



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

Compliance to Conditions stipulated in 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 23rd February, 2017 vide F. No. J-11011//284/2007- IA II (I)

Period : March 2017 to September 2017




A.	SPECIFIC CONDITIONS
i.	<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.</i>
Com	<ul style="list-style-type: none"> • The On-line stack monitoring, the Opacity meter has 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 ANNEXURE - A . • 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. • The process water quality is being checked manually by accredited 3rd party as and when being discharged. The report is enclosed as ANNEXURE - B
ii.	<i>The ETP for coke oven by-product should be designed to meet EPA notified standards especially the cyanide and phenol.</i>
Com	<ul style="list-style-type: none"> • 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.	<i>Coke oven plant should meet visible emission standards notified by the MoEFCC.</i>
Com	<ul style="list-style-type: none"> • 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 ANNEXURE C.
iv.	<i>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 waste water will be treated in the Sewage Treatment plant.</i>
Com	<ul style="list-style-type: none"> • The treated wastewater is being recycled and used for coke quenching and for green belt development within the plant. • The Sewage Treatment Plant construction is under progress where domestic waste water will be treated. Presently Septic tank is being used for storing the domestic waste water
v.	<i>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.</i>
Com	<ul style="list-style-type: none"> • Coal and coke fines are reused and recycled in the process. • Swamp breeze has been sold to • Used Oil and other hazardous wastes are being disposed to the TSDF, Haldia, authorized by WBPCB in every six monthly.
vi.	<i>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/Nm3 by installing energy efficient technology</i>



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Com	<ul style="list-style-type: none"> The On-line stack monitoring, the Opacity meter has been installed in all 8 number of Chimneys The average emission level is 22.2 mg/Nm³. Online Ambient air monitoring is also being monitored at one location. The last six monthly report is enclosed as ANNEXURE - A
vii.	<p><i>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.</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 2.5 Kilometers of the road inside the material handling area has been paved to reduce the dust generation. The total coal yard (area of 25000 sq. Mt.) has also been concreted in order to prevent the dust generation. Movable water tanker with sprinkling arrangement is used for water sprinkling purpose in the road within factory and in the periphery area and also the mechanised Mobile Vacuum Cleaning system is being used regularly for arresting the fugitive emission 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. <div style="text-align: center;">  </div>



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viii.	<i>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.</i>
Com	<ul style="list-style-type: none"> • 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. • The average SOx level is 317.4 mg/Nm³, the NOx level is 154.9 mg/Nm³ and the PM level is 22.2 mg/Nm³ • The detail six monthly report is enclosed as ANNEXURE – A/1.
ix.	<i>Multi stage 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</i>
Com	<ul style="list-style-type: none"> • Online continuous CO is being monitored in the ambient air. Average CO level is 1.74 mg/m³.
x.	<i>Efforts shall further be made to use maximum water from the rain water 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</i>
Com	<ul style="list-style-type: none"> • Presently 100% water of the rainwater storage pond is being used for coke quenching / road sprinkling / green belt development. For remaining requirement the DM plant blowdown water and cooling tower blowdown water is being reused for coke quenching purpose • Study for enhancing the capacity of rain water harvesting sources will be made once the expansion of the plant will be made.
xi.	<i>A statement on carbon budgeting including the quantum of equivalent CO₂ being emitted by the existing plant operations, the amount of carbon sequestered annually by the existing green belt and the quantum of equivalent CO₂ 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</i>
Com	<ul style="list-style-type: none"> • Under discussion with central Environment Management team of Tata Steel Jamshedpur
xii.	<i>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.</i>
Com	<ul style="list-style-type: none"> • As the unit coke oven batteries are working under negative pressure the working temperature never exceed 40°C. Workers generally works there for cleaning purpose only. It ensures that they never work continuously in that area. • All employees are being provided with proper PPEs and sufficient drinking water facilities are being provided inside the premises
xiii.	<i>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</i>



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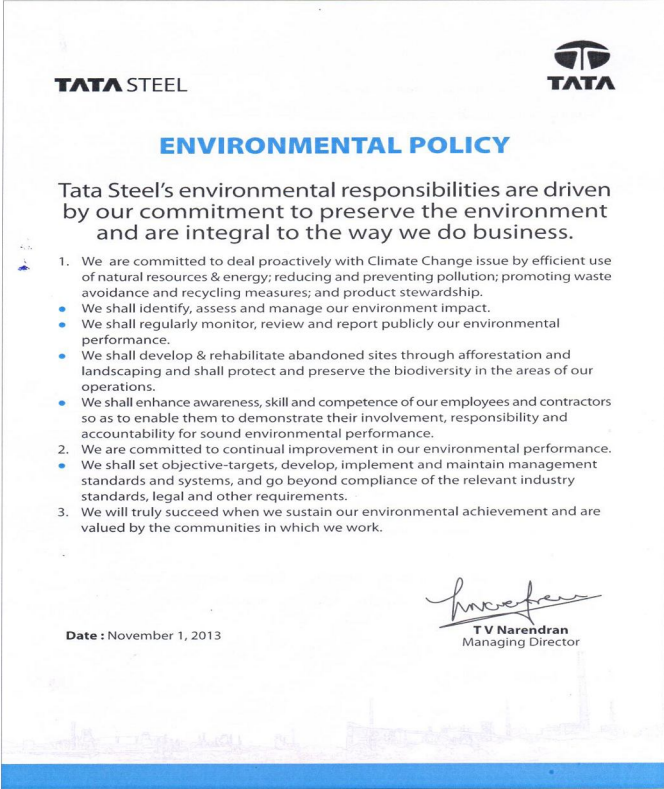
Com	<ul style="list-style-type: none"> Regular waste water and process water testing is being carried out by registered 3rd party. The detail report is enclosed as ANNEXURE B
xiv.	<i>Risk assessment and disaster management plan for the project focusing on Disaster prevention shall be prepared and implemented in conjunction with district Disaster Management plan</i>
Com	<ul style="list-style-type: none"> The unit has separate DMP where all possible emergencies have been identified and mitigation measures have been addressed. Regular mock drills are being conducted on possible emergencies.
xv.	<i>A time bound action plan shall be submitted to reduce solid waste , its proper utilization and disposal</i>
Com	<ul style="list-style-type: none"> 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.
Com	<ul style="list-style-type: none"> The CREP has been implemented by our integrated Tata Steel at Jamshedpur works This unit, a division of Tata Steel, is the stand alone coke making unit only whose product is transferred to JSR H Blast furnace for making the steel. The division follows the Tata Steel CSR policy From FY'17 onwards this division of Tata Steel works on "Focus Area" approach by adopting Villages / Panchayats / Home so that the Socio – economic development can be visible As a part of CSR activity M/S Tata Steel Limited, Hooghly Met Coke (HMC) Division, Haldia has commissioned three numbers of "Drinking Water Projects" to meet the basic need of surrounding community / institutes around HMC at Haldia Under the "ADOPT A HOME" programme, initiated by the Ministry of Women and Child Development, GOI, project initiated at Vivekananda Loksiksha Mondir, Muradpur, Purba Medinipore Community based drinking water project at "Patikhali Village" adjacent to HMC plant At Kumarpur Sub Health Centre , Haldia Block
xvii.	<i>Green belt shall be developed in 33% of plant area . Selection of plant species shall be as per the CPCB guidelines in consolation with the DFO</i>
Com	<ul style="list-style-type: none"> Nearly 18.6 hector area is being considered as Green belt. Total 31222 number of trees are surviving as on date under Tata Steel scope. Approximately 3000 trees are existing within Tata Power scope which adds another 1.4 hector area. Total Green Belt area is 27% 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. The details of the trees planted are given below. Every year plantation done in available space. The detail plantation done till date is enclosed as ANNEXURE : D
xviii.	<i>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.</i>
Com	<ul style="list-style-type: none"> The expansion project has not yet been finalised. The total cost of the project has not yet finalized by top management. This condition will be complied once it is finalised



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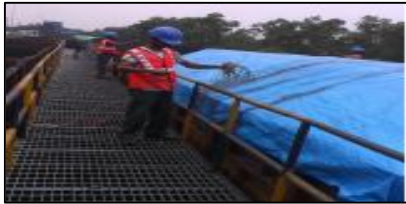
<p>xix.</p>	<p><i>The proponent shall prepare a detailed CSR plan for every year for the next 5 year's for the existing – cum-expansion project, which includes village- wise, sector- wise(Health ,Education, Sanitation, Health, Skill Development and infrastructure requirements such as strengthening of village roads , avenue plantation, etc) activities in consultation with the local communities and administration. The CSR plan will be include 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 year's 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</i></p>
<p>Com</p>	<ul style="list-style-type: none"> • 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.
<p>xx.</p>	<p><i>The company shall submit their policy towards Corporate Environment Responsibility which shall inter-alia address (i) Standard operating process / procedure to being 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 non compliance/ violation environmental norms to the board of directors of the company and/or stakeholders</i></p>
<p>Com</p>	<ul style="list-style-type: none"> • The company possess central environment policy which is applicable at HMC division also <div data-bbox="491 1216 1158 2002" style="border: 1px solid black; padding: 10px; margin: 10px 0;">  <p>The screenshot shows the 'ENVIRONMENTAL POLICY' document from Tata Steel. It includes the Tata Steel logo, the title 'ENVIRONMENTAL POLICY', and a statement: 'Tata Steel's environmental responsibilities are driven by our commitment to preserve the environment and are integral to the way we do business.' Below this is a list of three main points: 1. Proactive climate change management, 2. Continual improvement in environmental performance, and 3. Sustaining environmental achievements. The document is signed by T V Narendran, Managing Director, and dated November 1, 2013.</p> </div>



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xxi.	<i>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</i>
Com	<ul style="list-style-type: none"> • There was no public Hearing / Public Consultation taken place. • Public Hearing was exempted in the TOR condition
xxii.	<i>Haulage roads shall be sprinkled with water at regular intervals for which water tankers with sprinkler arrangement are deployed. Regular sweeping of roads shall be practiced with vacuum sweeping machine or water flushing to minimize dust</i>
Com	<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 and also the mechanised Mobile Vacuum Cleaning system is being used regularly for arresting the fugitive emission <div style="display: flex; justify-content: space-around;">   </div> <ul style="list-style-type: none"> • 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. <div style="text-align: center;">  </div>
xxiii.	<i>Trucks carrying coal and other raw material shall be covered with tarpaulin to prevent spreading of dust during transportation</i>
Com	<ul style="list-style-type: none"> • 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 <div style="display: flex; justify-content: space-around;">   </div>
xxiv.	<i>Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking , mobile toilets, mobile STP, Safe Drinking water , medical health care etc. The housing may be in the form of temporary structures to be removed after the completion of the project</i>
Com	<ul style="list-style-type: none"> • This condition will be complied once the project will be commenced



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B.	GENERAL CONDITIONS
i.	<i>The project authorities must strictly adhere to the stipulations made by the West Bengal Pollution Control Board and the state government.</i>
Com	Complied.
ii.	<i>No further expansion or modification of the plant shall be carried out without prior approval of this Ministry.</i>
Com	Will comply with the conditions. There will be no further expansion without notifying the Ministry
iii.	<i>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 month</i>
Com	<ul style="list-style-type: none"> • Presently one ambient air monitoring station has been constructed. Installation of other stations will be done phase wise. • Six monthly reports will be submitted to SPCB and MOEF , Regional office.
iv.	<i>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</i>
Com	<ul style="list-style-type: none"> • Regular waste water and process water monitoring is being carried out by registered 3rd party. All parameters are within the specified standards prescribed under GSR 422(E). • The detail report is enclosed as ANNEXURE B
v.	<i>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 (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 72.8 – 78.9 dBA. Level (avg) • 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.
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"> • The health surveillance is being done as per Factory Act. The last health chek-up completed in February 2017 for FY'17 where 294 employees have been tested. For FY'18 the checkup is under progress. • Records are maintained at the Occupational Health Centre. • Health check up for contractors persons are conducted regularly by the respective agencies during issuing / renewal of Gate pass.
vii.	<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"> • Rain water harvesting is done. The rain water is being stored in the storm water pond which is used for quenching process.



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<p>viii.</p>	<p><i>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.</i></p>	
<p>Com</p>	<ul style="list-style-type: none"> • The local people are being employed by the company • Trees planted at various places of the town. • • CSR activity for development of the community and society in FY'17 is as follows: <ul style="list-style-type: none"> ○ Drinking Water Facilities at At Patikhali village (adjacent to HMC plant), Haldia Municipality : Community based drinking water project at one point by drilling of a deep bore well and placing of over head tank of 2000 litres supply to local people and nearly 500 people are benefitted ○ Drinking Water Facilities At Vivekananda Lokasiksha Mondir, Muradpur, Chandipur Block : ONE Deep bore well project by which drinking water being catered to the Girls Home and supply water for toilets by providing PVC pipelines, sanitary fittings & over head tank system installed. Nearly 150 girls will be benefitted through this project ○ Drinking Water Facilities At Kumarpur Sub Health Centre, Haldia Block (GOVT. Building) :Construction of One Deep bore well with provision for an extension of drinking water point for the nearby community by placing a PVC tank supply water to the sub centre and community. Average 70 patients every day and nearly 25 families are being benefitted. • The Total Budget allotted for CSR activity FY'17 is Rs. 16.5 Lakhs for Tata Steel Ltd. 	



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- Distribution of ceiling fans to schools based on Mahishadal block, Purba Medinipore, WB



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 (MoEFCC) 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.*

Com

- In HMC, Separate Fund for the FY'17 has been allocated for carrying out continuous water spraying & sprinkling system, mobile vacuum cleaning system, within the plant area for controlling dust, installation & regular maintenance of DF system to control fugitive emission, environment quality monitoring system etc. Fund for Green Belt development and CSR activity have also being allocated which are used in a planned manner.

SI No.	Items	Amount Spent (in FY'17)
1	Water sprinkling on the road for dust suppression	Rs. 12 Lakhs
2	For cleaning/ housekeeping	Rs. 216 Lakhs
3	Installation of DF and Maintenance and spares for Dry Fog system	Rs. 12 Lakhs
4	Green belt maintenance	Rs. 30 Lakhs
5	Environment Parameters monitoring	Rs. 5 Lakhs
	TOTAL EXPENSES	Rs. 275 Lakhs

x. *A copy of clearance latter shall be sent by the proponent to concerned 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.*

Com

- Complied

xi. *The project proponent shall upload the status of compliance of the stipulated environment clearance*



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	<i>conditions, including results of monitored data on their website and shall update the same periodically. It shall simultaneously be sent to the Regional Office of the 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.</i>
Com	<ul style="list-style-type: none"> • Complied
xii.	<i>The project proponent shall also submit six monthly reports on the status of the compliance of the stipulated environmental conditions including results of monitored data (both in hard copies as well as by e-mail) to the regional office of 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.</i>
Com	<ul style="list-style-type: none"> • Six monthly report will be submitted to regional office of MOEFCC and WBPCB on every October and April of the year
xiii.	<i>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.</i>
Com	<ul style="list-style-type: none"> • Environment Audit Report FY 17 had been submitted to WBPCB on 7th September 2017
xiv.	<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 SPCB and may also be seen at website of the Ministry of environment, Forest and Climate change (MoEFCC) 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 should be forwarded to the regional office at Orissa.</i>
Com	<ul style="list-style-type: none"> • Communication regarding grant of environment clearance were given to the community on 24.02.2017 through newspaper advertisements. Details of which are given below. <ul style="list-style-type: none"> ○ Business Standard / Anadabazar Patrika (Bengali Adv.) / TOI dated 24.02.2017. EC copy is available at the website of the MoEFCC
xv.	<i>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"> • Will be informed to Ministry whenever the commissioning job will be started



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

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Period : March 2017 to September 2017

ANNEXURE - A

ONLINE OPACITY METER STACK SUMMERY REPORT (March 2017 – Sept 2017)

MONTH	Chimney 1 AB	Chimney 1 CD	Chimney 2 AB	Chimney 2 CD	Chimney 3 AB	Chimney 3 CD	Chimney 4 AB	Chimney 4 CD
Mar-17	NA	16	14	16	21	30	19	22
Apr-17	NA	16.33	22.65	15.68	20.16	32.41	36.81	19.1
May-17	17	15	25	15	15	22	27	24
Jun-17	18	18	27	14	16	26	22	31
Jul-17	14	16	29	14	16	34	29	25
Aug-17	19	17	29	13	11	33	32	21
Sep-17	18	16	28	15	11	32	43	23

ANNEXURE – A/ 1

STACK SUMMERY REPORT BY 3rd PARTY (March 2017 – Sept 2017)

Date of sampling	Location	Particulate Matter	SOx	NOx
01.03.2017	Chimney 1AB	25	411.3	195.6
02.03.2017	Chimney 1CD	41	559.7	216.5
02.03.2017	Chimney 2AB	51	494.3	157.8
05.04.2017	Chimney 3CD	30	433.4	182.6
05.04.2017	Chimney 3AB	29	394.4	174.8
06.04.2017	Chimney 2CD	22	424.3	178.5
10.05.2017	Chimney 1AB	27	406.6	165.7
10.05.2017	Chimney 1CD	53	341.5	127.1
10.05.2017	Chimney 2AB	41	363.3	178.5
07.06.2017	Chimney 3AB	34	367.6	154.4
07.06.2017	Chimney 3CD	28	343.7	121.6
08.06.2017	Chimney 2CD	33	284.3	11.9
08.06.2017	Chimney 2AB	39	222.4	102.8
06.07.2017	Chimney 1AB	10	227.2	120.8
06.07.2017	Chimney 1CD	13	287.7	143.6
07.07.2017	Chimney 4AB	51	387.6	169.9
10.08.2017	Chimney 3AB	45	265.1	176.6
10.08.2017	Chimney 3CD	47	256.9	169.6
11.08.2017	Chimney 2AB	46	242.6	167.3
11.08.2017	Chimney 2CD	48	279.4	171.3
04.09.2017	Chimney 1AB	44	277.9	176.7
04.09.2017	Chimney 1CD	44	296.7	193.9
05.09.2017	Chimney 2AB	32	286.3	181.8
05.09.2017	Chimney 2CD	48	276.6	185.3



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Period : March 2017 to September 2017

ANNEXURE - B

Process water Quality

Mitra S. K. Private Limited
Pagladanga Road, P-46, Udayan Industrial Estate, Kolkata 700015. Tel. : 91 33 23230072. Fax: 91 33 23230078. Email : mitra@skp.com Website : www.mitrask.com

MSK TESTING + INSPECTION T-2303

TEST REPORT

Name & Address of the Customer :
Tata Steel Limited
HMC Div, P.O- Haldia Refinery,
Purba Medinipur-721606.

Report No. : C/ENV/P&E/17-18/42
Date : 18.05.17
Sample No. : MSK/KOL/ENV/P&E/17-18/42
Date of receipt of sample : 10.05.17
Date(s) of performance : 10.05.17-18.05.17
Ref. No. & Date : NA

I hereby certify that the following sample drawn by us from the customer has been analyzed with the following results:

1.	Description of sample (As declared by customer)	: Effluent Water
2.	Sample Mark (if any, given by the customer)	: NA
3.	Date of sampling	: 09.05.17
4.	Place of sampling	: Outlet - I (Near Patikhali Gate)
5.	Environmental conditions during sampling	: NA
6.	Sampling Plan & Procedures used	: APHA 22 nd edition, 2012, 1060B,C

Report prepared by:
Signature : *Asim*
Name : Asim Kumar Jana
Designation : Office Assistant

for Mitra S. K. Private Limited
Signature : *Blat*
Name : Bodhisatta Maiti
Designation : Technical In Charge
Authorized Signatory

* The results relate only to the item(s) tested.
* This Test Report shall not be reproduced except in full, without the permission of Mitra S.K. Private Limited.
* The reserved part of sample(s), except particulate sample(s), shall be retained for 15 days & 1 year (1yr) from the date of issue of the Test Report.
* Microbiological sealed pack water sample(s) shall be retained for 15 days & 1 year (1yr) from the date of issue of the Test Report.

Head Office- Shraichi Centre (5th floor), 74B, A.J.C. Bose Road, Kolkata - 700 019, West Bengal, India.
Tel. : 91 33 40143000 / 22650006 / 22650017 Fax : 91 33 22650009
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Mitra S. K. Private Limited
Pagladanga Road, P-46, Udayan Industrial Estate, Kolkata 700015. Tel. : 91 33 23230072. Fax: 91 33 23230078. Email : mitra@skp.com Website : www.mitrask.com

MSK TESTING + INSPECTION T-2303

Report No. : C/ ENV/P&E/17-18/42
Sample No. : MSK/KOL/ENV/P&E/17-18/42

Analysis Result

Sl. No.	Test Parameter	Test Method	Result
1	pH at 25°C	APHA 22 nd edition, 4500-H+B	6.23
2	Colour in Hazen	APHA 22 nd edition, 2120B-2012	<1.0
3	Odour	APHA 22 nd edition, 2150B-2012	Unobjectionable
4	Total Suspended Solid as TSS in mg/l	APHA 22 nd edition, 2540D-2012	22
5	Temperature °C	IS 3025 (Part 9)-1984; RfM:2012	28
6	Oil & Grease in mg/l	APHA 22 nd edition, 5520B-2012	<1.4
7	NH ₃ -N in mg/l	APHA 22 nd edition, 4500 NH ₃ -F-2012	<0.1
8	TKN in mg/l	APHA 22 nd edition, 4500 N _{am} -B-2012	<0.3
9	Free NH ₃ in mg/l	APHA 22 nd edition, 4500 NH ₃ -F-2012	<0.1
10	Bio-Chemical Oxygen Demand as BOD in mg/l	APHA 22 nd edition, 5210B-2012	6.4
11	Chemical Oxygen Demand as COD in mg/l	APHA 22 nd edition, 5220B-2012	32
12	Arsenic in mg/l	APHA 22 nd edition, 3114 C-2012	<0.01
13	Sulphide as S ²⁻ in mg/l	APHA 22 nd edition, 4500 S D-2012	<0.1
14	Vanadium as V in mg/l	APHA 22 nd edition, 3111D-1113B-2012	0.63
15	Dissolved Phosphate as P in mg/l	APHA 22 nd edition, 4500P-B-D-2012	<0.023
16	Fluoride as F in mg/l	APHA 22 nd edition, 4500F-C-D-2012	0.24
17	Iron as Fe in mg/l	APHA 22 nd edition, 3500 Fe B-2012	0.79
18	Mercury as Hg in mg/l	APHA 22 nd edition, 3112B-2012	<0.001
19	Cadmium as Cd in mg/l	APHA 22 nd edition, 3111B-2012	<0.001
20	Zinc as Zn in mg/l	APHA 22 nd edition, 3111B-2012	<0.02
21	Lead as Pb in mg/l	APHA 22 nd edition, 3111B-2012	<0.005
22	Nickel as Ni in mg/l	APHA 22 nd edition, 3111B-2012	<0.02
23	Copper as Cu in mg/l	APHA 22 nd edition, 3111B-2012	<0.02
24	Manganese as Mn in mg/l	APHA 22 nd edition, 3111B-2012	<0.02
25	Hexavalent Chromium as Cr+6 in mg/l	APHA 22 nd edition, 3500 Cr B-2012	<0.01
26	Phenolic compounds (as C ₆ H ₅ OH)	APHA 22 nd edition, 3114C-2012	<0.01
27	Cyanide in mg/l	APHA 22 nd edition, 3111D-2012	<0.02
28	Nitrate Nitrogen in mg/l	APHA 22 nd edition, 4500NO ₃ -E-2012	0.6
29	Total Dissolved Solids in mg/l	APHA 22 nd edition, 2540C-2012	3860
30	Total Chromium in mg/l	APHA 22 nd edition, 3111D-2012	<0.01
31	Conductivity in µS/cm	APHA 22 nd edition, 2510B-2012	6570
32	Total residual chlorine in mg/l	IS 3025 (Part 26)-1986; RfM:2009	<0.1
*33	Particle size of suspended solids in mg/l	IS 24 88 (Part 5)-1976; RfM:2009	Passes through 850micron IS sieve

*This parameter is not in NABL Scope

Report prepared by:
Signature : *Asim*
Name : Asim Kumar Jana
Designation : Office Assistant

for Mitra S. K. Private Limited
Signature : *Blat*
Name : Bodhisatta Maiti
Designation : Technical In Charge
Authorized Signatory

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ANNEXURE - C

ONLINE AMBIENT AIR MONITORING SUMMERY REPORT (March 2017 – Sept 2017)

Ambient Air Quality Continuous Monitoring Data : Location : QC Lab

Parameter	PM10 (µg/m ³)	PM2.5 (µg/m ³)	SO ₂ (µg/m ³)	NO (µg/m ³)	NO ₂ (µg/m ³)	NO _X (µg/m ³)	CO (mg/m ³)
Limit	100	60	80	80	80	80	2
Mar-17	88.85	47.78	1.58	0.73	9.87	10.3	1.27
Apr-17	78.76	19.39	0.7	0.38	6.56	6.81	1.66
May-17	79.08	24.02	0.54	0.03	4.08	5.02	1.32
Jun-17	65.42	21.03	0.52	0.58	6.35	6.87	1.99
Jul-17	75.84	18.26	0.96	0.98	6.39	7.23	1.54
Aug-17	43.92	15.37	0.89	1.38	6.22	7.57	2.13
Sep-17	36.09	71.66	1.16	0.95	9.94	10.71	NA



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Details of Tree Plantation at HMC Site:

ANNEXURE - 5

Sl. No.	Location	Existing numbers
1	Tippler Side along the boundary wall	1326
2	Patikhali canal - both side	1423
3	Wagon Loader - Across boundary wall	3253
4	Simplex Gate	1558
5	Back side of Scrap yard	350
6	Coke Yard	2053
7	Central Avenue surrounding	1397
8	CCR surrounding area	1252
9	Patikhali Main gate to watch tower & east boundary wall	465
10	Near TPC ADM building	250
11	Hooghly Road	187
12	Boiler surrounded area	1700
13	Back side of new ADM building	385
14	Western Avenue Road both side, south side wall and in front of CCSS	1500
15	Around Storm water pond	980
16	"Green Haldia : Clean Haldia" project	1000
17	Trees planted near weigh bridge / across the road at the southern part of the plant	527
18	Boiler surrounding area in all 4 rows	2300
19	Chimney surrounded area	1200
20	Row#2 and 3 Quenching surrounded area	3200
21	Back side of Canteen / OHC / rest room	900
22	Water Storage Tank surrounded area	418
23	End of CL#4 & Surrounding	223
24	South side boundary wall	1400
25	Plantation done by Tata Power	1975
TOTAL		31222