measures for control of ground vibration and to arrest fly rocks and boulders should be implemented. | Blasting at Mines is done at fixed blasting period i.e. 12.00 Noon to 1.00 PM on working days. Mobile mining activities are not being practiced during blasting. All the precautionary and mitigative measures to control ground vibration and to arrest fly rocks is being exercised. |
| 17 | Consent to operate should be obtained from SPCB prior to start of enhanced production from the mine. | Has been obtained and enclosed in Annexure |
| 18 | Sewage treatment plant should be installed for the colony. ETP should also be provided for workshop and wastewater generated from mining operations. | There is no effluent from mine, hence ETP has not been installed. The sewage water from domestic uses is being collected through individual Septic Tank and Soak Pits. |
| 19 | The project proponent should take all precautionary measures during mining operation for conservation and protection of endangered fauna such as Indian Python, <i>Presbytis phayrei</i> , <i>Melurus ursinus</i> etc. Spotted in the study area. Action plan for conservation of flora and fauna shall be prepared and implemented in consultation with the State Forest and Wildlife Department. Necessary allocation of funds for implementation of the conservation plan shall be made and the | Action plan for conservation of flora and fauna spotted in the study area was prepared after due consultation with the local DFO and a copy of the same has already been submitted to the DFO for his comments, any suggestion and modification. On receipt of the same after vetting of State Forest Department, the action plan will be submitted to the MoEF |

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| | funds so allocated shall be included in the project cost. Copy of action plan may be submitted to the Ministry and its Regional Office within 3 months. | |
| 20 | A Final Mine Closure plan along with details of Corpus Fund should be submitted to the Ministry of Environment & Forest 5 years in advance of final mine closure for approval. | Progressive Mine Closure Plan duly approved by Indian Bureau of Mines is available with us. The same has already been informed to Regional Office of MoEF in our last six monthly report. |

GENERAL CONDITIONS

| Sl No | Conditions | Compliance Status |
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| 1 | No change in mining technology and scope of working should be made without prior approval of the Ministry of Environment & Forest | Complied. |
| 2 | No change in the calendar plan including excavation, quantum of mineral bauxite and waste should be made. | Excavation of Over Burden and Bauxite is being done as per the approved calendar plan. Details of excavation, quantum of mineral, OB, etc have been furnished for the financial year 11-12 is Annexed |
| 3 | Four ambient air quality-monitoring station should be established in the core zone as well as in the buffer zone for RPM, SPM, SO ₂ , NO _x monitoring. Location of the stations should be decided based on the metrological data, topographical features and environmentally and ecologically sensitive targets and frequency of monitoring should be undertaken in consultation with the State Pollution Control Board. | Monitoring locations have been fixed after due consultation of SPCB and regular monitoring is being carried out with the available in-house facilities. Monitoring Reports is enclosed as Annexure |
| 4 | Data on ambient air quality (RPM, SPM, SO ₂ , NO _x) should be regularly submitted to the Ministry including its Regional office located at Bhubneshwar and the State Pollution Control Board / Central pollution Control Board once in six months. | Monitoring locations have been fixed after due consultation of SPCB. Monitoring Reports is enclosed as Annexure |
| 5 | Fugitive dust emission from all the sources should be controlled regularly. Water spraying arrangements on haul roads, loading and unloading and at transfer points should be provided and properly maintained. | Two nos. of water tanker have been provided for sprinkling of water on haul roads and are generally being engaged at the places where active mining is in progress to contain fugitive dust. Water spraying at loading, unloading, etc is also being done manually. |
| 6 | Measures should be taken for control of noise levels below 85 dBA in the work environment. Workers engaged in operation of HEMM, etc. | Noise monitoring is being done regularly. at various locations of the work zone area and a monitoring report for the period of reporting six |

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| | should be provided with ear plug / muffs. | monthly compliance is enclosed. Workers engaged in operation of HEMMs, etc have also been provided with PPEs such as ear plug and ear muffs. |
| 7 | Industrial waste water (workshops and waste water 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. Oil and grease trap should be installed before discharge of workshop effluents. | There is no effluent discharge from Mine. Workshop has an Oil Catchment Pit to trap oil and grease. It is being ensured to make it operational and effective as and when required and accordingly the O&M department is taking its due care. |
| 8 | Personnel working in dusty areas should wear protective respiratory devices and they should also 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. Use of Personal Protective Equipment (PPE) by the individuals is being ensured. All the mine workers are being regularly and periodically sent to our own hospital for health checkup for any contraction of diseases due to exposure in dusty and noisy areas. Training on safety, health and environmental aspects of mining is being regularly imparted through VT training centre and also through various other training programmes conducted by the State Government, recognized agencies, etc. |
| 9 | 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 Organization. | Separate Environmental Management Cell (EMC) has been constituted and is functioning effectively. Copy enclosed |
| 10 | 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. | Not applicable. The mine is running since 1976. |
| 11 | 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. | Statement of budgetary provision and actual expenses for the year 11-12 for environmental protection measure is enclosed. It is once again reiterated that the funds so ear marked shall not be diverted for any other purposes other than it is committed at the beginning of the financial year. |
| 12 | 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. | Complied |

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| 13 | The project proponent shall submit six monthly report on the status of the implementation of the stipulated environmental safeguards to the Ministry of Environment and Forests, its Regional Officer, Bhubaneshwar, Central Pollution Control Board and State Pollution Control Board. | Complied |
| 14 | A copy of clearance letter will be marked to concerned Panchayat / local NGO, if any, from whom suggestion / representation has been received while processing the proposal. | Complied . |
| 15 | State Pollution Control Board should display a copy of the clearance letter at the Regional office, District Industry Center and Collector's office / Tehsildar's Office for 30 days. | Not Applicable . |
| 16 | The project authorities should advertise at least in two local newspapers widely circulated, one of which locality concerned, within 7days 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 http://envfor.nic.in and a copy of the same should be forwarded to the Regional Office of this Ministry located Bhubneshwar. | Complied. Copies, of the advertisement made in the local newspapers, have already been submitted to the Regional Office with previous six monthly report. |