



The Additional DG of Forests (Central)  
Eastern Regional Office  
Ministry Of Environment, Forests & Climate Change  
Government Of India  
A3, Chandrashekhar,  
Bhubaneswar -751023, Odisha

HMC/HAL/MoEF-ENV/03/FY23  
30<sup>th</sup> NOV 2022

Dear Sir,

**Sub:** Six Monthly Compliance report for Apr'2022 to Sep'2022 for Environmental clearances in respect of Tata Steel Limited, Hooghly Met Coke Division, Haldia.

**Ref:** 1. MoEF & CC EC Letter No. F. No. J11011//284/07 – IA II dated 29<sup>th</sup> January' 2008 of Tata Steel Ltd, Hooghly Met Coke Division, Haldia.  
2. MoEF & CC EC Letter No. J-11011//284/2007 – IA II (I) dated 23<sup>rd</sup> February' 2017 of Tata Steel Limited, Hooghly Met Coke Division, Haldia.

Kindly find enclosed Six-Monthly Compliance Report for the period from April'2022 to September'2022 for the condition stipulated in Environmental Clearance granted to Tata Steel Limited, Hooghly Met Coke Division, Haldia for your kind consideration.

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

Thanking You,  
Yours faithfully,  
Tata Steel Ltd.

Mantu Patra,  
General Manager  
Hooghly Met Coke Division, Haldia

Encl: a/a

Copy to: IRO, Kolkata  
Regional Direction, FSI

**TATA STEEL LIMITED**  
**Hooghly Met Coke Division**

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**Compliance to conditions stipulated in the Environmental Clearance for Coke Oven Plant (1.6 MTPA) & WHRB (120 MW) at Haldia, East Midnapur, West Bengal from MoEF, New Delhi vide letter No. F. No. J-11011//284/07- IA II (I) dated 29<sup>th</sup> January 2008**

<b>S. N</b>	<b>Condition</b>	<b>Compliance Status</b>
<b>A. Specific Conditions:</b>		
(i)	Proper and full utilization of coke oven gases in power plant using heat recovery steam generators (WHRB) shall be ensured and no flue gas shall be discharged into the air.	The coke oven gas is 100% utilized in power plant using heat recovery steam generators (WHRB) and no flue gas is discharged into the air.
(ii)	The prescribed emission standards for coke oven plants as notified vide notification no. GSR 46 (E) dated 3rd February 2006 shall be complied with.	<ul style="list-style-type: none"> <li>• The unit is established after the notification of 2006 was published, and as per notification no. GSR 46(E) the Non recovery / waste heat recovery technology has been adopted for coke making.</li> <li>• The coal is charged inside the oven under negative pressure for 70 hours in a temp of 950 – 1100°C; as a result, the volatiles evolved during coal carbonization is combusted completely in presence of controlled quantity of air and therefore, emission of particulate matter is very low. The stack height of 70 Mt from Ground Level is provided for proper dispersion of pollutants. The emission from all stacks are much less than 50mg/Nm<sup>3</sup> of SPM • WHRB used as PCU.</li> <li>• The emission standard specified in the Environmental Clearance, under Specific</li> <li>• condition (iii) for stack emission has been followed.</li> <li>• Online continuous stack monitoring system is also installed in all 8 chimneys.</li> <li>• Regular stack monitoring is done by registered third party also. Reports enclosed as <b>ANNEXURE - 1</b></li> </ul>
(iii)	Continuous stack monitoring facilities for all the major stacks and adequate air pollution control systems shall be provided to control air emissions within 100 mg/Nm <sup>3</sup> and reports submitted to the Ministry's Regional Office at the Bhubaneswar, WBPCB & CPCB.	<ul style="list-style-type: none"> <li>• On-line Continuous stack monitoring equipment have been installed at all the eight (08) Nos. of stacks.</li> <li>• Manual stack monitoring is also conducted on regular basis through registered third party.</li> <li>• The emissions are found to be within stipulated norms.</li> <li>• The Stack emission (avg.) report for last six month (Apr'22 -Sep'22) is enclosed as <b>Annexure- 2.</b></li> </ul>

**Compliance to conditions stipulated in the Environmental Clearance Order for Coke Oven Plant (1.6 MTPA) & WHRB (120 MW) at Haldia, East Midnapur, West Bengal from MoEF, New Delhi vide letter No. F. No. J-11011//284/07- IA II (I) dated 29<sup>th</sup> January 2008**

S. N	Condition	Compliance Status
<b>A. Specific Conditions:</b>		
(iv)	Fugitive emissions from coal handling plant shall be controlled by sprinkling water. Dry fogging system shall be installed at all the transfer points. In-plant control measures like bag filters, dedusting and dust suppression system shall be provided to control fugitive emissions from all the vulnerable sources including material handling areas and material transfer points	<ul style="list-style-type: none"> <li>• To control the fugitive emissions from coal handling plant, water sprinkling arrangements are made.</li> <li>• Dust Suppression System with Dry Fogging (DF) are in operation at all the coal transfer points, in Wagon Tippler and Coal crusher unit. Regular Maintenance are done to maintain effectiveness of the system.</li> <li>• To prevent fugitive dusts from coal heaps, 30 numbers of “Rain Gun Water Sprinklers” have been installed in the coal yard and, boundary wall (~ 5 mtr height)</li> <li>• More than 2.5 Kilometres of the road inside the material handling area (Coal / Coke / Tippler area) has been paved to reduce dust generation.</li> <li>• The entire coal yard and coke yard have been concreted to prevent dust generation.</li> <li>• Water sprinkling is done through mobile tankers with water sprinkling arrangement on roads within factory and in the periphery area.</li> <li>• Mechanised Mobile Vacuum Cleaning system is used regularly for arresting the fugitive emission.</li> <li>• Stationary vacuum cleaning machine has been provided at Wagon Tippler to prevent fugitive dusts.</li> </ul>
(v)	Secondary fugitive emissions shall be controlled within the prescribed limits, regularly monitored and records maintained. Guidelines / Code of Practice issued by the CPCB in this regard shall be followed	<ul style="list-style-type: none"> <li>• The ovens work under the negative pressure so secondary fugitive emissions are negligible in this non recovery coke making technology.</li> <li>• CPCB guidelines for non-recovery coke oven plant is followed.</li> <li>• Proper sealing arrangements has been provided in the oven doors and flue gas pipes/valves so that fugitive emission from battery can be restricted.</li> <li>• Gaseous emissions are monitored regularly.</li> </ul>
vi)	Total requirement of the water from Haldia Development Authority for coke oven and WHRB shall not exceed 5,300 m <sup>3</sup> /day and 13,750 m <sup>3</sup> /day respectively. The effluent shall be treated in the effluent treatment plant and all the treated wastewaters shall be recycled and reused either in the process or for dust suppression or green belt development. No wastewater shall be discharged outside the factory	<p>The average water taken from HDA as make-up water during Apr ‘22 to Sep ‘22 was 1826 m<sup>3</sup>/day approximately for coke oven (Tata Steel, Hooghly Met coke) and 6831 m<sup>3</sup>/day approximately for WHRB (Tata Power) which is within the permissible limit granted by the MOEF. The detail water consumption report is enclosed as <b>ANNEXURE 3</b>.</p> <p>The processed water is recycled and used for coke quenching and green belt development within the plant.</p>

**Compliance to conditions stipulated in the Environmental Clearance for Coke Oven Plant (1.6 MTPA) & WHRB (120 MW) at Haldia, East Midnapur, West Bengal from MoEF, New Delhi vide letter No. F. No. J-11011//284/07- IA II (I) dated 29<sup>th</sup> January 2008**

<b>S. N</b>	<b>Condition</b>	<b>Compliance Status</b>
<b>A. Specific Conditions:</b>		
	premises and 'Zero' discharge shall be adopted. Domestic effluent shall be treated in sewage treatment plant (STP) and disposed off as per norms laid down by Haldia Municipal Corporation.	<p>Initiatives taken for achieving Zero Discharge are:</p> <ul style="list-style-type: none"> <li>• A Storm water pond has been developed. The capacity of the pond is 6500 Cum (approx.).</li> <li>• Pipeline has been laid in all 4 rows for use the same water for coke Quenching purpose <ul style="list-style-type: none"> <li>o Pump has been installed at the end of Row#4 drain final outlet to re-circulate the water in the quenching pond.</li> <li>o The domestic effluent generated from the canteen and office buildings is recycled in the process itself.</li> </ul> </li> <li>• STP has been commissioned inside the plant and phase wise all domestic effluent is being treated in this STP. The outlet water is being stored at the storm water pond and finally used for coke quenching.</li> </ul>
(vii)	Permission for the drawl of water from Haldia Development Authority shall be obtained and recommendations implemented.	<ul style="list-style-type: none"> <li>• Agreement (dated 30/08/2013) between Haldia Development and Tata Power is in place.</li> </ul>
(viii)	Coal and coke fines shall be recycled and reused in the process. All the other solid waste including broken refractory mass shall be properly disposed of in environment-friendly manner. The waste oil shall be properly disposed of as per the Hazardous Waste (Management & Handling) Rules, 1989 and subsequent amendments.	<ul style="list-style-type: none"> <li>• Coal fines are recycled in the coke making process and coke fines are re-used at out integrated steel plant at Tata Steel Jamshedpur.</li> <li>• Wastes like ceramic blankets, empty oil drums, Oil contaminated wastes are disposed through the authorized TSDF.</li> <li>• Used oil generated from the process are sent to authorized re-processor.</li> </ul>
(ix)	All the environment management measures given in the EIA/EMP shall be implemented and complied with.	The environmental management measures given in the REIA are implemented and being complied with.
(x)	As proposed, green belt shall be developed in 27 % area as per the CPCB guidelines in consultation with DFO.	Nearly 18.50 Ha. area is being considered as green belt. As on date, total 27500 number of trees are surviving, and total Green Belt area is approximately 26% of the total 72.5 Ha plant area.

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<b>S. N</b>	<b>Condition</b>	<b>Compliance status</b>
<b>B. GENERAL CONDITIONS:</b>		
(i)	The project authority shall adhere to the stipulations made by West Bengal Pollution Control Board (WBPCB) and State Government.	<ul style="list-style-type: none"> <li>• CTO conditions are being Complied and six-monthly compliance report is submitted to WBPCB at regular basis.</li> </ul>
(ii)	No further expansion or modification of the plant shall be carried out without prior approval of this Ministry.	<ul style="list-style-type: none"> <li>• EC for Expansion of Coke Oven Plant from 1.6 MTPA to 2.2 MTPA has been received on 23rd February 2017 vide F. No. J-11011//284/2007- IA II (I) but, as on date no expansion project work has been started. The plant is running at 1.6 MTPA capacity only.</li> </ul>
(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 West Bengal Pollution Control Board (WBPCB) 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.	<ul style="list-style-type: none"> <li>• Complying all the conditions stipulated by WBPCB. e.g., the stack emission standard prescribed by WBPCB is 50 mg/Nm<sup>3</sup> which is being maintained in last six months. Refer <b>ANNEXURE -1.</b></li> </ul>
(iv)	Ambient air quality monitoring stations shall be set up as per statutory requirement in consultation with the WBPCB. Ambient air quality including ambient noise levels shall not exceed the standards stipulated under EPA or by the State authorities. Monitoring of ambient air quality shall be carried out regularly in consultation with WBPCB and data submitted to the Ministry's Regional Office at the Bhubaneswar, WBPCB & CPCB regularly. The instruments used for ambient air quality monitoring shall be calibrated time to time	<ul style="list-style-type: none"> <li>• Ambient Air Quality Monitoring Stations have been set- up at Four corners (North / South / East / West) adjacent to the boundary wall and central of the plant and regular monitoring is conducted through certified 3<sup>rd</sup> party. Ambient Air Quality Monitoring reports are attached as <b>Annexure-4.</b></li> <li>• One Continuous Online Ambient Air Quality Monitoring Station within the plant is in operation.</li> <li>• Regular Ambient Noise Monitoring is conducted through accredited 3<sup>rd</sup> party.</li> <li>• The half yearly data are being submitted to Ministry's Regional Office at the Bhubaneswar, WBPCB, Haldia office.</li> <li>• The instruments used for ambient air quality monitoring by 3<sup>rd</sup> party is being calibrated time to time and the calibration certificates are collected from the party.</li> </ul>



**Compliance to conditions stipulated in the Environmental Clearance for Coke Oven Plant (1.6 MTPA) & WHRB (120 MW) at Haldia, East Midnapur, West Bengal from MoEF, New Delhi vide letter No. F. No. J-11011//284/07- IA II (I) dated 29<sup>th</sup> January 2008**

<b>S. N</b>	<b>Condition</b>	<b>Compliance status</b>
<b>B. GENERAL CONDITIONS:</b>		
(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 shall conform to the standards prescribed under Environmental (Protection) Act, 1986 Rules, 1989 viz. 75 dBA (daytime) and 70 dBA (night-time).	<ul style="list-style-type: none"> <li>• Adequate Noise Control measures such as silencers, enclosures, hoods, rubber pads, have been provided at the appropriate places in the existing plant.</li> <li>• Workers working at work areas where noise levels are high, are provided earplugs and earmuffs to reduce the noise exposure.</li> <li>• Regular Noise Monitoring is conducted, and the noise level is found within prescribed limits.</li> <li>• The detail report is enclosed as <b>Annexure - 5</b></li> </ul>
(vi)	Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.	<p>PME (Periodical Medical Examination) has been done for 100% of company employees in FY22. Next due in Dec 2022 for FY-23</p> <p>Records are maintained at the occupational Health Centre.</p> <p>All employees and their family members are COVID vaccinated (booster dose) and all contractor employees have received at least 2<sup>nd</sup> dose of vaccination.</p> <p>Health check-up for contractors' persons are conducted regularly during the time of the renewal of the respective gate pass.</p> <p>100% check-up happened for contractor employees and records are being maintained at the OHC.</p>
(vii)	All the recommendations mentioned in the Corporate Responsibility for Environmental Protection (CREP) of CPCB issued for the steel plants shall be implemented	Recommendations mentioned in the Corporate Responsibility for Environmental Protection (CREP) of CPCB issued for the steel plants are implemented in our integrated steel plant, Tata Steel Jamshedpur
(viii)	The company shall undertake ecodevelopment measures including community welfare measures in the project area.	<ul style="list-style-type: none"> <li>• The local people nearly 256 people as permanent employee and over 850 as contractual employees are being employed by the company.</li> </ul>
(ix)	The company shall develop rainwater harvesting structures to harvest the rainwater for utilization in the lean season besides recharging the ground water table.	<ul style="list-style-type: none"> <li>• A storm water pond of capacity ~ 6500 cum has been developed during rain, the roof water from all building like ADM building / Store / Laboratory / pump house are collected in a common storm water drain and this water is collected in the storm water pond.</li> <li>• The collected water is utilized in coke quenching and other purposes like gardening, water sprinkling on roads, etc.</li> </ul>

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S. N	Condition	Compliance status
<b>B. GENERAL CONDITIONS:</b>		
(x)	Proper housekeeping and adequate occupational health programmes shall be taken up.	<p>To maintain proper housekeeping inside plant:</p> <ul style="list-style-type: none"> <li>• Dedicated team has been appointed for removal of scarps and maintaining proper housekeeping within the plant.</li> <li>• “Colour Coded Bins have been provided at various location for waste segregation at source.</li> <li>• Hazardous wastes are stored under covered shed above concrete flooring.</li> <li>• Mobile vacuum cleaning machine are operated for evacuating the dust particles.</li> <li>• Regular Housekeeping Audit is being conducted to improve the housekeeping in the plant.</li> </ul> <p>Periodic medical check-ups are conducted.</p>
(xi)	A separate environmental management cell to carry out various management and monitoring functions shall be set up under the control of Senior Executive.	<ul style="list-style-type: none"> <li>• Tata Steel Ltd., HMC Division have an Environmental Management Section (EMS) with a permanent qualified designated employee at Senior Manager level, reports directly to the General Manager of the unit, to carry out various management and monitoring functions.</li> <li>• The Corporate Environment Management Cell of Tata Steel, Jamshedpur works, headed by Chief – Environment and respective Heads – Environment also monitors and supervises the environmental activities of the HMC division at a regular basis.</li> <li>• Tata Power has a separate Environment Management Cell for monitoring environmental activities and statutory compliances in terms of power generation and distribution.</li> </ul>
(xii)	Adequate funds shall be allocated towards the capital cost and recurring cost/annum environmental pollution control measures and utilized judiciously 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.	<ul style="list-style-type: none"> <li>• Separate Fund has been allocated and utilized judiciously to implement the conditions stipulated by the Ministry of Environment and Forests.</li> <li>• Funds allocated are mainly utilised for dust suppression by water spraying &amp; sprinkling system, mobile vacuum cleaning system for controlling dust in work area, installation &amp; regular maintenance of DF system to control fugitive emission, installation and maintenance of Online ambient air quality monitoring system, monitoring the environment parameters by third party regularly etc.</li> <li>• Fund for Green Belt development and CSR activity have also been allocated which are used in a planned manner.</li> </ul>

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<b>S. N</b>	<b>Condition</b>	<b>Compliance status</b>
<b>B. GENERAL CONDITIONS:</b>		
(xiii)	The Regional Office of this Ministry at Bhubaneswar / CPCB / WBPCB shall monitor the stipulated conditions. A six-monthly compliance report and the monitored data along with statistical interpretation shall be submitted to them regularly.	<ul style="list-style-type: none"> <li>• Six monthly compliance report along with the monitoring data is submitted regularly to MOEF, Regional Office, Bhubaneswar. Last six-monthly compliance report was submitted on 31/05/2022 and the same has been submitted to WBPCB office also.</li> </ul>
(xiv)	The 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.	<ul style="list-style-type: none"> <li>• It has been complied as the project has already been completed and Consent to Operate has been issued by West Bengal State Pollution Control Board.</li> </ul>
(xv)	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 W. B. Pollution Control Board / Committee and may also be seen at Website of the Ministry of Environment and Forests at <a href="http://envfor.nic.in">http://envfor.nic.in</a> . This should 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 at Bhubaneswar.	<ul style="list-style-type: none"> <li>• Public Notice regarding grant of environment clearance has been advertised in two Local newspapers viz. Financial Express – (English Adv.) / Aajkal – (Bengali Adv.) dated 8.03.2008.</li> <li>• The compliance of the same was informed to MoEF (Regional Office – Bhubaneswar) through letter dated 11.03.08 by post.</li> </ul>



**Compliance to conditions stipulated in the Environmental Clearance for Expansion of Coke Oven Plant from 1.6 MTPA to 2.2 MTPA of M/S Tata Steel Ltd., at Haldia, East Midnapur, West Bengal from MoEF&CC, New Delhi on vide F. No. J-11011//284/2007- IA II (I) dtd. 23rd February 2017**

<b>S. N</b>	<b>Condition</b>	<b>Compliance status</b>
<b>B.</b>	<b>Specific conditions</b>	
i.	The project proponent should install 24X7 air and water monitoring devices to monitor air emission and effluent discharge, as provided by CPCB and submit report to Ministry and its Regional Office.	<ul style="list-style-type: none"> <li>• The On-line stack monitoring, the Opacity meter have been installed in all 8 number of Chimneys and six-monthly report are being submitted to WBPCB and MOEF, Bhubaneswar office. The last six-monthly report is enclosed as <b>ANNEXURE - 2.</b></li> <li>• The unit maintains the Zero Discharge throughout the year and no effluent is being discharge outside the premises. Exception only few days during peak summer season when the raw water supplied by HDA (Haldia Development Authority) the chloride level goes very high then the process water (Cooling tower discharge water) also contains very high chloride as a result it hampers the coke quality. So only for those days it can't be used for coke quenching purpose.</li> </ul>
ii.	The ETP for coke oven by-product should be designed to meet EPA notified standards especially the cyanide and phenol.	The unit operates under Non recovery coke making technology / waste heat recovery technology. There is no by-product from coke making process. Waste hot flue gas is being generated which is used for power generation with the help of WHRB.
iii.	Coke oven plant should meet visible emission standards notified by the MoEF & CC.	On-line stack monitoring, the Opacity meter has been commissioned in all Chimney. Regular stack monitoring is done by registered third party Online Ambient Air monitoring is carried out at one location and the workplace air quality, is being monitored at the regular intervals. The ambient air monitoring for 12 parameters as per National AAQ standard have also been done. The details data are enclosed as <b>ANNEXURE 4.</b>
iv.	All the effluents shall be treated and used for dust suppression and green belt development. No effluent shall be discharged outside the premises via drains and 'Zero' discharge shall be adopted. Domestic wastewater will be treated in the Sewage Treatment plant.	The treated wastewater is being recycled and used for coke quenching and for green belt development within the plant. The Sewage Treatment Plant is in operation.

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<b>S. N</b>	<b>Condition</b>	<b>Compliance status</b>
<b>B.</b>	<b>Specific conditions</b>	
v.	Coal and coke fines shall be recycled and reused in the process. The breeze coke and dust from the air pollution control system shall be reused in sinter plant. The waste oil shall be properly disposed of as per the Hazardous waste (Management, Handling, Handling and Transboundary Movement) Rules,2016.	Coal and coke fines are reused and recycled in the process. Swamp breeze is sold/ auctioned. Used Oil and other hazardous wastes are being disposed to the TSDF, Haldia, authorized by WBPCB.
vi.	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), and bag filters etc. shall be provided to keep the emission levels below 50mg/Nm <sup>3</sup> by installing energy efficient technology	The On-line stack monitoring, the Opacity meter has been installed in all 8 number of Chimneys. The last six-monthly report is enclosed as <b>ANNEXURE -2</b> .
\vii	In-plant control measures like bag filters, de-dusting and dust suppression system shall be provided to control fugitive emission from all the vulnerable sources. Dust extraction and suppression system shall be provided at all the transfer points. Bag filters shall be provided to hoods and dust collectors. Water sprinkling system shall be provided to control secondary fugitive dust emission generated during screening, loading ,unloading ,handling and storage of raw materials etc.	<ul style="list-style-type: none"> <li>• To control the fugitive emissions from coal handling plant, water sprinkling arrangements are made.</li> <li>• Dust Suppression System with Dry Fogging (DF) are in operation at all the coal transfer points, in Wagon Tippler and Coal crusher unit. Regular Maintenance are done to maintain effectiveness of the system.</li> <li>• To prevent fugitive dusts from coal heaps, 30 numbers of “Rain Gun Water Sprinklers” have been installed in the coal yard and, boundary wall (~ 5 mtr height) has been constructed around the stock yard.</li> <li>• More than 2.5 Kilometres of the road inside the material handling area (Coal / Coke / Tippler area) has been paved to reduce dust generation.</li> <li>• The entire coal yard and coke yard have been concreted to prevent dust generation.</li> <li>• Water sprinkling is done through mobile tankers with water sprinkling arrangement on roads within factory and in the periphery area.</li> <li>• Mechanised Mobile Vacuum Cleaning</li> <li>• system is used regularly for arresting the fugitive emission.</li> <li>• Stationary vacuum cleaning machine has been provided at Wagon Tippler to prevent fugitive dusts.</li> </ul>

**Compliance to conditions stipulated in the Environmental Clearance for Expansion of Coke Oven Plant from 1.6 MTPA to 2.2 MTPA of M/S Tata Steel Ltd., at Haldia, East Midnapur, West Bengal from MoEF&CC, New Delhi on vide F. No. J-11011//284/2007- IA II (I) dtd. 23rd February 2017**

<b>S. N</b>	<b>Condition</b>	<b>Compliance status</b>
<b>B.</b>	<b>Specific conditions</b>	
viii	The standards issued by the ministry vide G.S.R.277(E) dated 31st march, 2012 shall be strictly adhered to and the standards prescribed for the coke oven plant shall be monitored and the report should be submitted along with the six-monthly compliance report.	The standards issued by the ministry vide G.S.R.277(E) dated 31st march, 2012 is for the Coke Oven (by-product type) but HMC coke oven batteries are operated under Non – recovery type technology.
ix	Multistage scrubber, cyclone and bag filters etc. to control particulate emissions within the prescribed limits from coke oven shall be provided. Carbon mono-oxide (CO) shall also be monitored along with other parameters and standard notified under environment (Protection) Act shall be followed. The reports shall be submitted to the ministry Regional Office, CPCB and SPCB	Online continuous CO is being monitored in the ambient air.
x	Efforts shall further be made to use maximum water from the rainwater harvesting sources. If need, capacity of the reservoir shall be enhanced to meet the maximum water requirement. Only balance water requirement shall be met from other sources. Use of air-cooled condensers shall be explored and closed-circuit cooling system shall be provided to reduce water consumption and water requirement shall be modified accordingly	<ul style="list-style-type: none"> <li>• A Storm water pond has been developed. The capacity of the pond is 4000 Cum (approx.).</li> <li>• Pipeline has been laid in all 4 rows for use the same water for coke Quenching purpose pump has been installed at the end of Row#4 drain final outlet to re- circulate the water in the quenching pond.</li> </ul>
xi	existing plant operations, the amount of carbon sequestered annually by the existing green belt and the quantum of equivalent CO <sub>2</sub> that will be emitted due to the proposed expansion shall be prepared by the project proponent and submitted to the ministry and the regional office of the ministry. This shall be prepared every year by the project proponent. The first such budget shall be prepared within a period of 6 months and subsequently it should be prepared every year	Noted and shall be complied.

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<b>S. N</b>	<b>Condition</b>	<b>Compliance status</b>
<b>B.</b>	<b>Specific conditions</b>	
xii	For the employees working in high temperature zones falling in the plant operations areas, the total shift duration would be 4hrs or less per day where the temperature is more than 50°C. Moreover, the jobs of these employees will be alternated in such a way that no employee is subjected to working in high temperature area for more than 1 hr continuously, such employee would be invariably provided with proper protective equipment's, garments, and gears such as head gear, clothing gloves, eye protection etc. there should also be an arrangement for sufficient drinking water at site to prevent dehydration etc.	<ul style="list-style-type: none"> <li>As the unit coke oven batteries are working under negative pressure the working temperature never exceed 400°C. Workers generally works there for cleaning purpose only. It ensures that they never work continuously in that area.</li> <li>All employees are being provided with proper PPEs and sufficient drinking water facilities are being provided inside the premises</li> </ul>
xiii	Regular monitoring of influent and effluent surface, sub-surface and ground water shall be ensured and treated wastewater shall meet the norms prescribed by the state pollution control board / described under the E(P)Act. Leachate study for the effluent generated and analysis shall also be regularly carried out and report submitted to the Ministry's Regional office, SPCB and CPCB	Regular wastewater and process water testing is being carried out by registered 3 <sup>rd</sup> party.
xiv	Risk assessment and disaster management plan for the project focusing on Disaster prevention shall be prepared and implemented in conjunction with district Disaster Management plan	<ul style="list-style-type: none"> <li>The unit has separate DMP where all possible emergencies have been identified and mitigation measures have been addressed.</li> <li>Regular mock drills are being conducted on possible emergencies.</li> </ul>
xv	A time bound action plan shall be submitted to reduce solid waste, its proper utilization and disposal	Utilisation and disposal of solid waste (Swamp breeze) various ideas are under study like separation of BF coke from swamp breeze etc.
xvi	All the recommendation made in the charter on corporate responsibility for environment protection (CREP) for the steel plants and coke oven plants shall be implemented.	Recommendations mentioned in the Corporate Responsibility for Environmental Protection (CREP) of CPCB issued for the steel plants are implemented in our integrated steel plant, Tata Steel Jamshedpur
xvii	Green belt shall be developed in 33% of plant area. Selection of plant species shall be as per the CPCB guidelines in consultation with the DFO	As on date, total 27500 number of trees are surviving, and total Green Belt area is approximately 26% of the total 72.5 Ha plant area.

**Compliance to conditions stipulated in the Environmental Clearance for Expansion of Coke Oven Plant from 1.6 MTPA to 2.2 MTPA of M/S Tata Steel Ltd., at Haldia, East Midnapur, West Bengal from MoEF&CC, New Delhi on vide F. No. J-11011//284/2007- IA II (I) dtd. 23rd February 2017**

<b>S. N</b>	<b>Condition</b>	<b>Compliance status</b>
<b>B.</b>	<b>Specific conditions</b>	
xviii	At least 2.5% of the total cost of the project shall be earmarked towards the enterprise social commitment based on public hearing issues, locals need and item-wise details along with time bound action plan shall be prepared and submitted to the ministry's regional office. Implementation of such program shall be ensured by constituting a committee comprising of the proponent, representatives of village panchayat and District Administration. Action taken report in this regard shall be submitted to the ministry's Regional Office.	We are going for capacity enhancement of 0.16 MTPA through process improvements only without any additional expenditure.
xix	The proponent shall prepare a detailed CSR plan for every year for the next 5 years for the existing – cum-expansion project, which includes village- wise, sector- wise (Health , Education, Sanitation, Health, Skill Development and infrastructure requirements such as strengthening of village roads, avenue plantation, etc) activities in consultation with the local communities and administration. The CSR plan will be including the amount of 2% retain annual profits as provided for in clause 135 of the companies' act ,2013 which provides for 2% of the average net profits of previous 3 years towards CSR activities for life of the project. A separate budget head shall be created and the annual capital and revenue expenditure on various activities of the plan shall be submitted as part of the compliance report to RO. The details of the CSR plan shall also be uploaded on the company website and shall also be provided in the annual report of the company. The plan so prepared shall be based on SMART (Specific, Measurable, Achievable, Relevant and time bound) concept. The expenditure should be aimed at sustainable development and direct free distribution and temporary relief should not be included	The is a Division of Tata Steel for coke making unit which is used for steel making at JSR. The division is not a profit centre and has no separate book of accounts. Tata Steel central CSR team drives the CSR activity of all units including HMC and allot the budget accordingly which is within 2% of Company (Tata Steel) profit.

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<b>S. N</b>	<b>Condition</b>	<b>Compliance status</b>
<b>B.</b>	<b>Specific conditions</b>	
xx	The company shall submit their policy towards Corporate Environment Responsibility which shall inter-alia address (i) Standard operating process / procedure to bring into focus any infringement / deviation/violation of environmental or forest norms/ conditions, (ii) Hierarchical system or administrative order of the company to deal with environmental issues and ensuring compliance to the environmental clearance conditions and (iii) System of reporting of noncompliance/ violation environmental norms to the board of directors of the company and/or stakeholders	Tata Steel's central environment policy is followed by HMC division
xxi	All the commitments made to the public during the public Hearing / Public Consultation meeting shall be satisfactorily implemented and a separated budget for implementing the same shall be allocated and information submitted to the Ministry's Regional Office	There was no public Hearing / Public Consultation taken place. Public Hearing was exempted in the TOR condition
xxii	Haulage roads shall be sprinkled with water at regular intervals for which water tankers with sprinkler arrangement is deployed. Regular sweeping of roads shall be practiced with vacuum sweeping machine or water flushing to minimize dust	<ul style="list-style-type: none"> <li>• To control the fugitive emissions from coal handling plant, water sprinkling arrangements are made.</li> <li>• Dust Suppression System with Dry Fogging (DF) are in operation at all the coal transfer points, in Wagon Tippler and Coal crusher unit. Regular Maintenance are done to maintain effectiveness of the system.</li> <li>• To prevent fugitive dusts from coal heaps, 30 numbers of "Rain Gun Water Sprinklers" have been installed in the coal yard and, boundary wall (~ 5 mtr height) has been constructed around the stock yard.</li> <li>• More than 2.5 Kilometres of the road inside the material handling area (Coal / Coke / Tippler area) has been paved to reduce dust generation.</li> <li>• The entire coal yard and coke yard have been concreted to prevent dust generation.</li> <li>• Water sprinkling is done through mobile tankers with water sprinkling arrangement on roads within factory and in the periphery area.</li> <li>• Mechanised Mobile Vacuum Cleaning system is used regularly for arresting the</li> </ul>



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<b>S. N</b>	<b>Condition</b>	<b>Compliance status</b>
<b>B.</b>	<b>Specific conditions</b>	
		fugitive emission. Stationary vacuum cleaning machine has been provided at Wagon Tippler to prevent fugitive dusts.
xxiii	Trucks carrying coal and other raw material shall be covered with tarpaulin to prevent spreading of dust during transportation	<ul style="list-style-type: none"> <li>At HMC the raw material transported through rake only which is covered with tarpaulin cover. Inside the plant the raw materials transported through covered conveyor belt only.</li> </ul>
xxiv	Provision shall be made for the housing of construction labor within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, Safe Drinking water, medical health care etc. The housing may be in the form of temporary structures to be removed after the completion of the project	Noted and shall be complied.
<b>B.</b>	<b>GENERAL CONDITIONS</b>	
i.	The project authorities must strictly adhere to the stipulations made by the West Bengal Pollution Control Board and the state government.	Complied.
ii.	No further expansion or modification of the plant shall be carried out without prior approval of this Ministry.	Noted and shall be complied.
iii.	At least four ambient air quality monitoring stations should downward direction as well as where maximum ground level concentration of PM10, PM2.5, SO2 and NOx are anticipated in consultation with the SPCB. Data on ambient air quality and stack emission shall be regularly submitted to this Ministry including its regional office at Orissa and the SPCB/CPCB once in six months.	Data on ambient air quality and stack emission is regularly submitted along with six monthly EC compliance report.
iv.	Industrial Waste water 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 from time to time. The treated wastewater shall be utilized for plantation purpose	ZLD is maintained.

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<b>S. N</b>	<b>Condition</b>	<b>Compliance status</b>
<b>B.</b>	<b>Specific conditions</b>	
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 (night time).	<ul style="list-style-type: none"> <li>Adequate Noise Control measures such as silencers, enclosures, hoods, rubber pads, have been provided at the appropriate places in the existing plant.</li> <li>Workers working at work areas where noise levels are high, are provided earplugs and earmuffs to reduce the noise exposure.</li> <li>Regular Noise Monitoring is conducted, and the noise level is found within prescribed limits.</li> </ul>
vi.	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"> <li>The detail report is enclosed as PME (Periodical Medical Examination) has been done for 100% of company employees in FY22. Next due on Dec 2022 in FY-23 Records are maintained at the Occupational Health Centre.</li> <li>All employees and their family members are COVID vaccinated (booster dose) and all contractor employees have received at least 2<sup>nd</sup> dose of vaccination.</li> <li>Health check-up for contractors' persons are conducted regularly during the time of the renewal of the respective gate pass.</li> <li>100% check-up happened for contractor employees and records are being maintained at the OHC.</li> </ul>
vii.	The company shall develop rainwater harvesting structures to ha the lean season besides recharging the ground water table vest the rain water for utilization in	<ul style="list-style-type: none"> <li>A storm water pond of capacity ~ 6500 cum has been developed</li> <li>During rain, the roof water from all building like ADM building / Store / Laboratory / pump house are collected in a common storm water drain and this water is collected in the storm water pond.</li> <li>The collected water is utilized in coke quenching and other purposes like gardening, water sprinkling on roads, etc.</li> </ul>
viii.	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"> <li>The environmental management measures given in the REIA are implemented and being complied with.</li> <li>The local people nearly 256 people as permanent employee and over 850 as contractual employees are being employed by the company.</li> <li>Two Nos. of Drinking Water Projects (Deep Bore well) done in schools in FY'22.</li> </ul>

**Compliance to conditions stipulated in the Environmental Clearance for Expansion of Coke Oven Plant from 1.6 MTPA to 2.2 MTPA of M/S Tata Steel Ltd., at Haldia, East Midnapur, West Bengal from MoEF&CC, New Delhi on vide F. No. J-11011//284/2007- IA II (I) dtd. 23rd February 2017**

<b>S. N</b>	<b>Condition</b>	<b>Compliance status</b>
<b>B.</b>	<b>Specific conditions</b>	
ix.	Requisite funds shall be earmarked towards capital cost and recurring cost/ annum for environment pollution control measures to implement the condition stipulated by the ministry of environment, Forest and Climate change (MoEF&CC) as well as the state government. An implementation schedule for implementing all the condition stipulated herein shall be submitted to the regional office of the ministry at Orissa. The funds so provided shall not be diverted for any other purpose.	<ul style="list-style-type: none"> <li>Tata Steel Ltd., HMC Division have an Environmental Management Section (EMS) with a permanent qualified designated employee at Senior Manager level, reports directly to the General Manager of the unit, to carry out various management and monitoring functions.</li> <li>The Corporate Environment Management Cell of Tata Steel, Jamshedpur works, headed by Chief – Environment and respective Heads – Environment also monitors and supervises the environmental activities of the HMC division at a regular basis.</li> </ul>
x.	A copy of clearance letter shall be sent by the proponent to concern Panchayat, Zila parishad / Municipal Corporation, Urban local body and the local NGO, If any, from whom suggestion/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.	Complied.
xi	The Project proponent shall upload the status of the stipulated environmental clearance conditions, including results of monitored data on their website and shall simultaneously be sent to the Regional Office of the MOEFCC at Orissa. The respective zonal office of CPCB and the SPCB. The criteria pollutant levels namely, PM10, SO2, NOx (ambient levels as well as stack emissions) or critical sectoral parameters, indicate for the project shall be monitored and displayed at a convenient location near the main gate of the company in the public domain update the same periodically.	<ul style="list-style-type: none"> <li>Six monthly compliance report along with the monitoring data is submitted regularly to MOEF, Regional Office, Bhubaneswar.</li> <li>Last six-monthly compliance report was submitted on 31/05/2022 and the same has also been submitted to WBPCB office.</li> </ul>
xii.	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 email) to the regional office of MOEFCC, the respective Zonal office of CPCB and the SPCB. The Regional office of this ministry at Orissa /CPCB / SPCB shall monitor the stipulated conditions.	<ul style="list-style-type: none"> <li>Six monthly compliance report along with the monitoring data is submitted regularly to MOEF, Regional Office, Bhubaneswar.</li> <li>Last six-monthly compliance report was submitted on 31/05/2022 and the same has been submitted to WBPCB office also.</li> </ul>

**Compliance to conditions stipulated in the Environmental Clearance for Expansion of Coke Oven Plant from 1.6 MTPA to 2.2 MTPA of M/S Tata Steel Ltd., at Haldia, East Midnapur, West Bengal from MoEF&CC, New Delhi on vide F. No. J-11011//284/2007- IA II (I) dtd. 23rd February 2017**

<b>S. N</b>	<b>Condition</b>	<b>Compliance status</b>
<b>B.</b>	<b>Specific conditions</b>	
xiii.	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 along with the status of compliance of environmental conditions and shall also be sent to the respective Regional Office of the MOEFCC at Orissa by e-mail.	Environmental Statement is submitted on time. Environmental Statement for FY22 was submitted on September 26, 2022, vide TSL/HMC/ENV/10/FY23.
xiv.	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 SPCB and may also be seen at website of the Ministry of environment, Forest and Climate change (MoEFCC) at <a href="http://envfor.nic.in">http://envfor.nic.in</a> . 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 should be forwarded to the regional office at Orissa.	Communication regarding grant of environment clearance for expansion project of Coke Oven Plant from 1.6 MTPA to 2.2 MTPA vide F. No. J11011//284/2007- IA II (I) was published in the newspapers viz., The Times of India, The Economic Times, and The Business Standards, dated 24 February 2017.
xv.	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	Noted and shall be complied.

### Annexure-1

<b>Stack Emission Monitoring Report Monthly average For period Apr'22 to Sep'22</b>						
Stack Name	SPM (mg/Nm <sup>3</sup> )		SO <sub>2</sub> (mg/Nm <sup>3</sup> )		NO <sub>x</sub> (mg/Nm <sup>3</sup> )	
	Prescribed Limit	Result	Prescribed Limit	Result	Prescribed Limit	Result
Chimney 1AB	50	23.11	800	306.49	500	183.98
Chimney 1CD	50	26.20	800	278.40	500	165.98
Chimney 2AB	50	23.78	800	311.56	500	195.08
Chimney 2CD	50	26.38	800	303.25	500	186.16
Chimney 3AB	50	22.75	800	270.44	500	153.62
Chimney 3CD	50	23.41	800	280.46	500	166.30
Chimney 4AB	50	27.22	800	303.07	500	183.35
Chimney 4CD	50	29.22	800	275.69	500	153.03

### Annexure-2

<b>Online Stack Emission Monitoring Report for SPM (in mg/Nm<sup>3</sup>) For Period: Apr'22- Sep'22</b>							
Stack	Apr'22	May'22	Jun'22	Jul'22	Aug'22	Sep'22	Average
Chimney 1AB	21.15	20.53	18.83	20.06	27.81	29.14	22.92
Chimney 1CD	38.85	32.94	29.34	17.93	31.01	20.70	28.46
Chimney 2AB	18.06	15.58	13.93	25.16	31.57	29.12	22.23
Chimney 2CD	24.71	24.20	28.55	27.60	26.73	32.18	27.33
Chimney 3AB	16.73	16.56	16.44	16.92	18.38	24.93	18.33
Chimney 3CD	24.96	27.58	27.42	27.76	29.39	27.36	27.41
Chimney 4AB	23.79	27.32	18.31	22.89	23.23	30.40	24.32
Chimney 4CD	29.30	27.64	26.36	16.41	19.15	26.09	24.16

### Annexure-3

Month	Total Water consumed (m <sup>3</sup> ) (From HDA)	Water consumed by Tata Power		Water consumed by Tata steel	
		(m <sup>3</sup> /month)	m <sup>3</sup> /day	(m <sup>3</sup> /month)	m <sup>3</sup> /day
Apr'22	354800	240790.7	8026.356	114009.32	3800.3107
May'22	283600	225319.8	7268.3797	58280.23	1880.0074
Jun'22	235300	199902.2	6663.4057	35397.83	1179.9277
Jul'22	227300	198693.3	6409.4626	28606.66	922.79548
Aug'22	216000	187664	6053.6787	28335.96	914.06323
Sep'22	216600	177260.7	5908.689	39339.33	1311.311
<b>Average Consumption m<sup>3</sup>/day</b>		<b>6831</b>		<b>1826</b>	

### Annexure-4

<b>AMBIENT AIR QUALITY MONITORING REPORT</b>													
<b>Period: Apr'22 to Sep'22</b>													
Sl. No	Sampling Stations	PM 10 µg/m <sup>3</sup>	PM <sub>2.5</sub> µg /m <sup>3</sup>	SO <sub>2</sub> µg/ m <sup>3</sup>	NO <sub>x</sub> µg / m <sup>3</sup>	CO mg/m <sup>3</sup>	Ozone (O <sub>3</sub> ) µg/m <sup>3</sup>	Lead (Pb) µg/m <sup>3</sup>	Ammonia (NH <sub>3</sub> ) µg/m <sup>3</sup>	Benzene (C <sub>6</sub> H <sub>6</sub> )	Benzo (a) Pyrene ng /m <sup>3</sup>	Arsenic (As) 3 ng /m	Nickel (Ni) ng/m <sup>3</sup>
1	Near CCR (Centre)	70.39	35.78	7.42	32.28	0.46	28.96	<0.01	28.88	<4.2	<0.5	<1.0	<5.0
2	Back Side of ADM Building (South side)	66.17	34.28	7.12	31.85	0.54	28.1	<0.01	24.87	<4.2	<0.5	<1.0	<5.0
3	Near Coal Yard (East Side)	81.92	42.51	8.26	37.22	0.60	30.75	<0.01	32.72	<4.2	<0.5	<1.0	<5.0
4	Patikhali Gate (North Side)	69.74	35.95	8.03	31.76	0.43	31.37	<0.01	29.86	<4.2	<0.5	<1.0	<5.0
5	Near Simplex Gate / ENS office (West Side)	73.04	37.57	7.86	35.42	0.57	29.22	<0.01	29.07	<4.2	<0.5	<1.0	<5.0



## Annexure-5

<b>NOISE QUALITY MONITORING REPORT (in dBA)</b>													
<b>Period: APR'22 to SEP'22</b>													
Sl.No	NOISE MONITORING LOCATIONS	Apr'22		May'22		Jun'22		Jul'22		Aug'22		Sep'22	
1	Admin Building			53.2	50.3			54.4	44.3			51.2	41.5
2	Engineering Service Centre			62.5	60.6			54.1	42.5			51.6	44.3
3	CCR			59.4	55.0			52.8	43.4			54.7	44.0
4	Screen House					58.5	55.5					55.1	47.1
5	Wagon Tippler			61.2	59.0					53.7	44.4		
6	Near Pathikhali Gate	60.8	55.3			56.5	55.7			54.3	46.8		
7	Near Simplex Gate	59.1	51.7			57.5	52.9			53	47.7		
8	Crusher House			63.3	61.5					54.8	48.4		
9	Occupational Health Centre	61.7	56.5			56.4	53.4			53.5	43.5		
10	Stamping Station	60.3	51.0					58.2	47.0				
11	Junction House-7	61	49.9					56.3	46.5				
12	Blending Bunker					59.0	51.7					55.1	47.4