

Half Yearly Compliance Report for the period October 2016 to March 2017 on compliance to the conditions stipulated in the Environmental Clearance letter no. J- 11015/644/2007-IA.II (M) dated 13.08.2008 of MoEF, GOI in respect of Kusumdihi Manganese & Bauxite Mine of M/s Bonai Industrial Co. Limited located in Sundergarh district of Odisha

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| <p>(i) The project proponent shall obtain Consent to Establish from the State Pollution Control Board, Orissa and effectively implement all the conditions stipulated therein.</p> | <p>Consent to establish has been obtained from State Pollution Control Board, Orissa. Stipulated conditions has been implemented.</p> |
| <p>(ii) Necessary forestry clearance under the Forest (Conservation) Act, 1980 for an area of 17.183ha forestland shall be obtained before starting mining operation in that area. Till such time mining activities shall be restricted to an area of 2.367ha forestland for which in principle forest clearance has been obtained from the Ministry on 25.03.2008. The environmental clearance is subject to grant of forestry clearance.</p> | <p>Forest clearance is obtained vide letter No. 8(21)12/2000-FCE, dt: 03.04.2014 for 2.367 Ha. In addition Stage-II Forest clearance has been obtained over 4.719 ha of forest land vide letter no 5-ORB231/2014-BHU, Dt: 11.12.2015(safety zone 0.51 ha + DLC 4.209 ha). The rest forest land over 14.306 is applied for surrender.</p> |
| <p>(iii) The mining operations shall be restricted to above ground water table and it should not intersect groundwater table. In case of working below ground water table, prior approval of the Ministry of Environment & Forests and Central Ground Water Authority shall be obtained for which a detailed hydro-geological study shall be carried out.</p> | <p>The mine is not under operation.</p> |
| <p>(iv) The project proponent shall ensure that no natural water course and/or water resources shall be obstructed due to any mining operations.</p> | <p>The mining is not in operation at present. However, no water course will be diverted due to mining operation in future.</p> |
| <p>(v) The over burden (OB) generated during the mining operation shall temporarily be stacked at earmarked dump site(s) only for backfilling. The existing OB dumps shall be liquidated within five years. Concurrent backfilling shall start from the 6th year onwards and there shall be no external over burden dump at the end of the mine life. The backfilled area shall be reclaimed and rehabilitated by plantation. Monitoring and management of rehabilitated areas shall continue until the vegetation becomes self sustaining. Compliance status shall be submitted to the Ministry of Environment & Forests and its Regional Office located at Bhubaneswar on six monthly basis.</p> | <p>This condition will be complied after resumption of mining operation.</p> |
| <p>(vi) Catch drains and siltation ponds of appropriate size shall be constructed around the</p> | <p>This condition will be complied after resumption of mining operation.</p> |

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| <p>working pit(s), soil, mineral and OB dumps to prevent run off of water and flow of sediments directly into the Kusumdihi Nallah, Samij Nallah, Karo River and other water bodies. 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. Garland drains, settling tanks and check dams of appropriate size, gradient and length shall be constructed both around the mine pit and temporary over burden dumps to prevent run off of water and flow of sediments directly into the Kusumdihi Nallah, Samij Nallah, Karo River and other water bodies 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 de-silted at regular intervals.</p> | |
| <p>(vii) Dimension of the retaining wall at the toe of temporary dumps and OB benches within the mine to check run-off and siltation should be based on the rain fall data.</p> | <p>Dimension of the toe wall around the dump of appropriate dimension will be constructed after resumption of mining activity.</p> |
| <p>(viii) Plantation shall be raised in an area of 31.528ha including a 7.5m wide green belt in the safety zone around the mining lease, backfilled and reclaimed area, roads etc. by planting the native species in consultation with the local DFO/ Agriculture Department. The density of the trees should be around 2500 plants per ha.</p> | <p>Plantation has been raised in 0.92 ha area. Plantation activity will be carried out regularly after resumption of mining activity.</p> |
| <p>(ix) Effective safeguard measures such as regular water sprinkling shall be carried out in critical areas prone to air pollution and having high levels of SPM and RPM such as haul road, loading and unloading point and transfer points. It should be ensured that the Ambient Air Quality parameters conform to the norms prescribed by the Central Pollution Control Board in this regard.</p> | <p>Regular water sprinkling will be carried out after resumption of mining operation.</p> |
| <p>(x) Regular monitoring of water quality upstream and downstream of Kusumdihi Nallah, Samij Nallah and other streams, if any shall be carried out and record of monitoring data should be maintained and submitted to Ministry of</p> | <p>Regular monitoring of water quality of Kusumdihi Nallah will be carried out after resuming mining operation.</p> |

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| Environment and Forests, its Regional Office, Bhubaneswar, Central Groundwater Authority, Regional Director, Central Ground Water Board, State Pollution Control Board and Central Pollution Control Board. | |
| (xi) The project authority shall implement suitable conservation measures to augment ground water resources in the area in consultation with the Regional Director, Central Ground Water Board. | This condition will be implemented after resumption of mining operation. |
| (xii) Regular monitoring of ground water level and quality shall be carried out in and around the mine lease 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 Ministry of Environment and Forests and its Regional Office, Bhubaneswar, Central Ground Water Authority and Regional Director, Central Ground Water Board. | This condition will be implemented after resumption of mining operation. |
| (xiii) The project proponent shall obtain necessary prior permission of the competent authorities for drawl of requisite quantity of water (surface water and ground water) for the project. | Water drawl permission has been obtained from Irrigation Department. Copy of the same attached as Annexure -III |
| (xiv) Appropriate mitigative measures shall be taken to prevent pollution of the Karo River in consultation with the State Pollution Control Board. | This condition will be implemented after resumption of mining operation. |
| (xv) Suitable rainwater harvesting measures on long term basis shall be planned and implemented in consultation with Regional Director, Central Ground Water Board. | This condition will be implemented after resumption of mining operation. |
| (xvi) Vehicular emissions shall be kept under control and regularly monitored. Measures shall be taken for maintenance of vehicles used in mining operations and in transportation of mineral. The vehicles should be covered with a tarpaulin and shall not be overloaded. | This condition will be implemented after resumption of mining operation. |
| (xvii) Minerals handling plant should be provided with adequate number of high efficiency dust extraction system. Loading and unloading areas including all the transfer points should also have efficient dust control arrangements. These should be properly maintained and operated. | This condition will be implemented after resumption of mining operation. |

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| (xviii) 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. | This condition will be implemented after resumption of mining operation. |
| (xix) Drills shall either be operated with dust extractors or equipped with water injection system. | This condition will be implemented after resumption of mining operation. |
| (xx) Consent to operate shall be obtained from the State Pollution Control Board prior to start of enhanced production from the mine. | Consent to operate has been granted by SPCB which is valid up to 31.03.2020. Copy of the same attached as annexure -I |
| (xxi) Sewage treatment plant should be installed for the colony. ETP should also be provided for workshop and wastewater generated during mining operation. | This condition will be implemented after resumption of mining operation. |
| (xxii) The project proponent shall take all precautionary measures during mining operation for conservation and protection of endangered fauna such as python 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 towards the cost of implementation of the plan and/or Regional Wildlife Management Plan for conservation of flora and fauna so prepared by the State Government shall be made. The amount so contributed shall be included in the project cost. A copy of action plan may be submitted to the Ministry and its Regional Office, Bhubaneswar within 3 months. | There is no endangered flora & fauna has been reported in the core as well as buffer zone of the area. However Site Specific Conservation Plan (SSCP) has been prepared and this has been approved by PCCF (Wildlife) cum Chief Wildlife Warden of Odisha and the same has been submitted with earlier compliance. A sum of Rs. 72,00,000 has been deposited with the forest department for implementation of the scheme. |
| (xxiii) 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. | The life of the mine is estimated to be 11 years as on 01.09.2016. Since mining operation has been discontinued since long the life of the mine will be increased further. Final mine closure plan along with corpus fund will be submitted 5 years in advance. |
| B. General conditions | |
| General Conditions | Compliance |
| (i) No change in mining technology and scope of working should be made without prior approval of the Ministry of Environment & Forests. | There will be no change in mining technology and scope of working. |
| (ii) No change in the calendar plan including excavation, quantum of mineral manganese ore and bauxite and waste shall be made. | There will be no change in calendar plan and quantum of the ore. |
| (iii) Four ambient air quality-monitoring stations 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 | Ambient Air Quality monitoring will be done after resumption of mining operation. |

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| 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. | |
| (iv) Data on ambient air quality (RPM, SPM, SO ₂ & NO _x) should be regularly submitted to the Ministry including its Regional office located at Bhubaneswar and the State Pollution Control Board / Central Pollution Control Board once in six months. | The mine is not under operation. So, environmental monitoring is not carried out at present on selected locations. |
| (v) 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. | Regular sprinkling of water is being done. |
| (vi) 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. | Presently there is no mining operation. |
| (vii) 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 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 workshop or vehicle maintenance unit in the mine. |
| (viii) 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. | There is no mining operation at present. Periodic medical examination is carried out at regular interval. |
| (ix) 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. | An Environment Management cell has been constituted. |
| (x) 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 | This condition will be implemented after resumption of mining operation. |

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| located at Bhubaneswar. | |
| (xi) The project authorities shall inform to the Regional Office located at Bhubaneswar regarding date of financial closures and final approval of the project by the concerned authorities and the date of start of land development work. | Since this is a mining project there is no specific date for financial closure and final approval of the project. |
| (xii) The Regional Office of this Ministry located at Bhubaneswar 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. | Full cooperation will be rendered to inspecting officers during monitoring of compliance conditions. |
| (xiii) 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, Bhubaneswar, Central Pollution Control Board and State Pollution Control Board. | Six monthly report is being regularly submitted to the Ministry of Environment and Forests, Regional Office, Bhubaneswar |
| (xiv) 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. | Clearance letter has already been displayed in concerned Panchayat. |
| (xv) 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. | This condition has been complied. |
| (xvi) 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 http://envfor.nic.in and a copy of the same should be forwarded to the Regional Office of this Ministry located Bhubaneswar. | EC was advertised in two news paper. |