

Compliance of conditions laid down in Environmental Clearance

ORSA BAUXITE MINES

Period : Oct'11 – Mar'12

| Sl No | Conditions | Compliance Status |
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| Specific Conditions | | |
| 1 | Environmental Clearance is subject to final order of the Hon'ble Supreme Court of India in the matter OF Goa foundation Vs Union of India in writ petition (civil) no 460 of 2004, as may be applicable to this project | It will be complied with as per the final decision of Hon'ble Supreme Court . |
| 2. | Environmental Clearance is subject to obtaining clearance from Wildlife (Protection) Act '1972 from the competent authority. | Willdlife Management plan has been accepted by Chief Wildlife Warden, Jharkhand vide letter no 75 (vivid)/ 940 dated 22.10.2008 & is under consideration. |
| 3. | All the conditions stipulated by SPCB in their NOC shall be effectively implemented. | Shall be complied. |
| 4 | 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 |
| 5 | Mining shall not intersect groundwater. The mine working shall be restricted to above ground water table. Prior approval of the Ministry of Environment & Forests and Central Ground Water Authority shall be obtained for mining below water table. | As the mining will be carried out at shallow depth, at no point of time mining activities will intersect the ground water table. |
| 6 | The project proponent shall ensure that the mining shall be carried out in small blocks and at a given point of time active mining shall not be more than 2.0 ha. | Will be complied |
| 7. | The project proponent shall ensure that no natural water course shall be obstructed due to any mining operations. | It will be ensured |
| 8 | Top soil, if any, 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 will be 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. |

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| 9. | The overburden generated during the initial year shall be kept as temporary dump. Concurrent backfilling starts from the 2 nd year onwards and there shall be no external dump at the end of the mine life. | Will be complied |
| 10. | The entire excavated area of 155 ha shall be reclaimed ,out of which 131 ha land shall be returned to rayats for agricultural purpose and in 24 ha plantation shall be raised. 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. | Will be complied |
| 11 | <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> | Will be complied |
| 12 | Dimension of the retaining wall at the OB benches within the mine to check run-off and siltation should be based on rainfall data. | Will be complied |
| 13 | Plantation shall be raised in an area of 24.0 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. | Mining production is yet to start. |
| 14 | 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. | Will be complied |

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| 15 | 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. | Will be complied |
| 16 | Prior permission from the competent authority should be obtained for drawl of water from the surface water bodies. | We shall draw only spring water from down the hill pockets for drinking purposes & remaining water requirement for wash, water sprinkling on road & afforestation purposes will be met from rainwater harvested ponds. Hence, as per the terms & conditions in Part III, Clause 6 of Mining lease deed we have permission of Deputy Commissioner, who is the competent authority for the purpose. |
| 17 | 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. | Vehicle engaged in mining operation will be regularly checked and repaired. |
| 18 | Drills should either be operated with dust extractors or should be equipped with water injection system. | Drilling will be done with water pouring in the holes for dust suppression. |
| 19 | 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 will be at fixed blasting period of 12.00 Noon to 1.00 PM on working days. All the precautionary and mitigative measures to control ground vibration and to arrest generation of fly rocks will be exercised . |
| 20 | Consent to operate should be obtained from SPCB prior to start of enhanced production from the mine. | Obtained & a copy is enclosed as Annexure |
| 21 | Sewage treatment plant should be installed for the colony. ETP should also be provided for workshop and wastewater generated from mining operations. | There will be no effluent discharge from Mine , hence ETP will not be required to installed. The sewage water from domestic uses will be treated through septic tanks and soak-pits. |
| 22 | The project proponent should take all precautionary measures during mining operation for conservation and protection of endangered fauna such as Leopard, Indian Wolf, Indian elephant, Indian small civet, Indian Python, etc. Spotted in the study area. Action plan for | Wildlife Management plan has been accepted by Chief Wildlife Warden, Jharkhand vide letter no 75(vivid)/940 dated 22.10.2008. |

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| | 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 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. | |
| 23 | 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 dully approved by Indian Bureau of Mines exists with us. Final Mine closure plan to be prepared & got approved as per provision of Mines & Minerals (Development & Regulation) Act-1957 & Mineral conservation & Development Rules-1988, one year before the closure of Mine. |

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 | Will be complied with. |
| 2 | No change in the calendar plan including excavation, quantum of mineral bauxite and waste should be made. | Will be complied with. |
| 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. | Will be complied with. |
| 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. | Will be complied with. |

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| 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. | Will be complied with. |
| 6 | Measures should be taken for control of noise levels below 85 dBA in the work environment. Workers engaged in operation of HEMM, etc. should be provided with ear plug / muffs. | Will be complied with. |
| 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. | Will be complied with. |
| 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. | Will be complied with. |
| 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. | Complied. (enclosed Annexure). |
| 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. | Has been informed. |
| 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. | It will be complied with.(enclosed Annexure). |
| 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) | Agreed upon. |

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| | of the Regional Office by furnishing the requisite data / information / monitoring reports. | |
| 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 Office, Bhubneshwar CPCB 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. | Already done and copies submitted. |