



**STATE ENVIRONMENT IMPACT ASSESSMENT AUTHORITY,  
(SEIAA), ORISSA.**

(Constituted vide order No. S.O. 2674 (E) Date 17<sup>th</sup> Nov. 2008 of Ministry of Environment & Forest, Govt. of India, Under Environment Protection Act, 1986.) Qr. No. 5RF-2/1, Unit-IX, Bhubaneswar-751022  
[E-mail-seiaaorissa@gmail.com](mailto:E-mail-seiaaorissa@gmail.com), Website - [www.orissaseiaa.gov.in](http://www.orissaseiaa.gov.in)

---

Ref. No. \_\_\_\_\_

Dt. \_\_\_\_\_

**SEIAA – 38/11**

From

Bhagirathi Behera, IFS  
Director, Environment-cum-  
Special Secretary to Govt.  
& Member Secretary, SEIAA, Orissa

To

M/s TATA Steel Ltd.  
Bombay House  
24, Homi Mody Street  
Mumbai – 400001

Sub: Environmental Clearance for Manmora Manganese ore Mines of M/s TATA Steel Ltd. at Joda in the district of Keonjhar, Orissa.

Sir,

This has reference to your letter no. TSLDEL/466/2008 dated 12.05.2008 and no. TSLDEL/466/2008 dated 23.10.2008 along with application in the prescribed format submitted to MOEF, Govt. of India and subsequent letters no. MD/ENV/85/116/2010 dated 23.03.2010 and no. MD/ENV/242/116/2010 dated 04.09.2010 on the above mentioned subject I am directed to say that the State Environment Impact Assessment Authority, Orissa has considered the application for the proposal for production of 12,000 TPA Manganese ore from Manmora Manganese Mine and slime storage facility to reclaim a part of the mined out pit over a lease area of 16.35 ha. which is a part of the existing Joda East Iron mine (JEIM) of M/s TATA Steel with a total leasehold area of 671.093 ha. The proponent has also applied for use of the mined out pit for storing slimes generated from their existing iron ore beneficiation plant. The TOR was issued by MOEF in Nov, 2008 based on which the EIA/ EMP reports were submitted. The mine has obtained Forest Clearance and Consent to operate till March, 2011. Public hearing of the proposal was conducted on 01.02.2010.

It was clarified during the presentation that the proponent has already exhausted the mineable manganese ore reserve of the Manmora Manganese mine which seems to be a violation of EC

as EC is yet to be granted. Presently TSL interested in slime storage and thereby reclaim a part of the mined out pit. The facts and figures presented shows that they had a residual reserve of 18,867 T of mineable manganese ore in April, 2008 which they wanted to mine at a rate of 12,000 TPA and so the expected life was 2 years. The proposed slime storage pond [dim. 430m (L) X 150 to 270m (W) X 77m (D)] is going to cover a surface area of 6.46 ha. to store 1.5 million m<sup>3</sup> of slime to a depth of 33m in four years period. About 50% of the pit circumference is proposed to be built with 0.4 million m<sup>3</sup> of OB material to a height of 35m. M/s WAPCOS, a Govt. of India undertaking, has provided the designs and has carried out permeability test of the soil.

The proposal was placed in the SEAC meeting held on 6<sup>th</sup> and 7<sup>th</sup> December 2010 and 25<sup>th</sup> January, 2011. Considering the information furnished and presentation made by the consultant, M/s S.S Environics (India) Pvt. Ltd., Bhubaneswar on behalf of the proponent, the committee decided to consider the proposal after receipt of certain information/document/clarification from the proponent. The proponent furnished the information/document/clarification and the committee verified the same. The committee also visited the mine on 17<sup>th</sup> March, 2011 to assess the present mining activities and environmental management practice.

The SEAC assessed that major activities during the next five years would be

- i) Construction of tailing pond for storage of slime to be generated from beneficiation plant of Joda-East Iron Ore mines.
- ii) Reclamation of mined out pits based on mine closure plan and reafforestation of the mining lease area.
- iii) Activities incidental to the above related activities.

Based on the information/documents furnished by the proponent and on recommendation of the SEAC, Orissa, the State Environment Impact Assessment Authority, Orissa hereby accords Environmental Clearance in favour of the project for a period of 5 (five) years under the provisions of the Environment Impact Assessment Notification, 2006 and 2009 and subsequent amendment thereto under various MOEF, Govt. of India circulars thereunder and subject to the following stipulated conditions.

**Stipulated Conditions:-**

1. The earthen embankments are planned as per WAPCO design, it needs stone walling on both sides to prevent collapse of the embankment as immediately down of the mine are the township, railway line and some agriculture land.
2. Since the mine has been fully worked and mineral resources have been fully removed, mine closure plan should be implemented forthwith reclaiming the mine pits and revegetation of the mine lease area.
3. The existing overburden dumps and the entire quantity of waste generated shall be backfilled and liquidated within five years and there shall be no external overburden dump in the mining lease area. The back filled area shall be afforested and back filling has to be done in a manner that it is restored to the normal ground level. A complete

- mine closure reclamation plan with afforestation/ revegetation component with year wise details submitted to the SEIAA within six months and strictly implemented.
4. The project proponent shall prepare wild life conservation plan in consultation with DFO and adequate safety and mitigation measures should be incorporated to protect the wild life, flora, fauna to mitigate adverse impact.
  5. Shelter belt i.e. Wind Break of 15m width and consisting of at least 5 tiers around lease facing the human habitation, school/ agricultural fields etc. (if any in the vicinity), in the safety zone/ backfilled & 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.
  6. 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.
  7. The applicant will take necessary steps for socio-economic development of the people of the area on need based assessment for providing employment, education, health care, drinking water and sanitation, road and communication facilities etc. after a detailed primary socio-economic survey.
  8. The applicant will comply to the points, concerns and issues raised by the people during public hearing on 01.02.2010 in accordance with the commitments made by him thereon.
  9. The project proponent shall take necessary safeguard measures to ensure that there is no leaching from the tailing pond.
  10. The decanted water from the tailing pond shall be re-circulated and there should be zero discharge from the tailing pond.
  11. The applicant will take statutory clearance/ approval / permissions from the concerned authorities in respect of his project as and when required.
  12. For post environmental clearance monitoring, the applicant will submit half-yearly compliance report in respect of the stipulated terms and conditions of 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.
  13. 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 detailed methodology adopted for analysis of samples shall be clearly indicated.
  14. The proponent shall submit baseline data on flora & fauna and CSR activities already carried out within three months to the SEIAA.
  15. The following shall be implemented viz. (a) dump run-off should be diverted into setting ponds (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.
16. Maintenance of roads through which transportation are undertaken shall be carried out by the project proponent regularly at its own cost.
  17. 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.
  18. Mineral handling area shall 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.
  19. Transportation shall be done by covering the trucks with tarpaulin or other suitable mechanism so that no spillage of ore / dust takes place.
  20. Rain water harvesting shall be undertaken to recharge the ground water source.
  21. 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.
  22. 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.
  23. 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.
  24. Provision shall be made for the housing of the labourers 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.
  25. 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.
  26. This Environmental Clearance is subject to Forest Clearance under the Forest (Conservation) Act, 1980.

27. The mining operations shall be restricted to above ground water table and it should not intersect the groundwater table.
28. 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.
29. 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.
30. The critical parameters in the ambient air within the impact zone, peak particle velocity at 300m distance or within the nearest habitation, whichever is closer shall be monitored periodically. Further, quality of discharged water shall also be monitored [(TDS, DO, pH and Total Suspended Solids (TSS))]. The monitored data shall be uploaded on the website of the company as well as displayed on a display board at the project site at a suitable location near the main gate of the Company in public domain. The circular No. J-20012/1/2006-IA.II(M) dated 27.05.2009 issued by Ministry of Environment and Forests, which is available on the website of the Ministry [www.envfor.nic.in](http://www.envfor.nic.in) shall also be referred in this regard for its compliance.
31. The project proponent shall obtain necessary prior permission of the competent authorities for drawal of requisite quantity of water (surface water and ground water) required for the project.
32. 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 penal action under the provisions of Environment Protection (EP) Act, 1986.

**2. This Environment clearance is subject to the grant/approval/sanction of mining lease by the competent authority as required under law. The Environment Clearance will stand automatically cancelled if mining lease is not sanctioned or is cancelled.**

**Member Secretary**

**Memo No.** \_\_\_\_\_

**Dt.** \_\_\_\_\_

Copy to:

1. Ministry of Environment & Forests Govt. of India, Paryavaran Bhawan, C.G.O. Complex, Lodhi Road, New Delhi-110003 for kind information.
2. Principal Secretary to Govt., Forests & Environment Dept. Orissa for kind information.
3. Chairman, State Pollution Control Board, Paribesh Bhawan, A/118, Nilakantha Nagar, Unit-8, BBSR for kind information.
4. Chief Conservator of Forests, Regional Office (EZ), Ministry of Environment & Forests, A-31, Government of India, Chandra Sekharpur, Bhubaneswar for kind information.

5. Chairman, Central Pollution Control Board, CBD-cum-office Complex, East Arjun Nagar, New Delhi, 110032 for kind information.
6. The District Collector & Magistrate, Keonjhar for kind information and necessary action.
7. Copy forwarded to the Chairman/ Member Secy. / Member, SEIAA for kind information.
8. Chairman, SEAC/Secretary, SEAC, Paribesh Bhawan, A/118, Nilakantha Nagar, Unit-VIII, Bhubaneswar for kind information.
9. Guard file for records.

**Member Secretary**