

M/s Tata Steel Ltd, Hooghly Met Coke Division, Haldia

Compliance to Conditions stipulated in Environmental Clearance for Coke Oven Plant (1.6 MTPA) & WHRB (120 MW) at Haldia, East Midnapur, West Bengal from MoEF, New Delhi on 29th January, 2007 vide letter# F. No. J-11011//284/07- IA II (I)

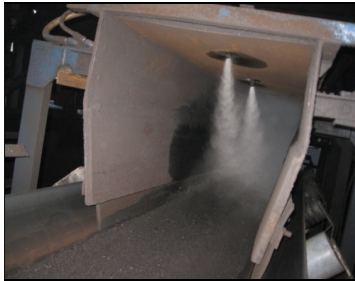

Period –October 2020 – March 2021

A.	SPECIFIC CONDITIONS																																
i.	<p><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.</i></p>																																
Com	<ul style="list-style-type: none"> • The coking coal is fed after crushing into Heat Recovery type coke oven batteries consisting of chambers made of refractory. The Carbonization of coal takes place at 1100 to 1250° C and the heat for carbonization is supplied by combustion of volatile matters evolved from the coal charged by admitting air into the chamber. The hot flue gas free from volatile matters is used to generate electric power by generating steam in waste heat recovery boiler. • Presently the plant is operating at rated capacity of 1.35 MTPA coke production. No expansion project of additional capacity has been taken up • From October 2020 to March 2021 total coke production was 745809 DMT (Dry Metric Ton) and Power generated is 426.816 MU. <table border="1" data-bbox="302 856 1463 1339"> <thead> <tr> <th>Month</th> <th>Coke Production (Tonnes) Dry</th> <th>POWER GENERATION (In MWH)</th> <th>WHRB Availability (%)</th> </tr> </thead> <tbody> <tr> <td>October 2020</td> <td>125,790.00</td> <td>67049</td> <td>92.3</td> </tr> <tr> <td>November 2020</td> <td>126,436.00</td> <td>72247</td> <td>99.4</td> </tr> <tr> <td>December 2020</td> <td>125,652.00</td> <td>73101</td> <td>99.4</td> </tr> <tr> <td>January 2021</td> <td>123,666.00</td> <td>73883</td> <td>99.9</td> </tr> <tr> <td>February 2021</td> <td>116,051.00</td> <td>65195</td> <td>98.6</td> </tr> <tr> <td>March 2021</td> <td>128,214.00</td> <td>75341</td> <td>99.7</td> </tr> <tr> <td>TOTAL</td> <td>745809</td> <td>426816</td> <td></td> </tr> </tbody> </table> <ul style="list-style-type: none"> • The plant is having 352 numbers of coke oven batteries (1.6 MTPA coke capacity) equally divided into 4 rows. 11 numbers of ovens are forming one block so each row is having 8 nos of block. 2 nos. of blocks of 11 ovens each is now connected to one no. of WHRB & subsequently 2 nos. of WHRBs connected to one no. of combined stack of 70 m height. So each row has 4 numbers of WHRBs and 2 no. of stack. Total 8 nos of stacks and 16 nos of boilers are present in the entire plant. Stacks are designed for stack emission <50 mg/Nm³ of particulate matter. • There is no flow meter installed for measuring the gas volume used for power generation and discharged into the air. 	Month	Coke Production (Tonnes) Dry	POWER GENERATION (In MWH)	WHRB Availability (%)	October 2020	125,790.00	67049	92.3	November 2020	126,436.00	72247	99.4	December 2020	125,652.00	73101	99.4	January 2021	123,666.00	73883	99.9	February 2021	116,051.00	65195	98.6	March 2021	128,214.00	75341	99.7	TOTAL	745809	426816	
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ii.	<p><i>The prescribed emission standards for coke oven plants as notified vide notification no. GSR 46 (E) dated 3rd February, 2006 shall be complied with.</i></p>																																

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Com	<ul style="list-style-type: none"> This is the unit established after the notification of 2006 published, and as per notification no. GSR 46(E) the Non recovery / waste heat recovery technology has been adopted for coke making which is environment friendly method. The emission standard specified in the Environmental Clearance, under Specific condition (iii) for stack emission has been followed. To reduce the SPM, non recovery type technology is being used. WHRB used as PCU. The coal is being charged inside the oven under negative pressure for 68- 70 hours (avg. in a temp of 950 – 1050 °C as a result the volatiles evolved during coal carbonization is being combusted completely in presence of controlled quantity of air so emission of any particulate matter is very low. The stack height is 70Mt from GL. The emission from all stack are much less than 50mg/Nm3 of SPM. Online stack monitoring system is also installed in all 8 chimney. Regular stack monitoring is done by registered third party also.
iii.	<p><i>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/Nm3 and reports submitted to the Ministry's Regional Office at the Bhubaneswar, WBPCB & CPCB.</i></p>
Com	<ul style="list-style-type: none"> On-line stack monitoring, the Opacity meter has been commissioned in all Chimney. The opacity meter calibration and validation process is under progress and will be connected to SPCB server once the reliability of the equipment achieved. Regular stack monitoring is done by registered third party. The Stack emission (avg) report for last six month (October 20 – March 21) enclosed as ANNEXURE - 2 .
iv.	<p><i>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, de-dusting and dust suppression system shall be provided to control fugitive emissions from all the vulnerable sources including material handling areas and material transfer points.</i></p>
Com	<ul style="list-style-type: none"> Besides the continuous water sprinkling at coal handling plant and all transfer point; the Dust Suppression System with Dry Fogging (DF) has been commissioned. In Wagon Tippler, Coal crusher unit and all the coal transfer points the DF and dust suppression system is operational. Dry fog system for coal and coke handling to restrict particulate emission to within 10 mg per cu m have been installed. The system has been installed at Wagon tippler unit, coal crusher unit, Coal / coke transfer points like Junction House # 5 (Cl#7 belt discharge pt., CL#8 belt receiving pt.); Junction House # A (WCK#1, 2 belt discharge pt. WCK#3 belt receiving pt.); Junction House # B (WCK#3 belt discharge pt. RCK#1, CK#1 belt receiving pt.); Junction House # C (WCK#5, 6 belt discharge pt. CK#7 belt receiving pt.); Junction House # D (WCK#7, RCK#3 belt discharge pt. CK#1 belt receiving pt.); Screen House. In last six month 5 numbers of DF points have been constructed in coal handling area at Junction House # 1, 2 & 2A. Regular maintenance is being done for making this system effective <div style="display: flex; justify-content: space-around;">   </div> <ul style="list-style-type: none"> More than 2 Kilometers of the road inside the material handling area has been paved to reduce the

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	<p>dust generation. The total coal yard (area of 25000 sq. Mt.) has also been concreted in order to prevent the dust generation.</p> <ul style="list-style-type: none"> Movable water tanker with sprinkling arrangement is used for water sprinkling purpose in the road within factory and in the periphery area The mechanised Mobile Vacuum Cleaning system is being used regularly for arresting the fugitive emission Static Vacuum Machine also installed at Wagon tippler area to arrest the dust All around the stock yard the boundary wall has been constructed to restrict the dust flowing outside the factory. The average height of the wall is 5 mt. 30 numbers of the “Rain Gun Water Sprinklers” have been installed in the coal yard to prevent the generation of fugitive emission from the coal heap. These sprinklers can rotate at 360° and can spray the water at a radius of 15 meter. The height of the sprinklers are approx 2.6 mt. The workplace air quality, as well as ambient air quality (PM₁₀ & PM_{2.5}) is being monitored at the regular intervals.
v.	<p><i>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.</i></p>
Com	<ul style="list-style-type: none"> The ovens work under the negative pressure so secondary fugitive emissions are negligible in this non recovery coke making technology All workers are being provided with PPEs for protection HMC is following the CPCB guidelines so far the non recovery coke oven plant operation is being concerned. Positive sealing arrangements has been provided in the oven doors and flue gas pipes/valves Gaseous emissions are monitored regularly; corrective action taken whenever the results found crossing the limit.
vi.	<p><i>Total requirement of the water from Haldia Development Authority for coke oven and WHRB shall not exceed 5,300 m³/day and 13,750 m³/day respectively. The effluent shall be treated in the effluent treatment plant and all the treated wastewater 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 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.</i></p>
Com	<ul style="list-style-type: none"> The average water taken from HDA as make-up water during October 20 – March 21 was 1651 m³/day approximately for coke oven (Tata Steel, Hooghly Met coke) and 6785.34 m³/day approximately for WHRB (Tata Power) which is within the permissible limit granted by the MOEF. The detail water consumption report is enclosed as : ANNEXURE 3 The processed water is being tested and recycled and used for coke quenching and for green belt development within the plant. Initiatives taken for achieving Zero Discharge are: <ul style="list-style-type: none"> A Storm water pond has been developed. The capacity of the pond is 4000 Cu mt (approx). Pipe line 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-circulated the water in the quenching pond . As the unit is not having any township inside the factory premises no domestic effluent has been

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	<p>generated at the company's scope so STP has not been provided separately. The canteen waste water is being recycled in the process itself.</p> <ul style="list-style-type: none"> 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 
vii.	<p><i>Permission for the drawl of water from Haldia Development Authority shall be obtained and recommendations implemented.</i></p>
Com	<ul style="list-style-type: none"> HMC is purchasing the water from M/S Haldia Water Service Pvt Limited . An agreement between Haldia Development Authority and HMCPCL had taken place on 01 March 2007 , Ref no: 04AA 789559
viii.	<p><i>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 off in environment-friendly manner. The waste oil shall be properly disposed off as per the Hazardous Waste (Management & Handling) Rules, 1989 and subsequent amendments.</i></p>
Com	<ul style="list-style-type: none"> Coal fines are reused in the process and coke fines are sent to JSR for re-using at their end. The empty oil drum and oil filters and oil soaked jute/cotton waste generated from the process is being sent to the authorized re-processor (TSDF). The used oil generated from the process is being sent to authorized re-processor The organisation has taken special initiative to reduce solid waste generation by reducing the oven door consumption. The door cast-able (refractory bricks) material is being now electrically preheated as a result the door cast-able life has been increased and refractory brick waste generation has been reduced over the years. The ceramic blankets are being disposed to the authorized TSDF.

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FORM 10 WEST BENGAL WASTE MANAGEMENT LIMITED J.L. No. - 103, Mouza - Purba Srikrishnapur, P.O. & P.S. - Sutahata, PIN - 721655, Haldia, Dist. - Purba Medinipur, West Bengal MANIFEST FOR HAZARDOUS AND OTHER WASTE		FORM 10 (See rule 19 (1)) MANIFEST FOR HAZARDOUS AND OTHER WASTE	
1	Sender's name and mailing address (including Phone No. and e-mail): TATA STEEL LTD, HOOGHLY METCOKE DIV. DATIKHALI, HALDIA-721606. M. 9231040230 Email: etatesteel@tatasteel.com	1	Sender's name and mailing address (including Phone No. and Email): Tata Steel Ltd. HMC Div. Haldia. P.O - Indian Oil Refinery. Dist - Purba Medinipur. 721606
2	Sender's authorization No.: 144/25(HW)-2898/2013	2	Sender's authorization No.: 144/25 (HW) - 2898 / 2013
3	Manifest Document No.: 13417	3	Manifest Document No./Pass Book No: B 55 9825
4	Transporter's name and address (including Phone No. and e-mail): West Bengal Waste Management Limited J.L. No. 103, Mouza Purba Srikrishnapur, P.O. & P.S. Sutahata, Haldia 721635 Dist. Purba Medinipur, West Bengal, Ph. No. -03224-278238 / 39 E-mail - wbwm_haldia@spkvy.com	4	Transporter's name and address (including Phone No. and Email): N. K. COMPANY 2K Industrial Estate VIL-Bansagram, Hagan Molla Road, P.O - Rasulpur, P.S - Bishupura.
5	Type of vehicle: (Truck/Tanker/Special Vehicle)	5	Type of Vehicle: (Truck/Tanker/Special Vehicle)
6	Transporter's registration No.: WB-03C 8875	6	Transporter's registration No.: WB 03C 8875
7	Vehicle registration No.: WB-31N-0038	7	Vehicle registration: WB03C 8875
8	Receiver's name and mailing address (including Phone No. and e-mail): West Bengal Waste Management Limited J.L. No. 103, Mouza Purba Srikrishnapur, P.O. & P.S. Sutahata, Haldia 721635 Dist. Purba Medinipur, West Bengal, Ph. No. -03224-278238 / 39 E-mail - wbwm_haldia@spkvy.com	8	Receiver's name and mailing address (including Phone No. Email): N. K. COMPANY J. R. INDUSTRIAL ESTATE VIL-Bansagram, Hagan Molla Rd, P.O.-Rasulpur, P.S.-Bishupura.
9	Receiver's authorization No.: 160/25(HW)-1506/2003 (Pt-IV)	9	Receiver's authorization no.: 74/25(HW) 2004/2006 (Pt-2) date 26
10	Waste description: Empty Oil Drum, Oil soaked Drum	10	Waste description: Used Oil.
11	Total quantity No. of Containers: 22 Nos. of Empty Drum	11	Total quantity No. of Containers: 6 m ³ or MT
12	Physical form: (Solid/Semi-Solid/Sludge/Oily/Tarry/Slurry/Liquid)	12	Physical form: (Solid / Semi-Solid / Sludge / Only / Tarry/Slurry / Liquid) (oil)
13	Special handling instructions and additional information: Hazardous Waste, Follow SOP. Handle separately	13	Special handling instructions and additional information: N/A
14	Sender's Certificate: I hereby declare that the contents of the consignment are fully and accurately described above by proper shipping category, packed, marked and name and are labeled and are in all respects in proper conditions for transport by road according to applicable National Government Regulations.	14	Sender's Certificate: I hereby declare that the contents of the consignment are fully and accurately described above by proper shipping name and are categorized, packed, marked, and labeled, and are in all respects in proper conditions for transport by road according to applicable national government regulations.
14	Name and stamp: Himala Dutta Roy Signature Day Month Year 15 12 2020		Name and Stamp: Himala Signature Day Month Year 15 12 2020
15	Transporter acknowledgement of receipt of Wastes: Name and stamp: Biswanath Signature Day Month Year 15 12 2020	15	Transporter acknowledgment of receipt of Wastes: Name and Stamp: MD. Shafigue Signature Day Month Year 15 12 2020
16	Receiver's certification for receipt of hazardous and other waste: Name and stamp: Haldia Signature Day Month Year 15 12 2020	16	Receiver's certification for receipt of hazardous and other waste: Name and Stamp: MD. Shafigue Signature Day Month Year 15 12 2020

ix. All the environment management measures given in the EIA/EMP shall be implemented and complied with.

Com

- Implementation of protection measures as indicated in the REIA are implemented. Online stack monitoring systems are being commissioned. For dust suppression DF system has been installed. Acoustic enclosures / barriers / shields are being used to reduce noise, providing the personal protective equipment like ear plugs/ muffs etc are also being provided.
- As the batteries are operating under negative pressure, no flames are visible outside the battery and the temperature in the battery area remains > 40 deg C (avg).
- All the workers working at battery area are being provided with adequate PPEs like Fire registrant jacket, nose musk etc.



x. As proposed, green belt shall be developed in 27 % area as per the CPCB guidelines in consultation with DFO.

Com

- Nearly 18.50 hector area is being considered as Green belt. Total 26500 number of trees are surviving as on date under Tata Steel scope Replantation is under progress. Approximately 5000 trees are existing within Tata Power scope which adds another 1.45 hector area. Total Green Belt area is approximately 26% of the total 72.5 hector plant area. The areas where tree plantation are not feasible, and also not required to be paved, are being covered with grass, hedges and low bushes with flowering trees for beautification and to avoid soil erosion. IN FY21 total 2800 nos of

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	<p>trees were planted inside the works. The main species planted are Mehogini, Bakul, Lambu, Debdaru, chatim, supari etc.</p> <ul style="list-style-type: none"> • Every year plantation done in available space.
B.	GENERAL CONDITIONS
i.	<i>The project authority shall adhere to the stipulations made by West Bengal Pollution Control Board (WBPCB) and State Government.</i>
Com	All CTO conditions are being Complied
ii.	<i>No further expansion or modification of the plant shall be carried out without prior approval of this Ministry.</i>
Com	EC for Expansion of Coke Oven Plant from 1.6 MTPA to 2.2 MTPA has been received on 23 rd 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. No "Consent to Establish" has been applied from WBPCB till date. It is being ensured that the compliance on EC will be submitted to MOEF once the expansion will take place
iii.	<i>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.</i>
Com	Complying all the conditions stipulated by WBPCB. E.g. the stack emission standard prescribed by WBPCB is 50mg/Nm ³ which is being maintained in last six months..
iv.	<i>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 and 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.</i>
Com	<ul style="list-style-type: none"> • Different areas have been identified within the factory premises where Ambient Air Quality is being tested at a regular basis. • One Ambient Air Quality monitoring station within the plant has been commissioned. The calibration and validation of the equipment is under progress • Different areas have been identified within the factory premises where Ambient Air Quality is being tested at a regular basis by the certified 3rd party. The summary is enclosed. ANNEXURE 1 • Regular noise monitoring also been done by the accredited 3rd party. • The half yearly data are being submitted to Ministry's Regional Office at the Bhubaneswar, WBPCB, Haldia office. • The instruments used for ambient air quality monitoring by the accredited 3rd party is being calibrated time to time and the calibration certificates are collected from the party.
v.	<i>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</i>

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	<i>viz. 75 dBA (day time) and 70 dBA (night time).</i>
Com	<ul style="list-style-type: none"> The noise level inside the plant has been recorded between specified limit The control measures such as; silencers, enclosures, hoods, rubber pads, have been provided at the appropriate places in the existing plant. The work areas where noise levels are high, earplugs and earmuffs have been provided to reduce the noise exposure. The detail report is enclosed as ANNEXURE - 4
vi.	<i>Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.</i>
Com	<ul style="list-style-type: none"> PME (Periodical Medical Examination) has been done for 98.5% of company employees in FY21. Records are maintained at the Occupational Health Centre. Health check up for contractors persons are conducted regularly during the time of the renewal of the respective gate pass. 100% checkup happened for contractor employees and records are being maintained at the OHC.
vii.	<i>All the recommendations mentioned in the Corporate Responsibility for Environmental Protection (CREP) of CPCB issued for the steel plants shall be implemented</i>
Com	<ul style="list-style-type: none"> The CREP has been implemented by along with Tata Steel - JSR works since this TSL – HMC unit is the stand alone coke making unit only. The company follows the Tata Steel CSR policy Presently Tata Steel works on “Focus Area” approach by adopting Villages / Panchayats / Home so that the Socio – economic development can be visible. Construction of Drinking Water Projects taken up by the unit initially for CSR activity.
viii.	<i>The company shall undertake eco-development measures including community welfare measures in the project area.</i>
Com	<ul style="list-style-type: none"> The local people nearly 256 people as permanent employee and over 850 as contractual employees are being employed by the company. As a part of welfare activity, the primary schools, mainly for BPL people, have been considered. Some infrastructural development like making toilets for girls, boundary wall around the school, electrification jobs, school furniture etc are being done. Till now total 19 nos of DWP has been commissioned till FY20 . The Total expenditure for CSR activity till was nearly is Rs. 90 Lakhs At local level under “Amphan Relief” 500 nos Tarpulin sheets were distributed to the victims “Food for everyone” nearly 500 families were provided food items during lockdown situation
ix.	<i>The company shall develop rain water harvesting structures to harvest the rain water for utilization in the lean season besides recharging the ground water table.</i>
Com	<ul style="list-style-type: none"> A Storm water pond has been developed. The capacity of the pond is 4000 Cu mt (approx). 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. Pipe line has been laid in all 4 rows for using this water for coke quenching and other purposes like gardening, water spraying in the road, water sprinkling system etc.
x.	<i>Proper house keeping and adequate occupational health programmes shall be taken up.</i>
Com	<ul style="list-style-type: none"> Separate agency has been appointed for removal of scarps and maintaining proper housekeeping within the plant and for cleaning activity. For storage of waste “COLORED BINS” have been provided at various location Impervious pit has been constructed for storing the hazardous waste Mobile vacuum cleaning machine is also being used at a regular interval for evacuating the dust

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	<p>particles</p> <ul style="list-style-type: none"> TPM initiatives has been started by the shop floor employees in terms of improving the house keeping at shop floor. Identifying KAIZENS and conducting 1s & 2s has been initiated. Regular Housekeeping Audit is being conducted to improve the housekeeping in the plant
xi.	<i>A separate environmental management cell to carry out various management and monitoring functions shall be set up under the control of Senior Executive.</i>
Com	<p>Tata Steel Ltd., HMC Division have an Environmental Management Section (EMS) with a permanent qualified designated employee at a Senior Manager level, reports directly to the General Manager of the unit, to supervise the environmental activities and environmental management programmes. This section co-ordinates and provides necessary services on environmental issues of the entire unit</p> <p>This section is responsible for implementation of Environmental Management Plan and interaction with the environmental regulatory agencies, reviewing policy and planning and mitigates all statutory compliances. This section interacts with State Environment Department, Ministry of Environment & Forests (MoEF), Central Pollution Control Board (CPCB), West Bengal Pollution Control Board (WBPCB) and other environment regulatory agencies.</p> <p>The major responsibilities of the EMS includes:</p> <ul style="list-style-type: none"> Obtaining Consent from WBPCB. Environmental monitoring Analysis of environment data, reports, preparations and transmission of report to statutory authorities, Corporate cell etc. Compliance with guidelines and statutory requirements. Coordination with statutory bodies, functional groups of the unit, Corporate Environment Management Cell Interaction for evolving and implementation of modification programmes to improve the availability / efficiency of pollution control devices / systems. Environmental Appraisal (Internal) and Environmental Audit. <p>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.</p> <p>Tata Power has a separate Environment Management Cell for monitoring environmental activities and statutory compliances in terms of power generation and distribution</p>
xii.	<i>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.</i>
Com	<p>Capital Investment for Environment Control Measure spent in FY21:</p> <ol style="list-style-type: none"> Stationary mechanized Industrial Vacuum cleaning machine procured and installed at Wagon Tippler (under MCRC scheme) – 80 lakhs New Opacity meter (Land make) one number procured – 5.5 lakhs <p>Environmental maintenance and operating cost:</p> <ol style="list-style-type: none"> IVC machine running cost – 85 lakhs / annum Dry fog maintenance and running cost – 15 lakhs/annum Greenbelt development and maintenance cost – 40 lakhs / annum <p>Environment performance monitoring cost – 5 lakhs / annum</p>

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xiii.	<i>The Regional Office of this Ministry at Bhubaneswar / CPCB / WBPCB shall monitor the stipulated conditions. A six monthly compliance report and the monitored data alongwith statistical interpretation shall be submitted to them regularly.</i>
Com	<ul style="list-style-type: none"> • Environment Statement FY 20 had been submitted to WBPCB on 22 September 2020 • Six monthly environmental performance monitoring Report for April 2020 – September 2020 has also been submitted to MOEF, Regional Office, Bhubaneswar via email and hard copy has also been couriered. The same report has been submitted to WBPCB office also.
xiv.	<i>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.</i>
Com	<ul style="list-style-type: none"> • All required information has been intimated to WBPCB while obtaining Consent to Operate. • The validity of Consent to Operate is up to 31 May 2022.
xv.	<p><i>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 http://envfor.nic.in. 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</i></p> <p><i>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 Bhuvanewar.</i></p>
Com	<ul style="list-style-type: none"> ➤ Communication regarding grant of environment clearance were given to the community on 08.03.2008 through newspaper advertisements. Details of which are given below. <ul style="list-style-type: none"> o Financial Express – (English Adv.) / Aajkal – (Bengali Adv.) dated 08.03.2008. ➤ Communication regarding grant of environment clearance for expansion project of Coke Oven Plant from 1.6 MTPA to 2.2 MTPA vide F. No. J-11011//284/2007- IA II (I) were published in the newspapers (TOI, Business Standard, The Telegraph – Kolkata etc) dated 24 February 2018. The compliance of the same was informed to MoEF (Regional Office – Bhubaneswar) through letter dated 11.03.08 by post.

M/s Tata Steel Ltd, Hooghly Met Coke Division, Haldia

Compliance to Conditions stipulated in Environmental Clearance for Coke Oven Plant (1.6 MTPA) & WHRB (120 MW) at Haldia, East Midnapur, West Bengal from MoEF, New Delhi on 29th January, 2007 vide letter# F. No. J-11011//284/07- IA II (I)

Period –October 2020 – March 2021

AMBIENT AIR QUALITY SUMMERY REPORT**ANNEXURE - 1**

Name : M/s. Tata Steel Ltd., Hooghly Met Coke Div.

Address : HFC Complex, Patikhali, Haldia, Purba Medinipur

Ambient Air Quality (Avg)

Parameters	Std ($\mu\text{g}/\text{m}^3$)						
		Near OHC / Canteen	ADM Wall side	Near CCR	In-front of LMC	Near Simplex Gate local neighbourhood	Near Patikhali Gate local neighbourhood
PM₁₀	100	75.8	72.1	84.5	69.6	84.7	72.6
PM_{2.5}	60	42.1	40.3	48.7	43.9	45.2	41.8
SO₂	80	8.1	8.6	7.3	11	8.3	8.7
Nox	80	20.4	38.7	35.6	27.8	41.9	39.8

M/s Tata Steel Ltd, Hooghly Met Coke Division, Haldia

Compliance to Conditions stipulated in Environmental Clearance for Coke Oven Plant (1.6 MTPA) & WHRB (120 MW) at Haldia, East Midnapur, West Bengal from MoEF, New Delhi on 29th January, 2007 vide letter# F. No. J-11011//284/07- IA II (I)

Period –October 2020 – March 2021

ANNEXURE -2**STACK SUMMERY REPORT**

Name : M/s. Tata Steel Ltd, Hooghly Met Coke Div.

Address : HFC Complex, Patikhali, Haldia, Purba Medinipur

Stack monitoring – Manual sampling by registered third party

Month of sampling	Location	Particulate Matter	Sulphur di-oxide (mg/ Nm ³)	NOx (mg/ Nm ³)
Oct-20	Chimney 1 AB	48.9	271.1	198.6
	Chimney 1 CD	43.5	292.5	187.5
	Chimney 2 AB	43.2	310.5	243.3
	Chimney 3 AB	33.6	278.8	201.4
	Chimney 4 AB	35.4	205.5	167.2
Nov-20	Chimney 2 CD	31.4	362.2	178.8
	Chimney 3 CD	47.3	311.9	169.7
	Chimney 3 AB	36.4	297	161.6
	Chimney 4 CD	27	326.7	182.4
	Chimney 4 AB	46.8	344.6	185.6
	Chimney 1 AB	43.5	323.6	198.5
	Chimney 1 CD	38.9	278.8	207.5
Dec-20	Chimney 2 AB	45.5	323.9	205.4
	Chimney 1 AB	39	289.6	168.5
	Chimney 3 AB	41.8	256.2	198.6
	Chimney 3 CD	42.3	316.9	235.4
	Chimney 4 AB	46.2	302.5	201.6
	Chimney 4 CD	38.4	387	248.5
	Chimney 2 CD	36.7	331	208.6
	Chimney 1 CD	25.4	281.2	178.8
Jan-21	Chimney 2 AB	45.5	387.1	192.6
	Chimney 3 AB	41.8	384.8	186.7
	Chimney 4 AB	49.5	339.7	191.6
Feb-21	Chimney 3 AB	46.3	323.3	189.2
	Chimney 1 AB	46.8	361.5	195.7
	Chimney 2 AB	43.6	309.3	187.6
	Chimney 3 CD	41.4	310	186.7
	Chimney 4 CD	45.8	354.5	219.6
	Chimney 2 CD	47.6	326.7	198.4
	Chimney 4 AB	47	245.7	167.5

M/s Tata Steel Ltd, Hooghly Met Coke Division, Haldia

Compliance to Conditions stipulated in Environmental Clearance for Coke Oven Plant (1.6 MTPA) & WHRB (120 MW) at Haldia, East Midnapur, West Bengal from MoEF, New Delhi on 29th January, 2007 vide letter# F. No. J-11011//284/07- IA II (I)

Period –October 2020 – March 2021

Mar-21	Chimney 4 AB	49.4	305.4	189.7
	Chimney 4 CD	43.1	312.5	191.6
	Chimney 3CD	44.9	367	183.7
	Chimney 1AB	33.1	319.6	168.8

STACK PM Level (mg/Nm3) : Online- Opacity meter avg reading

	Chimney 1AB	Chimney 1CD	Chimney 2AB	Chimney 2CD	Chimney 3AB	Chimney 3CD	Chimney 4AB	Chimney 4CD
October 2020	49.8	47.77	32.17	***	34.69	***	38.43	***
November 2020	***	43.52	44.71	***	47.10	***	49.30	36.58
December 2020	49.61	40.20	42.00	48.09	26.89	44.17	44.56	40.98
January 2021	29.35	48.32	***	41.48	37.29	***	***	43.48
February 2021	47.09	***	48.62	47.32	***	***	***	***
March 2021	45.03	***	***	49.37	***	40.22	***	***

M/s Tata Steel Ltd, Hooghly Met Coke Division, Haldia

Compliance to Conditions stipulated in Environmental Clearance for Coke Oven Plant (1.6 MTPA) & WHRB (120 MW) at Haldia, East Midnapur, West Bengal from MoEF, New Delhi on 29th January, 2007 vide letter# F. No. J-11011//284/07- IA II (I)

Period –October 2020 – March 2021

ANNEXURE -3

WATER SUMMERY REPORT

Name : M/s. Tata Steel Ltd, Hooghly Met Coke Div.

Address : HFC Complex, Patikhali, Haldia, Purba Medinipur

MONTH	WATER CONSUMED PER DAY (HMC)	WATER CONSUMED PER DAY (TPC)	TSL (HMC) WATER CONSUMED (CUBIC MTR/MONTH)	TPC WATER CONSUMED (CUBIC MTR/MONTH)
October 2020	1555.87	6092.52	48232	188868
November 2020	1474	6726	44220	201780
December 2020	1603.4	6139.93	48102	184198
January 2021	2181.2	5912.13	65436	177364
February 2021	1735.04	5990.31	48581	173719
March 2021	1357.71	9851.17	38016	285684

M/s Tata Steel Ltd, Hooghly Met Coke Division, Haldia

Compliance to Conditions stipulated in Environmental Clearance for Coke Oven Plant (1.6 MTPA) & WHRB (120 MW) at Haldia, East Midnapur, West Bengal from MoEF, New Delhi on 29th January, 2007 vide letter# F. No. J-11011//284/07- IA II (I)

Period –October 2020 – March 2021

ANNEXURE - 4

AMBIENT NOISE SUMMERY REPORT (DAY & NIGHT)

<u>Location</u>	<u>Day Time Limit: 75 dBA</u>	<u>Night Time Limit: 70 dBA</u>
Blending Bunker	75	68
CCR	58.4	44.9
ADM Building	54.7	43.3
Surrounding Community outside Patikhali Gate	59.2	44.8
Surrounding Community outside Simplex Gate	59.3	45.8