

State Level Environment Impact Assessment Authority



**Madhya Pradesh
Government of India
Ministry of Environment & Forests**

Madhya Pradesh Pollution Control Board

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No: 10 /EPCO-SEIAA/09

Date:- 08-04-09

To,

M/s Shakambhari Mines and Minerals,
Rajnigandha Main Road
Kamtee-Distt.
Nagpur-Maharashtra

Sub: Environmental clearance for Gowari Wadona Manganese Ore mines at village Gowari Wadona Khasra no 171&36 area 6.607 ha. Sonsar, Chhindwara-M.P. Case No. 08/2008

This has reference to your application No. Nil dated 18/03/08 and subsequent letter date 03/02/2009 & 17/02/09 seeking prior environmental clearance for the above project under the EIA Notification, 2006. The proposal has been appraised as per prescribed procedure in the light of provisions under the EIA Notification, 2006 on the basis of the mandatory documents enclosed with the application viz., the Form I and feasibility report and the additional clarifications furnished in response to the observations of the Expert Committee constituted by the competent authority in its meetings held on 30/06/2008 and 24/09/09.

2. It has been noted that the proposal is for manganese ore mining at production capacity 2100 T/year. The mining lease area is 6.607 ha. which is a part of waste land. Out of total lease area of 6.607 ha. mining will be carried out in 3.2 ha. only. An area of 0.06 ha. will be for infrastructure, 0.06 ha. for roads and 1.4 ha. will be utilized for green belt. The general elevation of the lease ranges from 374.1 m to 380 m above MSL. River Kanhan flows at a distance of 4 km

from mine boundary. There are no Wildlife Sanctuaries, National Parks, Tiger/Elephant Reserves, Heritage sites etc. within 10 km of the lease boundary. No relocation and rehabilitation of population will be involved. The mineable reserves are 51600 T. At proposed rate of production life of the mine at present capacity will be about 25 years. Method of mining will be open cast manual involving drilling and blasting. Ultimate depth of mining will be at 35 m. Water table is at a depth of 20 m. Water requirement will be 6 KLD, which will be met from ground water and mine water. Solid waste of about 4875 Cu.m. will be generated during the first 5 year plan period. Approval for Mining Plan (including mine closure plan) was obtained from Indian Bureau of Mines (IBM) on 11/04/07. Public hearing was conducted on 23/09/2008.

3. The project has been considered in accordance with the provisions of the EIA notification issued by the Ministry of Environment & Forests vide S.O. 1533 (E), dated September 14, 2006.
4. Based on the information submitted by you, as at Para 2 above and others, the State Level Environment Impact Assessment Authority (SEIAA) hereby accords environmental clearance to the above project under the provisions of EIA notification dated September 14, 2006, subject to the compliance of the following Specific and General conditions.

A. Specific conditions

- (i) No two pits shall be simultaneously worked i.e before the first is exhausted and reclamation work completed, no mineral bearing area shall be worked.
- (ii) After exhausting the first mine pit and before starting mining operations in the next pit, reclamation and plantation works in the exhausted pit shall be completed so as to ensure that reclamation, forest cover and vegetation are visible during the first year of mining operations in the next pit. This process will follow till the last pit is exhausted. **Adequate rehabilitation of mined pit shall be completed before any new ore bearing area is worked for expansion.**

- (iii) Adequate buffer zone shall be maintained between two consecutive mineral bearing deposits.
- (iv) Construction of new road outside the village would be done by the project proponent whenever the land will be made available.
- (v) Minimum 40 plants /400 sq.m will be planted in the first two years by the project proponent.
- (vi) Blast vibrations study shall be conducted and submitted to the Regional office of the Ministry **within six months**. The study shall also provide measures for prevention of blasting associated impact on nearby houses and agricultural fields.
- (vii) Need based assessment for the near by villages shall be conducted to study economic measures which can help in upliftment of poor sections of society. Company shall provide separate budget for community development activities.
- (viii) Land-use pattern of the nearby villages shall be studied, including common property resources available for conversion into productive land. **Action plan for abatement and compensation for damage to agricultural land/ common property land (if any) in the nearby villages, due to mining activity shall be submitted to the Regional office of the Ministry within six months**. Annual status of implementation of the plan and expenditure thereon shall be reported to the Regional Office of the Ministry.
- (ix) Maintenance of village roads through which transportation of minerals are undertaken shall be carried out by the company regularly at its own expenses. The roads shall be black topped.
- (x) Rain water harvesting shall be undertaken to recharge the ground water source. Status of implementation shall be submitted to the Regional Office of the Ministry **within six months** and thereafter every year from the next consequent year.

- (xi) Measures for prevention and control of soil erosion and management of silt shall be undertaken. Protection of dumps against erosion shall be carried out with geotextile matting or other suitable material, and thick plantations of native trees and shrubs shall be carried out at the dump slopes. Dumps shall be protected by retaining walls.
- (xii) Trenches / garland drains shall be constructed at foot of dumps and coco filters installed at regular intervals to arrest silt from being carried to water bodies. Adequate number of Check Dams and Gully Plugs shall be constructed across seasonal/perennial nallahs (if any) flowing through the ML area and silts arrested. De-silting at regular intervals shall be carried out.
- (xiii) Garland drain of appropriate size, gradient and length shall be constructed for both mine pit and for waste dump and sump capacity shall 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 shall also provide adequate retention period to allow proper settling of silt material. Sedimentation pits shall be constructed at the corners of the garland drains and de-silted at regular intervals.
- (xiv) Ground and surface water (if any) in and near the core zone (within 5.0 km of the lease) shall be regularly monitored for contamination and depletion due to mining activity and **records maintained**. *The monitoring data shall be submitted to the Regional Office of the Ministry regularly.* Further, monitoring points shall be located between the mine and drainage in the direction of flow of ground water shall be set up and records maintained.
- (xv) Cultivable waste land within 5 km radius of the lease shall be identified and developed into productive land and made available to villages. Status of implementation shall be submitted to the Regional office of the Ministry **within three months** from start of production.
- (xvi) Fugitive dust generation shall be controlled. Fugitive dust emission shall be regularly monitored at locations of nearest human habitation (including schools

and other public amenities located nearest to sources of dust generation as applicable) and **records submitted** to the Regional Office of the Ministry regularly.

- (xvii) Baseline data for air quality shall be maintained and RSPM level in air quality in the nearby human habitation (villages) shall also be monitored along with other parameters.
- (xviii) Transportation of minerals shall be done by covering the trucks with tarpaulin or other suitable mechanism so that no spillage of mineral / dust take place.
- (xix) Occupational health and safety measures for the workers including identification of work related health hazards, training on malaria eradication, HIV, and health effects on exposure to mineral dust etc. shall be carried out. Periodic monitoring for exposure to respirable mineral dust on the workers shall be conducted and records maintained including health records of the workers. Awareness programme for workers on impact of mining on their health and precautionary measures like use of personal equipments etc. shall be carried out periodically. Review of impact of various health measures shall be conducted followed by follow up action wherever required.
- (xx) Top soil / solid waste shall be stacked properly with proper slope and adequate safeguards and shall be utilized for backfilling (wherever applicable) for reclamation and rehabilitation of mined out area. Top soil shall be separately stacked for utilization later for reclamation and shall not be stacked along with over burden.
- (xxi) Over burden (OB) shall be stacked at earmarked dump site(s) only and shall not be kept active for long period. The maximum height of the dump shall not exceed 20 m, each stage shall preferably be of maximum 10 m and overall slope of the dump shall not exceed 28°. The OB dump shall be backfilled. The OB dumps shall be scientifically vegetated with suitable native species to prevent erosion and surface run off.

Monitoring and management of rehabilitated areas shall continue until the vegetation becomes self-sustaining. Compliance status shall be submitted to the Regional office of the Ministry of Environment & Forests on **six monthly basis**.

- (xxii) Slope of the mining bench and ultimate pit limit shall be as per the mining scheme approved by Indian Bureau of Mines.
- (xxiii) Adequate plantation shall be raised in the ML area, haul roads, OB dump sites etc. Green belt development shall be carried out considering CPCB guidelines including selection of plant species and in consultation with the local DFO / Agriculture Department. Herbs and shrubs shall also form a part of afforestation programme besides tree plantation. The company shall involve local people for plantation programme. Details of year wise afforestation programme including rehabilitation of mined out area *shall be submitted* to the Regional Office of the Ministry every year.
- (xxiv) Regular monitoring of ground and surface water sources for level and quality shall be carried out by establishing a network of existing wells and constructing new piezometers during the mining operation. The monitoring shall be carried out four times in a year i.e. pre-monsoon (April-May), monsoon (August), post-monsoon (November) and winter (January) and the data thus collected shall be regularly sent to MoEF, Central Ground Water Authority and Regional Director, Central Ground Water Board.
- (xxv) The waste water from the mine shall be treated to conform to the prescribed standards before discharging in to the natural stream. The discharged water from the Tailing Dam (if any) shall be regularly monitored and report submitted to the Ministry of Environment & Forests, Central Pollution Control Board and the State Pollution Control Board.
- (xxvi) **Hydro-geological study of the area shall be reviewed annually. In case adverse effect on ground water quality and quantity is observed mining shall be stopped and resumed only after mitigating steps to contain any adverse impact on ground water is implemented.**

- (xxvii) Vehicular emissions shall be kept under control and regularly monitored. Vehicles used for transportation of minerals and others shall have valid permissions as prescribed under Central Motor Vehicle Rules, 1989 and its amendments. The vehicles transporting minerals shall be covered with a tarpaulin or other suitable enclosures so that no dust particles / fine matters escape during the course of transportation. No overloading of minerals for transportation shall be committed. The trucks transporting minerals shall not pass through wild life sanctuary (if any in the study area).
- (xxviii) Prior permission from the Competent Authority shall be obtained for extraction of ground water (if any).
- (xxix) Action plan with respect to suggestions/improvements and recommendations made during public consultation/hearing (as agreed) shall be submitted to the Regional Office of the Ministry and the State Govt within six months.
- (xxx) A final mine closure plan, along with details of Corpus Fund, shall be submitted to the Ministry of Environment & Forests, 5 years in advance of final mine closure for approval.

B. General conditions

- (i) No change in mining technology and scope of working shall be made without prior approval of the Ministry of Environment & Forests.
- (ii) No change in the calendar plan including excavation, quantum of mineral and waste shall be made.
- (iii) Four ambient air quality-monitoring stations shall be established in the core zone as well as in the buffer zone for RSPM, SPM, SO₂, NO_x 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.

- (iv) Data on ambient air quality (RPM, SPM, SO₂, NO_x) should be regularly submitted to the Regional office of the Ministry located at Bhopal and the State Pollution Control Board / Central Pollution Control Board **once in six months**.
- (v) Fugitive dust emissions from all the sources shall be controlled regularly. Water spraying arrangement on haul roads, loading and unloading and at transfer points shall be provided and properly maintained.
- (vi) Measures shall be taken for control of noise levels below 85 dBA in the work environment. Workers engaged in operations of HEMM, etc. shall be provided with ear plugs / muffs and health records of the workers shall be maintained.
- (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 19th May, 1993 and 31st December, 1993 or as amended from time to time. Oil and grease trap shall be installed before discharge of workshop effluents.
- (viii) Personnel working in dusty areas shall be provided with protective respiratory devices and they shall also be imparted adequate training and information on safety and health aspects.
- (ix) Provision shall be made for the housing the labourers within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.
- (x) A separate Environmental Management Cell with suitable qualified personnel shall be set-up under the control of a Senior Executive, who will report directly to the Head of the Organization.
- (xi) The project authorities shall inform to the Regional Office of the Ministry located at Bhopal regarding date of financial closures and final approval of the project by the concerned authorities and the date of start of land development work.

- (xii) The funds earmarked for environmental protection measures shall be kept in separate account and shall not be diverted for other purpose. Year wise expenditure shall be reported to the Ministry and its Regional Office located at Bhopal.
 - (xiii) The Regional Office of the Ministry located at Bhopal shall monitor compliance of the stipulated conditions. The project authorities shall extend full cooperation to the officer(s) of the Regional Office by furnishing the requisite data / information / monitoring reports.
 - (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.
 - (xv) State Pollution Control Board shall display a copy of the clearance letter at the Regional office, District Industry Centre and Collector's office / Tehsildar's Office for 30 days.
 - (xvi) The project authorities shall 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 State Level Environment Impact Assessment Authority (SEIAA) website at **www.mpseiaa.nic.in** and a copy of the same shall be forwarded to the Regional Office of the Ministry located in Bhopal.
5. The Ministry or any other competent authority may alter/modify the above conditions or stipulate any further condition in the interest of environment protection.
6. Concealing factual data or submission of false/fabricated data and failure to comply with any of the conditions mentioned above may result in withdrawal of

this clearance and attract action under the provisions of Environment (Protection) Act, 1986.

7. Any appeal against this environmental clearance shall lie with the National Environment Appellate Authority, if preferred, within a period of 30 days as prescribed under Section 11 of the National Environment Appellate Authority Act, 1997.
8. The above conditions will be enforced inter-alia, under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986 and the Public Liability Insurance Act, 1991 along with their amendments and rules.

Sd/-
(Deepti Gaur Mukerjee)
Member Secretary, SEIAA

Endt No. 11 /SEIAA/EPCO/09

Dated:-08-04-09

Copy to:-

1. The Secretary, Department of Environment, Government of Madhya Pradesh, Bhopal
2. The Member Secretary, Madhya Pradesh State Pollution Control Board, Paryavarn Parisar, E-5, Arera Colony, Bhopal-462016
3. Division, Monitoring Cell, MoEF, New Delhi- 110 003
4. The Regional Officer, MOEF, Bhopal
5. Guard file.

(Deepti Gaur Mukerjee)
Member Secretary, SEIAA