



The Chief Conservator of Forests (Central)
Eastern Regional Office
Ministry of Environment & Forests
Government of India
A/3, Chandrashekharapur,
Bhubaneswar – 751 023, Odisha

KPO/Env/C-05/ 62 /2014
29th November 2014.

Dear Sir,

Sub.: Six monthly Compliance Report for April '14 to Sep '14 for Environmental Clearances in respect of 6.0 MTPA Integrated Steel Plant of M/s. Tata Steel at Kalinganagar Industrial Complex, Duburi, Dist. Jajpur, Odisha.

Ref.: EC Granted by MoEF vide Letter No. J-11011/7/2006-IA-II(I) dated 7.11.2006.
: Amendment in EC granted by MoEF vide Letter No. J-11011/7/2006-IA-II(I) dated 10.12.2012

Kindly find enclosed Six Monthly Compliance Report for the period from April 2014 to September 2014 for the conditions stipulated in Environmental Clearance including amendment in EC to 6.0 MTPA Integrated Steel Plant of Tata Steel Limited at Duburi, Dist. Jajpur, Odisha for your kind considerations.

Copy of the compliance report is also being sent in soft format through e-mail (mef@ori.nic.in) for your kind perusal.

We trust the information furnished is in line with your requirement.

Thanking you,

Yours faithfully,

U S Parkhi
Head, Environment, KPO

Encl. a/a

Copy to MS, OSPCB, Bhubaneswar / CPCB Kolkata

TATA STEEL LIMITED

Odisha Project Kalinganagar Industrial Complex, Duburi, Jajpur, Odisha Pin 755 026 India
Registered office Bombay House 24 Homi Mody Street Mumbai 400 001
Tel. 91-22 66658232, Fax. 91-22 66657724
Corporate Identity Number L27100MH1907PLC000260
Website: www.tatasteel.com

Six Monthly Environment Compliance Report

April 2014 to September 2014

For
Integrated Steel Plant Project of Tata Steel
at Dubury, Dist. Jajpur, Odisha



Bag Filter installed for Coke Oven Charging Car



Sulphur Recovery installed at ByProduct plant

Six Monthly Compliance Status (April '14 to Sep '14) of Environmental Clearance including Amendment in EC for 6.0 MTPA Integrated Steel Plant at Kalinganagar, Duburi, District-Jajpur, Odisha by M/s Tata Steel Ltd vide MoEF Letter No. EC No-J-11011/7/2006-IA.II(I) dtd. 7th Nov 2006 and 10th Oct 2012

	Additional Conditions vide letter dated 10.10.2012	Status as on 30.09.2014
i)	The company shall install low NOx burners to mitigate NOx emissions from captive power plant.	8 Nos of Low NOx burners have been installed for each boiler in captive power plant to control NOx emissions.
ii)	Data on ambient air, stack and fugitive emission shall be regularly submitted online to Ministry's Regional Office at Bhubaneswar and Central Pollution Control Board as well as hard copy once in six months and display data on PM10, SO2 and NOx outside the premises at the appropriate place for the general public.	<ul style="list-style-type: none"> • At present, most of the units are in very advance stage of construction and some units are ready for commissioning. • Latest AAQ data which is being monitored in & around the site on 24 hourly basis at 7 locations is summarized as follows: <ul style="list-style-type: none"> PM₁₀ : 31 to 52 µg/m³ PM_{2.5} : 18 to 29 µg/m³ SO₂ : 8 to 11 µg/m³ NO_x : 11 to 12 µg/m³ CO : < 0.25 mg/m³ • AAQ data is displayed at the entrance of the project site for information to general public in non-electronic form. • Out of 7, 4 No.s of Online Continuous AAQ stations have been planned in Phase -I of the project.
iii)	The National Ambient Air Quality Standard issued by the Ministry vide GSR No.826(E) dated 16th November, 2009 shall be followed.	Air Quality standards conforming to NAAQS vide GSR 826 (E) has been referred for air quality monitoring and review.
iv)	The project proponent shall also submit six monthly reports on the status of the compliances of the stipulated environmental conditions including results of monitored data (both in hard copies as well as by e-mail) to the respective Regional Office of MoEF, the respective Zonal Office of CPCB and SPCB. The Regional Office of the Ministry at Bhubaneswar/CPCB/SPCB shall monitor the stipulated conditions	<ul style="list-style-type: none"> • Six monthly compliance report for the period Oct '13 to March '14 was submitted to MoEF, CPCB as well as OSPCB regional office both in hard as well as soft copy on 30th May 2014.
v)	The environmental statement for each financial year ending 31 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 along with the status of compliances of environmental conditions and shall also be sent to the respective Regional Offices of the MoEF by e-mail.	<ul style="list-style-type: none"> • Environment Statement for the year 2013 -14 was submitted to OSPCB on 2nd Sept 2013. • Status of Compliance of EC conditions have also been updated on company's website. (www.tatasteelindia.com)
vi)	The company shall submit within three months their policy towards Corporate Environment Responsibility which should inter-alia address (i) Standard operating process/ procedure to being into focus any infringement/ deviation/ violation of the environmental or forests norms/ conditions, (ii) Hierarchical system or Administrative order of the Company to deal with environmental issues and ensuring compliances to the environmental clearances conditions and (iii) system of reporting of noncompliance/ violation of environmental norms to the Board of Directors of the Company and/or shareholders.	<ul style="list-style-type: none"> • Corporate Environmental Policy was submitted to MoEF, New Delhi vide our letter no. TSL/DEL/805/2013 dated 8.1.2013. • Copy of the same was also submitted to MoEF, Bhubaneswar Office.

Six Monthly Compliance Status (April '14 to Sep '14) of Environmental Clearance including Amendment in EC for 6.0 MTPA Integrated Steel Plant at Kalinganagar, Duburi, District-Jajpur, Odisha by M/s Tata Steel Ltd vide MoEF Letter No. EC No-J-11011/7/2006-IA.II(I) dtd. 7th Nov 2006 and 10th Oct 2012

A	Specific Conditions as per EC dated 7.11.2006	Status as on 30.09.2014
i)	<p>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 Boards 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. On-line continuous monitoring system shall be installed in stacks to monitor SPM and interlocking facilities shall be provided so that process can be automatically stopped in case emission level exceeds the limit. Nox burners shall be installed to control NOx levels. VOCs from the coke oven shall be monitored and controlled as per CPCB guidelines. The new standards prescribed by the CPCB for coke oven plants shall be strictly followed.</p>	<ul style="list-style-type: none"> • Process units such as Coke Plant, Sinter Plant, Blast Furnaces, SMSs, Mills have been designed conforming to the load/mass standards notified by the Ministry in order to have the gaseous emissions under control and below the prescribed limits. • Online stack monitoring systems are being installed for all major stacks to monitor SPM levels. • VOC from coke plant will be controlled by On-main charging by HPLA, Hydraulic doors, Door sealing, Door frame cleaner, etc. as per CPCB guidelines. • New standards prescribed by CPCB for coke plant shall be strictly followed.
ii)	<p>In-plant control measures for checking fugitive emissions from all the vulnerable sources like coke oven area, Sinter Plant, BF case house, BF stack house, and BOF shop etc. shall be provided. Further, specific measures like water sprinkling and dry fogging (DF) shall be carried out at the stock piles of raw materials, stacker reclaimer, conveyor transfer points and vibrating screens etc. Dust extraction system and bag filter shall be provided for room air cleaning such as sinter plant stock house, BF stock house and BF cast house, BOF shop and Ferro-alloys handling area in steel melting shop etc. Fume extraction system in steel refining units shall also be provided. Centralized de-dusting system i.e. collection of fugitive emissions through suction hood and subsequent treatment through bag filter or any other device and finally emitted through a stack of appropriately designed and height conforming to the standards for induction furnaces in the industry shall be provided. Fugitive emissions shall be controlled, regularly monitored and records maintained.</p>	<ul style="list-style-type: none"> • During construction phase: <ul style="list-style-type: none"> ○ Water sprinkling on construction roads is being done by truck mounted water tankers to control dust emission. ○ Speed limits are enforced for movement of vehicles at the site ○ Most of the main roads within the plant site are partially metaled. • Fugitive emission controls at all the vulnerable points have been considered by dust suppression, dry-got, Dust/ Fume extractions systems, etc. as applicable in RMHS, Sinter Plant, Coke Plant, BF Stock & Cast Houses, BOF Shops, Lime Plant, etc. • Minimum Stack heights have been considered as per guidelines for dispersion.
iii)	<p>ESP shall be provided to sinter plant and blast furnace. New standards prescribed by the CPCB for coke oven shall be strictly followed. The Company shall install Waste Heat Recovery Boilers (WHRB) to recover the waste heat and generate power from the steam produced by the WHRB. The particulate emissions from the WHRB shall be controlled by installation of ESP as per CPCB specification and particulate emissions shall not exceed 50mg/Nm³. Further, the company shall install bag filter, After Burner Chamber (ABC), suction hood, dust extraction device and fume extraction system to control gaseous emissions from the WHRB.</p>	<ul style="list-style-type: none"> • ESPs with higher efficiency have been provided to Sinter plants, Blast Furnaces etc. • Coke oven plant is designed to comply with new standards prescribed by CPCB for Coke Oven. • Waste Heat Recovery Boilers have been installed to recover waste heat which in turn shall be used for in-house power generation. • Pollution Control Systems have been designed as per CPCB guidelines to control PM emissions below 50 mg/Nm³. • Particulate emissions from the will be less than 50 mg/Nm³.

Six Monthly Compliance Status (April '14 to Sep '14) of Environmental Clearance including Amendment in EC for 6.0 MTPA Integrated Steel Plant at Kalinganagar, Duburi, District-Jajpur, Odisha by M/s Tata Steel Ltd vide MoEF Letter No. EC No-J-11011/7/2006-IA.II(I) dtd. 7th Nov 2006 and 10th Oct 2012

	Specific Conditions as per EC dated 7.11.2006	Status as on 30.09.2014
iv.	<p>Total requirement of the water from Brahamani /Kharsua river shall not exceed 26.5 MGD. No ground water shall be drawn and used for the plant. The effluent quantity into the industrial drain leading to the Gonda Nalla shall not exceed 92m³/hr and shall conform to the prescribed standards. Ammonia, phenol and cyanide in the effluent should be treated separately and discharged only after meeting the norms prescribed by the OSPCB/CPCB/Ministry under E(P) Act. Cyanide shall meet the standard of 0.2 ppm. TDS in the effluent discharged shall not be more than 2,100 mg/l. The domestic wastewater after treatment in STP shall be used for green belt development.</p>	<ul style="list-style-type: none"> • Make up water requirement for the plant is <26.5 MGD. Present water consumption during construction is around 1 MGD. • Total effluent discharge envisaged is < 92m³/hr and it will meet the standards prescribed by MoEF/ CPCB/OSPCB before discharge into Gonda Nalla. • Ammonia, Phenol, Cyanide from Coke Oven plant shall be treated separately in BOD plant meant for Coke Plant. • Domestic wastewater shall be treated in the centralized STP and treated water shall be utilized for plantation purposes. • No groundwater shall be used for plant operations.
v.	<p>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.</p>	<ul style="list-style-type: none"> • Base line data regarding ground water level & quality is available. • Ground water monitoring will be done post operation of secured landfill. • Reports shall be generated on regular basis and submitted to RO, OSPCB & CPCB.
vi.	<p>BF slag shall be sold to the cement manufacturers after granulation. Non-granulated BF slag shall be used in road making. BOF slag shall not be dumped anywhere except used for making cement and road etc. proposed in EIA/EMP. Ammonia and tar shall be recovered and remaining solid waste shall be burnt. Gas cleaning plant sludge and mill scales shall be reused in the sinter plant. Char generated shall be used in FBC boiler. The kiln accretions shall be utilized for filling low lying areas. The entire quantity of fly ash generated during the process shall be utilized for making brick. ESP fly ash shall be made available to the cement plants and brick making plants whereas bottom ash shall be disposed off in a suitably designed landfill as per CPCB guidelines to prevent leaching to the sub-soil and underground aquifer.</p>	<ul style="list-style-type: none"> • BF slag online granulation process is being installed as well as wagon loading facilities is being developed for transporting slag to cement units. • Non-granulated BF slag & BOF slag shall be used for road making. • In COBPP, we have provision of Tar and Sulphur recovery, which will be sold as by-products. • Gas cleaning plant is being completed in BF & SMS. • Recycling of mill scales from mills to sinter plant is also provided.
vii.	<p>The company shall develop surface water harvesting structures to harvest the rain water for utilization in the lean season besides recharging the ground water table.</p>	<ul style="list-style-type: none"> • Surface run-off during the monsoon have been collected and stored in the reservoirs constructed under rain water harvesting schemes. • Storm water pond with necessary pumping arrangement of storm water in raw water system is completed. • Rain water harvesting structures are being planned in RCC buildings as well as in low lying areas.

Six Monthly Compliance Status (April '14 to Sep '14) of Environmental Clearance including Amendment in EC for 6.0 MTPA Integrated Steel Plant at Kalinganagar, Duburi, District-Jajpur, Odisha by M/s Tata Steel Ltd vide MoEF Letter No. EC No-J-11011/7/2006-IA.II(I) dtd. 7th Nov 2006 and 10th Oct 2012

	Specific Conditions as per EC dated 7.11.2006	Status as on 30.09.2014
viii.	Green belt shall be developed in at least 33% area within and around the plant premises as per the CPCB guidelines in consultation with DFO.	<ul style="list-style-type: none"> Green Belt cover is being continuously developed within and around the project site, rehabilitation colonies. Details of tree saplings planted; 2009-10 : 792 nos. 2012-13 : 12622 nos. 2010-11: 1130 nos 2013-14 : 29888 nos 2011-12: 4800 nos. 2014-15 : 22490 nos. (till sep'14) Avenue plantation is being taken up at Jajpur town, Kalinganagar and Bhubaneswar.
ix.	Occupational Health Surveillance of the workers shall be done on a regular basis and records maintained as per the factories Act.	<ul style="list-style-type: none"> Periodic medical check-up for workers are being done and records for the same are maintained as per the factories Act.
x.	Recommendations made in the CREP guidelines issued for the steel plants shall be implemented.	<ul style="list-style-type: none"> CREP recommendations are being implemented.
xi.	Rehabilitation and Resettlement plan shall be implemented as per the revised R&R policy and in collaboration with the State Government in a time bound manner and report submitted to the Ministry, its Regional Office at Bhubaneshwar and OPCB.	<ul style="list-style-type: none"> 1013 out of 1234 families have been rehabilitated within the framework of "Tata Steel parivaar" concept as per the revised R & R policy of Odisha Govt. in consultation with the local administration.
xii.	The environmental clearance for the mining project and forest clearance for the forest land involved in the mining project shall be obtained from the Ministry prior to operation of the integrated Steel Plant. In case, environmental clearance for the mining proposal from State Govt/Govt. of India is not available, Ministry shall be regularly informed about the source of ore and coal.	<ul style="list-style-type: none"> The matter is being pursued with State and Central Government. Source of ore and coal will be intimated to all concerned before the start of operation.
B.	General Conditions as per EC dated 7.11.2006	Status as on 30.09.2014
i.	The project authorities must strictly adhere to the stipulations made by the Orissa Pollution Control Board (OPCB) and the State Government	<ul style="list-style-type: none"> Stipulation as per OSPCB will be adhered to during project execution and subsequent operation phases.
ii.	No further expansion or modification in the plant should be carried out without prior approval of the Ministry of Environment and Forests.	<ul style="list-style-type: none"> Amendment in the Environmental Clearance was granted by MoEF on 10.10.2012 vide letter no. J-11011/7/2006-IA.II.(I).
iii.	At least four ambient air quality-monitoring stations should be established in the downward direction as well as where maximum ground level concentration of SPM, SO ₂ and NO _x are anticipated in consultation with the OPCB. Data on ambient air quality and stack emission should be regularly submitted to this Ministry including its Regional Office at Bhopal and the OPCB/CPCB once in six months.	<ul style="list-style-type: none"> Latest AAQ data as monitored in and around the site on 24 hourly basis at more than four locations is as follows; PM₁₀ : 31 to 52 µg/m³ PM_{2.5} : 18 to 29 µg/m³ SO₂ : 8 to 11 µg/m³ NO_x : 11 to 12 µg/m³ CO : < 0.25 mg/m³
iv.	Industrial waste water shall be properly collected, treated so as to conform to the standards prescribed under GSR 422 dated 19 th May, 1993 and 31 st December, 1993 or as amended from time to time. The treated wastewater shall be utilized for plantation purpose.	<ul style="list-style-type: none"> Individual units such as Coke plant, HSM, SMS shall have their own effluent treatment plants for recovery & reuse. Excess treated water from individual treatment plant will be sent to Central Effluent Treatment Plant (CETP). CETP is envisaged to have tertiary treatment for recycle and re-use of treated water. Treated wastewater will be also be used for plantation, dust suppression & other uses.

Six Monthly Compliance Status (April '14 to Sep '14) of Environmental Clearance including Amendment in EC for 6.0 MTPA Integrated Steel Plant at Kalinganagar, Duburi, District-Jajpur, Odisha by M/s Tata Steel Ltd vide MoEF Letter No. EC No-J-11011/7/2006-IA.II(I) dtd. 7th Nov 2006 and 10th Oct 2012

	General Conditions as per EC dated 7.11.2006	Status as on 30.09.2014									
v.	The overall noise levels in and around the plant area shall be kept well within the standards (85dBA) 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).	<ul style="list-style-type: none"> • Low noise prone rotary equipment and vibration dampening has been one of the design aspects as a control measure for noise pollution. • Provision of acoustic hoods, silencers in steam ejectors as well as sound proof enclosures have also been made at various internal sites. • Ambient Noise levels are measured at various locations and noise levels observed during the reporting period are < 57 dBA in day time < 50 dBA in night time. 									
vi.	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.	<ul style="list-style-type: none"> • Environmental protection measures as proposed in the EIA and EMP report is being implemented. • Various socio-economic developmental activities in the area of Health, Women Empowerment, Education, Sports & culture, Infrastructure development etc. are on-going in 28 villages surrounding the project site. • Recently, 5 medical mobile units have been added for immediate treatment to the local people. 									
vii.	The project authorities shall utilize Rs.1,525.00 Crores earmarked for the environmental pollution control measures judiciously to implement the conditions stipulated by the Ministry of Environment and Forests as well as the State Government alongwith the implementation schedule for all the conditions stipulated herein. The funds so provided shall not be diverted for any other purpose.	Funds earmarked for the environmental pollution control measures are being utilized only for the said purpose.									
viii.	The Regional Office of this Ministry at Bhopal/CPCB/OPCB 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 are being sent regularly. Last Report Sent on 30.05.2014									
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 with the OPCB/Committee and may also be seen at Website of the Ministry of Environmental 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.	Complied. Paper advertisement Details: <table border="0"> <thead> <tr> <th><u>News paper</u></th> <th><u>Language</u></th> <th><u>Date</u></th> </tr> </thead> <tbody> <tr> <td>New Indian Express</td> <td>English</td> <td>13.06.06</td> </tr> <tr> <td>Sambad</td> <td>Odia</td> <td>13.06.06</td> </tr> </tbody> </table>	<u>News paper</u>	<u>Language</u>	<u>Date</u>	New Indian Express	English	13.06.06	Sambad	Odia	13.06.06
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New Indian Express	English	13.06.06									
Sambad	Odia	13.06.06									
x	Project authorities should inform 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.									

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