Compliance Status of Environmental Clearance of Expansion of Crude Steel Plant (5.0 MTPA to 6.8 MTPA) at Tata Steel Works, Jamshedpur, District East Shinghbhum, Jharkhand vide MoEF Letter no J-11011/317/2006.IA.II (I) dated April 16, 2007

Sl.No.	Condition	Compliance Status
	Specific Conditions	
i.	The gaseous emissions from various process units shall conform to the load/mass based standards notified by this Ministry on 11th 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. 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.	All the existing and new units are provided with adequate pollution control equipment (PCEs) to ensure the emission levels within specific legal requirement. Please refer **Annexure – I** for monitoring reports for April 2014 - September 2014. Alarms and interlocking wherever possible have been provided in the units to indicate emission level.
ii.	Efforts shall be made to reduce RSPM levels in the ambient air and a time bound action plan shall be submitted. On-line stack monitoring facilities for all the stacks including new sinter plant and power house and sufficient air pollution control devices shall be provided to keep the emission levels below 50 mg/Nm^3 and reports submitted to the Jharkhand SPCB and CPCB.	• We have submitted Action Plan and status update on reduction of RSPM Level in Ambient Air vide our letter no. EMD/C-33/124/13 dated June 22, 2013. • Online stacks monitoring systems in the major stacks have been installed. • All the new Air Pollution Control devices have been commissioned with design emission levels of below 50 mg/Nm^3 of particulate matter from stacks within Works. • Monitoring reports are being submitted regularly.
iii.	In-plant control measures for checking fugitive emissions from all the vulnerable sources shall be provided. Dust extraction system and dry fogging system will be provided to control air emissions at material transfer and sizing plants. ESP and bag filters shall be provided wherever required to keep the	The status of control measures in the units are as follows. • Installed ESPs and Bag Houses in the "H" Blast Furnace, Sinter Plant#4. • Dust control systems, dry fog system and water spraying have been provided at the material handling systems.

	emission levels below 50 mg/Nm^3 particularly in 'H'-BF stock house, BF cast houses and Sinter stock house. Low NO burners will be installed to control NO emissions. Gas cleaning plant shall be provided to BF. Further, specific measures like water sprinkling shall be carried out and fugitive emissions shall be controlled, regularly monitored and records maintained.	• Low NOx burners have been installed. The following control measures are in place to check the fugitive emissions. • Bag Houses, water-spraying arrangements are provided at all potential dust generating points. • The boilers at Power House#3 have been converted to gas firing from coal. This has contributed significantly in the reduction of the fugitive emissions. • Regular cleaning of shop floor area with the help of mechanical dust collector, road sweepers, is being done. • Monitoring of fugitive emission is being done at the regular intervals and records kept. Please refer **Annexure – I** for monitoring reports for April 2014 - September 2014.
iv.	Gaseous emission levels including secondary fugitive emissions shall be controlled within the latest permissible limits issued by the Ministry and regularly monitored. Guidelines / Code of Practice issued by the CPCB in this regard shall be followed.	All the Steel Melting Shops (LD#1, LD#2 and LD#3) have been provided with Electrostatic Precipitators (ESP) as secondary emission control system.
v.	Total water requirement from River Subarnarekha shall not exceed 3,91,800 m^3/day as per the permission accorded by the State Govt. No ground water shall be used. GCP wastewater treatment plants for 'H'-BF and Billet Caster no. 3 shall be provided. The treated process effluent shall be recycled and re-used in cooling tower as well as for green belt development. Cooling tower blow down shall	• Water taken from Subarnarekha River for steel making as make-up water is within the recommended capacity by State Government. • Installations of closed loop system for the new units have been commissioned. The treated water is recycled for various processes within the plant.

	be used for granulation, coke quenching, dust suppression and other non-product uses. Treated effluent discharge into the streams/river shall not exceed 37,000 m^3/day. Domestic effluent shall be treated in Sewage Treatment Plant (STP).	• The discharge quantity from the works drain is kept within the prescribed standard. • Sewage from the Jamshedpur Town is treated in Sewage Treatment Plants (2 nos.). BOD and Suspended Solids are within the prescribed limits.
vi.	Continuous monitoring of Total Organic Compounds (TOC) shall be done at the outlet of ETP (BOD plant).	Online TOC analyzer has been installed for continuous monitoring at BOD Plant Outlet.
vii.	Ground water monitoring around the solid waste disposal site / secured landfill (SLF) shall be carried out regularly and report submitted to the Ministry's Regional Office at Bhubaneswar, CPCB and OPCB.	We are regularly conducting the ground water monitoring around the waste disposal site at five locations. Analysis report submitted to JSPCB indicates that concentration of heavy meals is well within the prescribed limits. Please refer **Annexure – I** for monitoring reports for April 2014 - September 2014.
viii.	Solid wastes shall be reused in the cement plant, road construction and railway ballast. BF slag shall be granulated in cast house and used for cement making. LD slag shall be processed in Waste Recycling Plant and subsequently recycled in the BF LD sludge and sinter plants. Remaining slag shall be used for road construction and filling the low-lying areas. The Chrome sludge in the form of Cr^{+3} shall be dumped only in the secured landfill located within the plant premises and proper disposal of Chrome sludge shall be ensured. Oily waste shall be burnt in the incinerator.	• BF slag from H Blast Furnace is granulated in cast house and is used for cement making. • LD slag is processed at the modernized Waste Recycling Plant to recover the metallic portion and reuse at Sinter Plants. • The chrome sludge from CRM Plant is stored in secured land fill within the Works. • Oily sludge is burnt in the Incinerator.
ix.	Fly ash shall be used in cement plants. Bottom ash shall be disposed off in a suitably	All boilers at Tata Steel are capable to fire gas. This has resulted in considerable

	designed landfill as per CPCB guidelines to prevent leaching to the sub-soil and underground aquifer.	reduction in generation of fly ash. To deal with emergency situations; a small amount of coal firing is done occasionally in boiler # 4 at PH#4. Fly ash generated from Power House#4, which is less in quantum, is stored in Bara Ash Pond.
x.	Practice of disposal of solid wastes along the river shall be immediately stopped and efforts shall be made to remove the solid waste from the banks of the river.	No disposal of solid waste along the river bank from Tata Steel.
xi.	A time bound action plan should be submitted to reduce solid waste, its proper utilization and disposal. Action plan for the reclamation of Jugsalai Muck disposal site submitted to the Ministry shall be implemented in a time bound manner.	An action plan for Solid waste management has been submitted to JSPCB vides our letter no. EMD/C-02/460/11 dated December 16, 2011. We have also submitted road map regarding future generation and the disposal of solid waste vide our letter no. EMD/C-33/124/13 dated June 22, 2013. Tata Steel has taken a number of steps to improve the solid waste utilization. For the period during April 2014 - September 2014, the solid waste utilization was 92%. Various actions have been already planned to improve the solid waste utilization further. Phase – II of reclamation work at Jugsalai Muck disposal site is under progress. We have submitted the updated status of Jugsalai Muck Dump (JMD) Eco-Restoration & Reclamation Plan vide our letter no. EMD/C-33/124/13 dated June 22, 2013.
xii.	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	• Rainwater is collected from the new facilities through surface drain into Cooling Pond. The rainwater thus collected is recycled in the plant for reuse. • The rainwater harvesting

	table.	structures at four buildings within and outside the plant have been completed.
xiii.	Green belt shall be developed in 1157.7 ha (33 %) out of total 4391.85 ha. within and around the plant premises as per the CPCB guidelines in consultation with DFO.	• We have planted approx. 21085 saplings during April 2014 - September 2014inside the works and Jugsalai Muck Dump area. Every year plantation done in available space. • Almost all vacant space inside Works is covered with plantation.
xiv.	Occupational Health Surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.	The health surveillance is being done as per Factory Act. Records are maintained at the Occupational Health Services.
xv.	Recommendations made in the Corporate Responsibility for Environment Conservation (CREP) issued for the steel plants shall be implemented.	CREP recommendations have been implemented.
	General Conditions	
i.	The project authorities must strictly adhere to the stipulations made by the Jharkhand Pollution Control Board (Jharkhand SPCB) and the State Government	All the relevant stipulations made by JSPCB and State Government are being complied.
ii.	No further expansion or modifications in the plant should be carried out without prior approval of the Ministry of Environment and Forests.	We have received Environmental Clearance for the expansion from 6.8 MTPA to 9.7 MTPA Steel Plant vide MoEF letter no. J-11011/691/2007-IA. (II) dated May 11, 2010. Necessary Environment Clearance will be taken before any further expansion or modification.
iii.	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, SO_2 and NO_X are anticipated in	Four Ambient Air Quality Monitoring Stations have been installed. We submit monitoring data on ambient air quality and stack emission regularly to JSPCB/MoEF/CPCB. Please refer **Annexure – I** for

	consultation with the Jharkhand SPCB. Data on ambient air quality and stack emission should be regularly submitted to this Ministry including its Regional Office at Bhopal and the Jharkhand SPCB/CPCB once in six months.	monitoring reports for April 2014 - September 2014.
iv.	Industrial wastewater shall be properly collected, treated so as to conform to the standards prescribed under GSR 422 (E) dated 11th May, 1993 and 31st December, 1993 or as amended form time to time. The treated wastewater shall be utilized for plantation purpose.	Wastewater is being treated in the Effluent treatment plants of respective units for meeting the standards. Treated wastewater is used for plantations and road dust suppression. Most of treated wastewater is recycled back to the system.
v.	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).	The control measures such as silencers, enclosures, hoods, rubber pads, have been provided at the appropriate places on all sources of noise generation in the plant. The ambient noise level is being monitored. Please refer **Annexure – I** for monitoring reports for April 2014 - September 2014.
vi.	The project proponent shall also comply with all the environmental protection measures and safeguards recommended in the EIA and EMP report. Further, the company must undertake socio-economic development activities in the surrounding villages like community development programs, educational programs, drinking water supply and health care etc.	• Implementation of protection measures as indicated in the REIA for 6.8 MTPA plant units have been complied which includes ESPs, bag filters, on-line slag granulation system for blast furnaces and waste water treatment plants etc. • Socio economic development activities are regularly undertaken in and around Jamshedpur through the two agencies namely, Tata Steel Rural Development Society and Tata Steel Community Development and Welfare

		Services Centers. The development activities undertaken in the surrounding community are need based and are in the field of health care, education, mid-day meal at schools, sports and culture, self-employment, drinking water, rural electrification, etc. Tata Steel also facilitate the Institutes like R D Tata Technical Institute, Tata Football Academy, Tata Archery Foundation, etc. which encourages the local talent to develop themselves and participate at National and International levels.
vii.	As mentioned in the EIA and EMP, ₹259.00 Crores and ₹18.5 Crores earmarked towards the capital cost and recurring cost/annum for environmental pollution control measures shall be 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.	The funds for capital investment on pollution control equipment are not diverted. More than ₹700 Crores has been invested in the pollution abatement measures including commissioning of new and upgradation of existing pollution control equipment.
viii.	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.	Six monthly compliance reports and the monitored data are being submitted regularly. Please refer **Annexure – I** for monitoring reports for April 2014 - September 2014.
ix.	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	The Notice has been advertised in two local newspapers *viz.* Uditvani (Hindi) and Avenue Mail (English) on April 21, 2007 and communication to this effect was also sent to the MoEF vide our

	with the OSPCB/Committee 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.	letter no. EMD/C-32/2118/07 dated August 18, 2007.
x.	Project authorities should 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.	Complied