

F. No. J-11011/691/2007- IA II (I)
Government of India
Ministry of Environment and Forests
(I.A. Division)



Paryavaran Bhawan
 CGO Complex, Lodhi Road
 New Delhi – 110 003

E-mail : pb.rastogi@nic.in
 Telefax : 011: 2436 7668
 Dated 11th May, 2010

To,
 The Managing Director
 M/s Tata Steel Ltd.
 Jamshedpur – 831 001
 Jharkhand

E-mail : lanant@tatasteel.com / sb.prasad@tatasteel.com / chanakya@tatasteel.com ;
 Fax No. : 0657-2424098 / 011 – 233226265 / 0657-2270751;

Subject: Expansion of Steel Plant (6.8 MTPA to 9.7 MTPA, Crude Steel Production) at Tata Steel Works, Jamshedpur, District East Singhbhum, Jharkhand by M/s Tata Steel Ltd. - Environment clearance reg.

Ref. : Your letter no. TSLDEL/344/2010 dated 31st August, 2009.

Sir,

This has reference to your letter no. TSLDEL/344/2010 dated 31st August, 2009 alongwith Form I, Pre-feasibility Report, draft Terms of References and EIA/EMP and subsequent clarifications furnished by you vide your letters 29th December, 2009, 5th January, 2010 8th & 15th March, 2010 for environmental clearance on the above mentioned project.

2.0 The Ministry of Environment and Forests has examined the application. It is noted that proposal is for the expansion of Steel Plant (6.8 MTPA to 9.7 MTPA, Crude Steel Production) at Tata Steel Works, Jamshedpur, District East Singhbhum, Jharkhand by M/s Tata Steel Ltd. M/s Tata Steels Ltd. The project will be located within the existing campus in 717 ha. Total land acquired is 5,094 ha. and no additional land will be acquired. Jora Pahar PF, Sand Pacha Rahar PF, Deluse RF are located within 10 km. radius. Environmental clearance for the steel plant (5.0 to 6.8 MTPA) has been accorded vide letter no. J-11011/317/2006 IA(II)(I) dated 16th April, 2007. Total cost of the project is Rs. 14,800.00 Crores. Following will be the configuration of the steel plant:

S.N.	Plant / Product	Existing (6.8 MTPA)	Proposed (9.7 MTPA)
1.	Coke ovens	2.3	3.4
2.	Sinter Plant	7.6	8.0
3.	Pellet Plant	-	6.0
4.	Blast Furnace (Hot Metal)	7.2	10.55
5.	Steel Making (Crude Steel)	6.8	9.7
6.	Long products	1.24	1.24
7.	Flat products	3.04	5.83
8.	Semis	2.32	2.37

After proposed expansion, the product-mix will be as under:

Plants	Present	Post 6.8 MTPA Growth plan (under construction) (MTPA)	Post 9.7 MTPA Expansion Project (MTPA)
Intermediate products			
Hot Metal	5.3	7.2 ±5%	10.55 ±5%

Crude Steel	5.0	6.8 ±5%	9.7±5%
Saleable Products			
Long Products	1.24	1.24 ±5%	1.24±5%
Flat products	2.90	3.04 ±5%	5.83±5%
Semis	0.63	2.32±5%	2.37 ±5%

Following will be done during the proposed expansion:

A. New Production facilities under Expansion Project :

- i) Coke Oven battery # 10 & 11 of capacity 0.7 MTPY each alongwith by-product recovery plant
- ii) Pellet plant (PP) of capacity 6.0 MTPY
- iii) Blast furnace 'I' of capacity 3.05 MTPY
- iv) LD #3 Shop with crude steel production capacity 2.4 MTPY
- v) Thin slab casting & rolling (TSCR) with production capacity of 2.34 MTPY hot strip coils
- vi) Two (2) No. twin-shaft lime kiln of capacity 600 TPD each

B. Units to be Upgraded :

- i) Augmentation of hot strip mill (HSM) from 3.10 to 3.55 MTPY
- ii) Enhancing LD#2 shop production by 0.5 MTPY
- iii) Upgrading blast furnaces 'C' from 0.23 to 0.70 MTPY hot metal production capacity
- iv) Increasing hot metal production from 'F-H' furnaces by 1.4 MTPY.
- v) Enhancing sinter production from SP#1-3 by an additional 0.1 MTPY
- vi) Suitable modifications in raw material & handling section (RMHS) for new as well as upgraded facilities

C. Old Units to be closed down :

- i) Blast furnace # 'A-B' and 'D-E' (4 Nos.)
- ii) Top charge battery # 3

3.0 Conventional BF-BOF route of steel making followed by thin slab casting and rolling will be used. No change will be made in the existing coke making facility and additional requirement will be sourced from Haldia Metcoke Plant, West Bengal and other sources. No additional sinter plant will be installed. Iron ore fines will be used in BF in iron making in pelletization plant (6.0 MTPA). No other new mill except TSCR mill will be installed. Two lime calciners will be installed. After upgradation and modification, hot metal (10.2 MTPA) will be produced and steel production will be enhanced to 9.7 MTPA.

4.0 Electrostatic precipitators (ESPs), bag house, bag filters, high pressure liquor aspiration (HPLA) extraction system, fume extraction system, covered conveyors, dry fog dust suppression system, water sprinkling will be provided to control particulate emissions within 50 µg/m³. City road traffic decongestion plan prepared will be implemented to decongest the city and reduce emission in the city. By product fuel gases e.g. coke oven gas, BF gas and LD gas will be reused in the plant itself. Total water requirement from River Subarnarekha will be 33.3 MGD. Permission for the drawl of 227 MGD water is obtained vide letter dated 7.1.1992. All the wastewater from various units will be treated in common effluent treatment plant (CETP) and recycled/reused for slag quenching, dust suppression, dry fog operation, road cleaning and green belt development etc. The water consumption will be 5.7 m³/T at 9.7 MTPY stage. The phenolic effluent from the coke oven will be treated in BOD plant. No additional treated wastewater will be released out of the premises and 'Zero' discharge will be adopted. All the BF slag will be granulated and sold to the cement manufacturers. LD slag will be used in sinter plant, blast furnaces and LD convertor, aggregated making, road ballast making, soil

conditioning etc. Flue dust will be recycled within the plant. Mill scales, LD sludge, lime fines and flue dust will be recycled back to the sinter plant. The coal tar sludge and BOD sludge will be recycled for coke making. Chromium sludge will be disposed in a HDPE lined pit within the premises. Jugsalai muck dump (JMD) will be reclaimed in a time bound manner.

4.0 Public hearing/Public consultation meeting was conducted on 18th June, 2009.

5.0. The Ministry of Environment and Forests hereby accords environmental clearance to the above project under the provisions of EIA Notification dated 14th September, 2006 subject to strict compliance of the following specific and general conditions:

A. SPECIFIC CONDITIONS :

- i) Compliance to all the specific and general conditions stipulated for the existing plant by the Central/State Govt. shall be ensured and regular reports submitted to the Ministry and its Regional Office at Bhubaneswar.
- ii) Efforts shall be made to reduce RSPM levels in the ambient air and a time bound action plan shall be submitted. On-line ambient air quality monitoring and continuous stack monitoring facilities for all the stacks shall be provided and sufficient air pollution control devices viz. Electrostatic precipitator (ESP), bag house, gas cleaning plant, bag filters etc. shall be provided to keep the emission levels below 50 mg/Nm³ by installing energy efficient technology. Low NOx burners shall be installed to control NOx emissions. At no time, the emission level shall go beyond the prescribed standards. Interlocking facilities shall be provided so that process can be automatically stopped in case emission level exceeds the limit.
- iii) Existing electrostatic precipitator (ESP) shall be upgraded and provided to new units to control gaseous emissions within 50 mg/Nm³. ESPs shall be provided to pellet plant, cast house and stock of blast furnaces and LD#3 shop. Waste gas from the drying and grinding unit of pellet plant shall be cleaned by bag filters. Adequate provisions shall be made to control NOx emissions. Bag house shall be provided to Lime kilns. Data on ambient air quality stack emissions and fugitive emissions shall regularly submitted to the Ministry's Regional Office at Bhubaneswar, Jharkhand Pollution Control Board (JPCB) and Central Pollution Control Board (CPCB) once in six months.
- iv) Land based fume extraction system shall be provided to coke oven battery # 10 and 11 to arrest fugitive emissions during charging and pushing operations. The coke oven gas shall be desulphurized by reduction of H₂S content of coke oven gas in the by-product recovery section to below 500 mg/Nm³. On-line charging with high pressure liquor aspiration (HPLA) for extraction of oven gas, leak proof oven doors, hydraulic door and door frame cleaner, water sealed AP caps and charging & pusher side emission extractor device shall be provided for the coke oven batteries to maintain VOC emissions within permissible limit. Land based fume extraction system for pushing emission control from coke ovens shall be provided.
- v) All the standards prescribed for the coke oven plants shall be followed as per the latest guidelines. Proper and full utilization of coke oven gases in power plant using heat recovery steam generators shall be ensured and no flue gases shall be discharged into the air. Sulphur shall be recovered from the coke oven gases from new product plant.
- vi) Only dry quenching method in the coke oven in new battery # 10 & 11 shall be adopted. ✓

- vii) The National Ambient Air Quality Emission Standards issued by the Ministry vide G.S.R. No. 826(E) dated 16th November, 2009 shall be followed.
- viii) In-plant control measures for checking fugitive emissions from all the vulnerable sources including bag filters and fume extraction system shall be provided. Dry fog dust suppression system / water sprinkling system shall be provided in raw material handling areas to control fugitive dust emissions. Fugitive emissions from different sources shall also be controlled by covered conveyors, water sprinkling in open yards and with dry fogging in the closed zones. Further, specific measures like asphaltting of the roads within premises shall be carried out to control fugitive emissions. Fugitive emissions shall be controlled, regularly monitored and records maintained.
- ix) Gaseous emission levels including secondary fugitive emissions from all the sources shall be controlled within the latest permissible limits issued by the Ministry and regularly monitored. Guidelines / Code of Practice issued by the CPCB shall be followed. New standards issued by the Ministry vide G.S.R. 414(E) dated 30th May, 2008 shall be followed.
- x) As proposed, traffic decongestion plan shall be implemented in a time bound manner to reduce emissions in the Jamshedpur city and separate budget shall be allocated for implementing the same. Maximum inbound and out bound material movement shall be done by railway wagons only to reduce dust emissions. Measures like covered conveyors for handling of bulk materials, centralized screening of iron ore, rationalization of weighing system, use of higher capacity vehicles etc. shall be adopted to reduce dust emissions. Mechanized vacuum cleaning of arterial roads shall be carried out on regular basis to further reduce dust emissions.
- xi) Vehicular pollution due to transportation of raw materials and finished products shall be controlled. Proper arrangements shall also be made to control dust emissions during loading and unloading of the raw material and finished product.
- xii) As proposed, total water requirement from River Subarnarekha shall not exceed 33.3 MGD although permission for 227 MGD water is obtained vide letter dated 7th January, 1992. Closed circuit cooling system shall be provided to reduce further water consumption. All the wastewater from various units shall be treated in the common effluent treatment plant (CETP) for primary, secondary and tertiary treatment shall be either recycled or used for dust suppression, slag quenching and green belt development etc. within the lease hold area. The phenolic effluent from the by-product recovery section of coke oven battery # 10 and 11 shall be treated in BOD plant. Wastewater containing suspended solids shall be passed through clariflocculation plant to recover and reuse the clarified water for cooling or cleaning. Mill effluent containing oil and suspended solids shall be passed through oil skimmers and filter press. No treated wastewater shall be released out the premises and 'Zero' discharge shall be adopted by recycling all the treated water in the plant itself including from the existing plant.
- xiii) Efforts shall be made to make use of rain water harvested. If needed, capacity of the reservoir shall be enhanced to meet the maximum water requirement. Only balance water requirement shall be met from other sources.
- xiv) Continuous monitoring of Total Organic Compounds (TOC) in the wastewater treated in BOD plant from the coke oven plant shall be done at the outlet of ETP (BOD plant). All the treated wastewater shall be monitored for pH, BOD, COD, oil & grease, cyanide, phenolic compounds, Chromium⁺⁶ etc. besides other relevant parameters. ✓

Jharkhand SPCB and CPCB within 3 months of issue of environment clearance letter.

- xxvi) As proposed, green belt shall be developed in more than 33 % area within and around the plant premises as per the CPCB guidelines in consultation with DFO.
- xxvii) Prior permission from the State Forest Department shall be taken regarding likely impact of the expansion of the proposed steel plant on the reserve forests. Measures shall be taken to prevent impact of particulate emissions / fugitive emissions, if any from the proposed plant on the surrounding reserve forests viz. Jora Pahar PF, Sand Pcha Rahar PF, Deluse RF located within 10 km radius of the project. Further, Conservation Plan for the conservation of wild fauna in consultation with the State Forest Department shall be prepared and implemented.
- xxviii) All the recommendations made in the Charter on Corporate Responsibility for Environment Protection (CREP) for the Steel Plants shall be implemented
- xxix) All the commitments made to the public during the Public Hearing / Public Consultation meeting held on 18th June, 2009 shall be satisfactorily implemented and a separate budget for implementing the same shall be allocated and information submitted to the Ministry's Regional Office at Bhubaneswar.
- xxx) At least 5 % of the total cost of the project i.e. Rs. 750.00 Crores shall be earmarked towards the corporate social responsibility and item-wise details alongwith time bound action plan shall be prepared and submitted to the Ministry's Regional Office at Bhubaneswar. Implementation of such program shall be ensured accordingly in a time bound manner.
- xxxi) The company shall provide housing for construction labour 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.

B. GENERAL CONDITIONS:

- i. The project authorities must strictly adhere to the stipulations made by the Jharkhand Pollution Control Board (JPCB) and the State Government.
- ii. No further expansion or modifications in the plant should be carried out without prior approval of the Ministry of Environment and Forests.
- iii. The gaseous emissions from various process units shall conform to the load/mass based standards notified by this Ministry on 19th May, 1993 and standards prescribed from time to time. The state Board may specify more stringent standards for the relevant parameters keeping in view the nature of the industry and its size and location.
- iv. At least four ambient air quality monitoring stations shall be established in the downward direction as well as where maximum ground level concentration of SPM, SO₂ and NO_x are anticipated in consultation with the Jharkhand PCB. Data on ambient air quality and stack emission should be regularly submitted to this Ministry including its Regional Office at Bhubaneswar and the Jharkhand PCB/CPCB once in six months.
- v. Industrial wastewater shall 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 form time to time. The treated wastewater shall be utilized for plantation purpose.

- vi. The overall noise levels in and around the plant area shall be kept well within the standards (85 dBA) by providing noise control measures including acoustic hoods, silencers, enclosures etc. on all sources of noise generation. The ambient noise levels should conform to the standards prescribed under EPA Rules, 1989 viz. 75 dBA (daytime) and 70 dBA (nighttime).
- vii. Occupational Health Surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.
- viii. The company shall develop surface as well as ground water harvesting structures to harvest the rainwater for utilization in the lean season besides recharging the ground water table.
- ix. The project proponent shall also comply with all the environmental protection measures and safeguards recommended in the EIA/EMP report. Further, the company must undertake socio-economic development activities in the surrounding villages like community development programmes, educational programmes, drinking water supply and health care etc.
- x. As proposed, Rs. 2,107.00 Crores and Rs. 60.00 Crores shall be earmarked towards total capital cost and recurring cost/annum for environmental pollution control measures and judiciously utilized to implement the conditions stipulated by the Ministry of Environment and Forests as well as the State Government. The funds so provided shall not be diverted for any other purpose.
- xi. The Regional Office of this Ministry at Bhubaneswar / CPCB / Jharkhand SPCB will monitor the stipulated conditions. A six monthly compliance report and the monitored data along with statistical interpretation shall be submitted to them regularly.
- xii. The Project Proponent shall inform the public that the project has been accorded environmental clearance by the Ministry and copies of the clearance letter are available with the JSPCB and may also be seen at Website of the Ministry of Environment and Forests at <http://envfor.nic.in>. This shall be advertised within seven days from the date of issue of the clearance letter, at least in two local newspapers that are widely circulated in the region of which one shall be in the vernacular language of the locality concerned and a copy of the same shall be forwarded to the Regional office.
- xiii. A copy of clearance letter shall be sent by the proponent to concerned Panchayat, Zila Parishad / Municipal Corporation, Urban Local Body and the local NGO, if any, from whom suggestions / representations, if any, were received while processing the proposal. The clearance letter shall also be put on the web site of the company by the proponent.
- xiv. The project proponent shall upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and shall update the same periodically. It shall simultaneously be sent to the Regional Office of the MOEF, the respective Zonal Office of CPCB and the JPCB. The criteria pollutant levels namely, SPM, RSPM, SO₂, NO_x (ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the projects shall be monitored and displayed at a convenient location near the main gate of the company in the public domain.

- xv. The project proponent shall also submit six monthly reports on the status of the compliance of the stipulated environmental conditions including results of monitored data (both in hard copies as well as by e-mail) to the Regional Office of MOEF at Bhubaneswar, the respective Zonal Office of CPCB and the JPCB. The Regional Office of this Ministry at Bangalore / CPCB / JPCB shall monitor the stipulated conditions.
- xvi. The environmental statement for each financial year ending 31st March in Form-V as is mandated to be submitted by the project proponent to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be put on the website of the company alongwith the status of compliance of environmental conditions and shall also be sent to the respective Regional Offices of the MOEF by e-mail.
- xvii. Project authorities shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities and the date of commencing the land development work.

6.0. The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.

7.0. The Ministry reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions.

8.0. 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 Act, 1997.

9.0. The above conditions shall 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, Hazardous Wastes (Management and Handling) Rules, 2003 and the Public (Insurance) Liability Act, 1991 along with their amendments and rules.


(Dr. P. B. Rastogi)
Director

Copy to:-

1. The Secretary, Department of Environment, Govt. of Jharkhand, Jharkhand.
2. Chairman, Central Pollution Control Board, Parivesh Bhavan, CBD-cum-Office Complex, East Arjun Nagar, New Delhi – 110 032.
3. Chairman, Jharkhand Pollution Control Board, Jharkhand, Town Administrative Building, H.E.C., Dhruwa, Raanchi - 824004, Jharkhand.
- ✓ 4. The Chief Conservator of Forests (Eastern), Regional Office (EZ), A/3, Chandrasekharapur, Bhuvaneswar - 751 023, Orissa.
5. Adviser (IA-II), Ministry of Environment and Forests, Paryavaran Bhavan, CGO Complex, New Delhi.
6. Monitoring Cell, Ministry of Environment and Forests, Paryavaran Bhavan, CGO Complex, New Delhi.
7. Monitoring Cell
8. Guard File.
9. Record File.


(Dr. P. B. Rastogi)
Director