



# STATE ENVIRONMENT IMPACT ASSESSMENT AUTHORITY (SEIAA), ORISSA

(Constituted vide Order No. S.O. 2674 (E) Dated. 17<sup>th</sup> Nov. 2008 of Ministry of Environment & Forest, Govt. of India)  
Qr. No. – 5RF - 2/1, Unit-IX, Bhubaneswar-751022

Ref. No. SEIAA/ 20  
SEIAA-26/09

Date 27.11.09

To  
The Tarini Minerals (P) Ltd.  
Boneikhal Joda, Dist- Keonjhar,  
Bo. A-6, Commercial Estate Dev. Area  
7 & 8 Rourkella-4, Ph. No. 0661-2400139

Sub: Expansion of Deojhar Iron Ore Mine of M/s TARINI MINERALS (P) Ltd to increase Iron Ore Production.

Sir,

With reference to your letter no TMPL/DIM/SEAC/EC/2009/01 Dt 23.3.09 along with application Terms of Reference (TOR) and subsequent letter no nil Dt. 23.11.09 for Environmental clearance on the above mentioned subject. The State Environment Impact Assessment Authority has considered the application.

The proposal is for enhancement of production of iron ore from 0.036 MTPA to 1.5 MTPA. The TOR for this project were prescribed on Dtd. 25.6.08 by the Expert Appraisal Committee of MoEF, Govt. of India. The mine lease area is 34.365 hectare. Entire lease area is forest area. The mine has got forest clearance from MoEF Govt. of India for diversion of 34.365 hectare. The lease deed for this mine was executed for a period of 20 years with effect from dated 5.9.1994. Mining plan is approved for maximum production of 1505665 TPA. The public hearing was conducted on 4<sup>th</sup> February, 2009. No National Park/Sanctuary is located within 10 km of the mine lease area. Mine working will be opencast mechanized involving drilling and blasting. Water requirement for the project is estimated to be 75 m<sup>3</sup>. day. The source of water is ground water. The mine has not submitted copy of permission for drawal of 75 m<sup>3</sup>.day groundwater from concerned authority. The mine working will not intersect groundwater table. Waste generation will be 0.204 million m<sup>3</sup> during plan period. The mine has

earmarked 2.092 hector as OB dump area (plan period). The mine has proposed garland drains, check dams and retaining walls to prevent wash out of loose material from dump area. Dump slope will be stabilized by putting vegetation. The issue raised during public hearing were also presented and discussed during the meeting.

Based on the informations, documents and clarifications provided the SEIAA hereby accords Environmental clearance in favour of the project for a period of 5 years under the provisions of the Environment Impact Assessment Notification, 2006 and subsequent amendments there to subject to the conditions specified below:-

A- Specific conditions:

- i) The applicant (Project proponent) will take necessary measures for prevention, control and mitigation of Air Pollution, Water Pollution, Noise Pollution and Land Pollution including solid waste management as mentioned by him in **Form-1, Final EIA reports and Environment Management Plan (EMP) in compliance** with the prescribed statutory norms and standards.
- ii) The applicant will take necessary steps for socio-economic development after a detailed Primary Socio-Economic Survey of the people of the core area on need based assessment for providing employment, education, health care, drinking water and sanitation road and communication facilities etc. A report is to be submitted by the proponent to SEIAA regularly on 1<sup>st</sup> June and 1<sup>st</sup> December of each calendar year.
- iii) The applicant will comply to the points. Concerns and issues raised by the people during public hearing on 4<sup>th</sup> February, 2009 in accordance with the commitments made by him thereon.
- iv) The applicant will take statutory clearance/approval/permissions from the concerned authorities in respect of his project as and when required.
- v) For post environmental clearance monitoring, the applicant will submit half yearly compliance report in respect of the stipulated terms and conditions of this Environmental Clearance to the State

Environmental Impact Assessment Authority (SEIAA), Orissa on 1<sup>st</sup> June and 1<sup>st</sup> December of each calendar year.

- vi) The core zone should be monitored intensively with no. of stations as prescribed by CPCB, Delhi and unit of pollutant level should be expressed as NAAQ of CPCB, Delhi. The detail methodology adopted for analysis of samples shall be clearly indicated.
- vii) The proponent shall submit ground tooting baseline data on flora & fauna and CSR activities already carried out within three months to the SEIAA, Orissa.
- viii) No two pits shall be simultaneously worked. 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 should be 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 body is worked.
- ix) Adequate buffer zone shall be maintained between two consecutive mineral bearing deposits.
- x) Zero waste mining concept shall be implemented either by putting up pelletisation plant or disposal of low grade ores/ fines to prospective buyers.
- xi) The following shall be implemented viz. (a) dump run-off should be diverted into settling ponds until it is clear (b) adequate rain water harvesting and ground water recharging facilities should be developed in the core zone, (c) attempt should be made to achieve zero water balance.
- xii) Maintenance of roads through which transportation of ores are undertaken shall be carried out by the project proponent regularly at its own cost.
- xiii) 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 shall be submitted to the SEIAA, Orissa.

- xiv) Transportation of ore shall be done by covering the trucks with tarpaulin or other suitable mechanism so that no spillage of ore/dust takes place.
- xv) Rain water harvesting shall be undertaken to recharge the ground water source.
- xvi) Monitoring of ground and surface water quality shall be regularly conducted and records should be maintained and data shall be submitted regularly to the SEIAA, Orissa.
- xvii) The proponent shall ensure that no silt originating due to mining activity is transported in the surface water course. 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 **geo-textile 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.
- xviii) Trenches/ garland drains shall be constructed at foot of dumps to arrest silt from being carried to water bodies. Adequate number of Check Dams shall be constructed across seasonal/perennial nallahs (if any) flowing through the ML area and silts be arrested. De-silting at regular intervals shall be carried out.
- xix) Provision shall be made for the housing the laborers within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, 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.
- xx) 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. The proponent shall engage a full time qualified doctor who is trained in occupational health. 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 undertaken (at interval of five years or less) shall be conducted followed by follow up action wherever required. Occupational Health Centre shall be established near the mine site itself.

- xxi) Shelter belt i.e. Wind Break of 15 m width and consisting of at least 5 tires around the lease facing the human habitation, school/ agricultural fields etc.) If any in the vicinity), in the safety zone/ back-filled & reclaimed areas, around voids & roads shall be raised. Green belt development and selection of plant species shall be as per CPCB guidelines. Density of the trees has to be around 2500 plants per hectare. Herbs and shrubs shall also form a part of afforestation programme besides tree plantation. Help & guidance of local DFO may be sought in the matter. Details of year wise afforestation programme including rehabilitation of mined out area shall be submitted to the SEIAA, Orissa within six months.
- xxii) This Environmental clearance is subject to Forest clearance under the Forest (Conservation) Act, 1980.
- xxiii) The mining operations shall be restricted to above ground water table and it should not intersect the groundwater table.
- xxiv) The top soil shall temporarily be stored at earmarked site (s) only and it should not be kept unutilized for long (not more than 3 years). The topsoil shall be used for land reclamation and plantation.
- xxv) The over burden (OB) generated during the mining operation shall be stacked at earmarked dump site (s) only and it should not be kept active for a long period of time and its phase-wise stabilization shall be carried out Proper terracing of OB dump shall be carried out so that the overall slope shall not exceed 28<sup>o</sup> Backfilling shall be done as per approved mining plan. Back-filling to start from 3<sup>rd</sup> year onwards of the mining operation & the entire quantity of waste generated shall be backfilled & liquidated within

five years. There shall be no external over-burden dumps after the 6<sup>th</sup> year of the mining operation. The backfilled area shall be afforested. Back-filling has to be done in a manner that it is restored to the normal ground level. Monitoring & management of rehabilitated areas should continue till the vegetation is established & becomes self generating compliance status to be reported to the appropriate authorities.

- xxvi) The funds earmarked for the environment protection measures shall be judiciously utilized. Under no circumstances this funds shall be diverted for other purposes. Year-wise expenditure for this fund should be reported to the SEIAA, Orissa.
- xxvii) The above mentioned stipulated conditions shall be complied in time bound manner. Failure to comply with any of the conditions mentioned above may result in withdrawal of this environmental clearance and attract action under the provisions of Environment Protection (EP) Act, 1986.

  
B. Behera (IFS)  
Member Secretary  
SEIAA

Memo no \_\_\_\_\_ Dt. \_\_\_\_\_

Copy forwarded to the Ministry of Forests & Environment Govt. of India, Paryavaran Bhavan, C.G.O. Complex, Lodi Rode, New Delhi 110003 for kind information.

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Member Secretary  
SEIAA

Memo no \_\_\_\_\_ Dt. \_\_\_\_\_

Copy forwarded to the Forests & Environment Dept. for kind information.

सि -  
Member Secretary  
SEIAA

Memo no \_\_\_\_\_ dt \_\_\_\_\_

Copy forwarded to the Chairman, State Pollution Control Board, Parivesh Bhawan, A/118, Nilakantha Nagar, Unit-8, and BBSR for kind information.

सि -  
Member Secretary  
SEIAA

Memo no \_\_\_\_\_ dt \_\_\_\_\_

Copy forwarded to the Chief Conservator of Forests, Regional Office (EZ), Ministry of Environment & Forests, A-31, Chandrasekharpur, Bhubaneswar for kind information.

सि -  
Member Secretary  
SEIAA

Memo no \_\_\_\_\_ dt \_\_\_\_\_

Copy forwarded to the Chairman, Central Pollution Control Board, CBD-cum-office Complex, East Arjun Nagar, New Delhi, 110032 for kind information.

सि -  
Member Secretary  
SEIAA


Memo no \_\_\_\_\_ dt \_\_\_\_\_

Copy forwarded to the Collector , Dist-Keonjhar, for kind information.

  
Member Secretary  
SEIAA


Memo no \_\_\_\_\_ dt \_\_\_\_\_

Copy forwarded to the Chairman/ Member Secy./ Member for kind information.

  
Member Secretary  
SEIAA

Memo no \_\_\_\_\_ dt \_\_\_\_\_

Copy forwarded to the Chairman SEAC/All members SEAC, Parivesh Bhawan, A/118, Nilakantha Nagar, Unit-VIII, Bhubaneswarfor kind information.

  
Member Secretary  
SEIAA



Memo no \_\_\_\_\_ dt \_\_\_\_\_

Copy forwarded to Guard file for records.

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Member Secretary  
SEIAA