Annexure II

COMPLIANCE CONDITIONS OF File No J-11011/166/2011-IA-II (I) dated 21st November 2012.

Sub: Expansion from 3.0 MTPA to 5.0 MTPA Integrated Steel Plant along with installation of Pellet Plant - 4.0 MTPA and 300 MW Captive Power Plant at Geethapuram, Village Dolvi, Tehsil Pen, District Raigad in Maharashtra by M/s JSW Steel Limited.

Ref: Environmental Clearance for expansion of integrated steel plant from 3 to 5 MTPA vide letter No J-11011/166/2011-IA-II (I) dated 21st November 2012 & vide letter No J-11011/76/2013-IA II(I), dated July 30, 2015.

Sr. No.	ENVIRONMENTAL CLEARANCE CONDITIONS	COMPLIANCE STATUS
1	Waste gases from Blast furnace and coke ovens will be utilised for power generation. Fugitive emissions from raw material handling section will be suppresses by dry fogging system / water sprinkling.	**Complying with** • Waste Gas from Blast Furnace (BF) and Coke Oven Gas (COG) is used in 55 MW Captive Power Plant and other plants as fuel. • Gas Holders provided for storing the Coke Oven Gas, LD and BF Gases. Gas Holder will help the steady network flow for distribution of gas in constant pressure (Operating pressure 996 mmWC. Also it helps to proper utilization of waste gases. Total CO2 Savings will be approximately 660000 Ton of CO2 per year. Energy saving approximate 1 Million Gcal/Year. Total cost for both gas holders is Rs 86.97 (Rs 33.2 Crores + Rs 53.77 Crores) • **De-dusting System with Bag filters** at Junction houses of raw material handling section in Blast Furnace and Coke Oven Plants. De-dusting System with Bag filters at

		Stock House - 2 Nos Cast house fume extraction system with Bag Filters • **Dust suppression by dry fog systems / water spraying systems** provided at Raw Material Handling Section (RMHS) and other applicable areas. • All conveyors and Junction houses of Raw Material Handling systems are closed system. • Total Investment on Yard sprinklers, De-dusting system and Dry fogging system Rs 77.29 Crores Details of covered shed for storage of Raw Material; • Covered shed for Jetty yard-A with a capacity of 110,000MT for Coal Storage • Covered shed for Jetty yard-B with a total capacity of 305,000 MT for Iron Ore and Flux. • Covered Sheds (2 Nos) for Pellet and Coke Storage of Capacity-1,20,000 MT each. • Covered shed for storing Iron Ore Bearing Material and Flux is in progress. Capacity 4,27,000 MT Total expenditure on cover shed is approximately 320 Crores. <u>Environmental Benefits of Covered Shed:</u> • No fugitive emission during handling of material • No water contamination during rains • No spillage of material on roads • Covered storage shed will prevent dust emission in the environment during operation of the yard. To control the fugitive emissions in Coke Oven Plant, following Control Measures are provided; • Bag Filters for coal crushing & mixing

		station & route • Ground De-dusting system with Bag Filters – connected to charging and pushing, primary crusher, coke cutter, secondary coke crusher area • Bag Filters for coke screen house & Silo. • Dust suppression system at all the transfer points, coal handling and coke handling route. **Hence the condition has been complied**
2	The makeup water requirement for the proposed expansion will be 2,590 m^3/day and the existing consumption is 833.3 m3/day, which shall be sourced from the State Water Resources Dept. from Nagothane dam at K.T. Bandhara. Maximum recycling of wastewater will be done after treatment to achieve zero discharge. Treated wastewater will be used for dust suppression and green belt development. Effluent streams such as cooling tower blow down, floor washings etc. will be used for fugitive dust suppression, water sprinkling etc. Sewage will be treated in septic tanks. Bag filter dust will be recycled in the process. Blow down water from power plant will be reused in steel melting shop slag yards for spraying on hot slag. Blow down water from Blast furnace recirculation system will be reused in the slag granulation plant as make up water to SGP recirculation water system. Treated waste water from coke oven by products plant will be used in the system itself.	**Complying with** • The makeup water requirement for the proposed expansion is limited to 2590 m3/hr (inadvertently mentioned as m3/day) besides the existing consumption for 3 MTPA plant • The water is sourced from the Nagothane dam at K.T. Bandhara as per the allocation from the Water Resources Department of Maharashtra. • Treated waste water & cooling tower blow down (CTBD) are used for dust suppression, slag cooling & plantation. There is no waste water discharge form the plant. • Sewage is treated in septic tanks & STPs & reused for gardening. • Bag Filter dust is recycled & reused in the process of Sinter & Pellet Making. • Blow down of power plant is used in SMS slag recovery plant for dust suppression. • Blow down water from Blast furnace 1 recirculation system is reused in the slag granulation plant (SGP) as make up water to SGP recirculation water system. • Treated water from Coke oven by-product is used in coke quenching **Hence the condition has been complied**

3	BF slag will be granulated and used for cement manufacturing. Slag from SMS production will be used in the sinter plant, in land / road / area development or for manufacturing of insulated bricks etc. Mill scale, flue dust from the blast furnace, dust from the bag filters will be used in Sinter plant. All pumps and motors will be selected from less noise generating types. Ear plugs will be provided to employees working in high noise prone areas. DG set will be provided with silencer.	• 100% granulated slag of Blast furnace - 1 is used in Cement Plant for making of Cement in JSW Group Company. • SMS- EAF slag is used in the sinter plant, in internal roads / land reclamation, area and construction of concrete structures and road construction in National Highways. • Mill scale, flue dust from Blast Furnace 1, dust from Bag Filters used in Sinter plant. • GCP dust from SMS 1 is used in Sinter Plant and Pellet plant • Low noise level pumps and motors are used. • Ear plugs / Ear muffs provided to all employees working in high noise prone areas. • DG sets having provided with silencer. **Hence the condition has been complied**
4	All the integrated steel plant are listed as S. No 3 (a) as Primary Metallurgy Industries under category A of the Schedule of EIA Notification 2006 and appraised by the Expert Appraisal Committee (Industry-I) of MoEF.	**Complying with** As per the EIA Notification 2006 and as per the EC conditions stipulated by MoEFCC for integrated steel plant listed as S.No 3 (a) as Primary Metallurgy Industries under category A
5	The proposal was considered by the expert Appraisal Committee -1 (industry) in its 37th Meeting held during 14th and 15th June 2012. The Committee recommended the proposal for Environmental clearance subject to stipulation of specific conditions along with other environmental conditions. Public hearing was conducted on 28.02.2012.	**Industry is complying with** all the general conditions and specific conditions stipulated in the Environment Clearance. Complied the points raised during Public Hearing.
6	Based on the information submitted by you, presentation made by you and consultant, M/s. MECON Limited., Ranchi, the Ministry of Environment and Forests hereby accords Environmental clearance to the above project under the provision of EIA Notification dated 14th September 2006 subject to strict compliance of the following specific and general	**Industry is complying** the general conditions and specific conditions stipulated in the Environment Clearance under the provision of EIA Notification 2006.

	conditions.	
Specific Conditions;		
i	Measures shall be undertaken to mitigate particulate levels in the ambient air and a time bound action plans shall be submitted. On-line ambient air quality monitoring with proper O&M and continuous stack monitoring facilities for all the process stacks shall be provided and sufficient air pollution control devices viz. Electrostatic precipitator (ESP), gas cleaning plant, scrubber, bag filters etc. shall be provided to keep the emission levels below 50 mg/Nm3 by installing energy efficient technology.	**Complied** • Adequate dust control measures (Bag filters, ESPs, Venturi Scrubbers, Cyclones) have been provided to all the units to mitigate particulate levels in the ambient air quality. Environmental monitoring parameters are well within the prescribed standards as per the Consent granted by MPCB. • Five Continuous Ambient Air Quality Monitoring stations have been installed in consultation with MPCB. All these stations are connected to URL of MPCB & CPCB & data is being transmitted online on real time basis for PM2.5, PM10, SO2, NOx & CO with proper O&M • Continuous Stack Emission Monitoring systems are installed at all major stacks (Process stacks) & connected to URL of MPCB & CPCB & data is being transmitted online on real time basis. • Electrostatic precipitator (ESPs), gas cleaning plants, scrubbers, bag filters etc. are provided to all units & PM levels are well within the prescribed norms as per MPCB Consent conditions.
ii	As proposed, Electrostatic precipitator (ESP) shall be provided to sinter / Pellet plant, WHRB, DE Plants and dust catcher followed by venturi scrubbers to blast furnace to control SPM levels within 50 mg/Nm3. Fume extraction system shall be provided to induction furnaces to control the emissions within the prescribed standards.	• Electrostatic precipitator provided in Blast Furnace 1, Sinter Plants & Pellet plant, • Cast House Fume Extraction System, Waste Heat Recovery Boiler (WHRB), Dust Extraction System and dust catcher followed by venturi scrubbers, de-dusting system with bag filters in stock houses in Blast Furnace are provided. • The emission level from the stacks are well within the prescribed standards. The Copy of the Six Monthly Stack Emission Monitoring Report is attached

		herewith in **Annexure 1** • JSW Steel Ltd., Dolvi, there is no Induction Furnace installed, however in Steel Melting Shop 1, Electric Arc Furnace (EAF) connected with - Gas Cleaning Plants (4 Nos) with bag filters provided with primary and secondary fume extraction systems. The emission level is well within the prescribed standards. The existing Gas Cleaning plants (GCPs 1, 2 &3) were modified and the guaranteed parameters of PM level in stacks are < 50 Mg/Nm3. **Hence the point is being complied**
iii	The National Ambient Air Quality Standards issued by the Ministry vide G.S.R. No. 826 (E) dated 16th November, 2009 shall be followed.	**Complied** On line Ambient air quality monitoring system (5 Nos) installed in the plant for the parameters PM10, PM2.5, SO2, NOx, CO and the data is uploaded in the CPCB and MPCB servers.
iv	Gaseous emission levels including secondary fugitive emissions from all the sources shall be controlled within the latest permissible limits issued by the Ministry and regularly monitored. Guidelines/Code of Practice issued by the CPCB shall be followed. New standards for the sponge iron plant issued by the Ministry vide G.S.R. 414 (E) dated 30th May, 2008 should be followed.	**Complying with** Adequate measures have been taken to control the gaseous emission levels. • Secondary fugitive emissions at Blast Furnace 1 - Cast House de-dusting system with Bag filters, Stock House de-dusting system with Bag filters. • Gas Cleaning Plants (4 Nos) for Electric Arc Furnace (EAF) of Steel Melting Shop (SMS – 1) from all the sources and are well within the permissible limits issued by the Ministry and regularly monitored. • A new standard for the sponge iron plant issued by the Ministry vide G.S.R. 414(E) dated 30th May, 2008 is being followed. As per the new guidelines of Sponge Iron Plant, the monitoring for stack emissions, work place monitoring etc. are carried out and the reports are within the CPCB

		norms.
v	Total makeup water requirement for expansion shall not exceed 2,590 KLD. Efforts shall further be made to use maximum water from the rain water harvesting 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. All the effluent should be treated and used for ash handling, dust suppression and green belt development. No effluent shall be discharged and 'zero' discharge shall be adopted. Sanitary sewage should be treated in septic tank followed by soak pit.	**Complying with** • The makeup water requirement for the proposed expansion is within the water allocated and less than 2590 m3/hr. • Roof Top Rain water harvesting system have been implemented. • Closed circuit cooling towers are provided to optimize water consumption. • All effluent is treated & recycled in the process and reused in slag cooling, dust suppression & plantation purpose. • No waste water is discharged to outside the plant premises except run off during monsoon. • Septic tank followed by soak pits provided in all plant areas. • Sewage Treatment Plants (STP) 3 Nos provided for treatment of sewage. The treated sewage water is used for gardening.
vi	Efforts shall be made to make use of rain water harvested. If needed, capacity of the reservoir should be enhanced to meet the maximum water requirement. Only balance water requirement shall be met from other sources.	**Complying with** • Roof top Rain water harvesting system has been established (at 12 various buildings of Oxygen Plant, Coke Oven, Power Plant, MRSS and Admin.) • The harvested rain water is being used in the cooling towers as make up water. • Since the water table is very high, therefore recharging ground water table is not feasible.
vii	Regular monitoring of influent and effluent surface, sub-surface and ground water (including chromite) should be ensured and treated wastewater should meet the norms prescribed by the State Pollution Control Board or described under the E (P) Act whichever are more stringent. Leachate study for the effluent generated and analysis shall also be regularly carried out and report submitted to the Ministry's Regional Office at Bhopal, SPCB and	**Complying with** • Regular monitoring of influent and effluent surface, sub-surface is being done by MoEFCC approved and NABL accredited labs & the results of all parameters are well within the prescribed standards. The plant is not using any ground water. • Analysis reports are submitted to the

	CPCB.	Regional Office, MoEF&CC, MPCB & CPCB on regular basis. All monitoring reports are submitted as per guidelines to; • MPCB - Once in three months, also as & when required, • MOEF&CC, Nagpur & Delhi – Once in Six month, • CPCB, New Delhi – Monthly basis
viii	The water consumption shall not exceed as per the standard prescribed for the steel plants.	Water consumption is well within the prescribed norms & CREP guidelines for the steel plants (less than 5 m3/ton of crude steel) Specific water consumption for the steel plant for 2023-24 (up to March 2024) is 2.49 M3/TCS **Hence the point is being complied**
ix	Vehicle pollution due to transportation of raw material and finished products shall be controlled. Proper arrangements shall also be made to control dust emissions during loading and unloading of the raw material and finished product.	**Complying with** • Transportation of raw material is mainly through sea route to captive jetty and further to the steel plant via closed conveyors. • Rs 320 Crores have been spent for covered shed for storage of raw material like coal, Iron Ore and Flux at Jetty & Raw Material storage yard to control the dust emission. • Transportation of finished products is mainly by rail. • Adequate dust suppression systems have been provided to control dust emissions during loading and unloading of the raw material and finished product. Dust Suppression such as; - Dry Fog System / Water spraying in junction houses / Transfer Towers at Raw Material Handling System (RMHS) & other units. - All the Junction houses and Conveyors are covered to avoid fugitive emissions while transfer of material through conveyor.

x	All internal roads shall be black topped. The roads shall be regularly cleaned with mechanical sweepers. A 3 tier avenue plantation using native species shall be developed along the roads.	**Complying with** • All internal roads are concreted & Vacuum based road sweeping machines (6 Nos) and mist type mobile water tankers (2 Nos) are provided for control of road emissions. • Avenue plantation using native species have been planted along the roads.
xi	Proper handling, storage, utilization and disposal of all the solid waste shall be ensured and regular report regarding toxic metal content in the waste material and its composition, end use of Solid/hazardous waste should be submitted to the Ministry's Regional Office at Bhopal, SPCB and CPCB.	**Complying with** Proper handling, storage, utilization and disposal of all the solid wastes like Iron ore fines, coke fines, fluxes and scales generated from the plant is used in Sinter Plants & Pellet Plant. Material have been shifted through conveyor, closed bulkers and loaded by pneumatic conveying system. The report of Solid wastes and Hazardous wastes generation and disposal are regularly submitted as mentioned below. • MPCB - Once in three months, also as & when required, • MOEF&CC, Nagpur & Delhi – Once in Six month, • CPCB, New Delhi – on Monthly Basis.
xii	Proper embankment shall be provided for the sludge disposal area.	**Complying with** • Proper embankment provided to contain sludge at all generating points- Sponge Iron Plant, Blast Furnace 1 and Hot Strip Mill 1. • Sludge generated from the Effluent treatment plants (Sponge Iron Plant, Blast Furnace, are used in sinter making & Pelletization process. • In sludge handling areas filter press and vacuum drum filters installed at Sponge Iron Plant, Hot Strip Mill and Blast Furnace.

xiii	Risk and Disaster Management Plan along with the mitigation measures shall be prepared and a copy submitted to the Ministry's Regional Office at Bhopal, SPCB and CPCB within 3 months of issue of environment clearance letter.	Risk and Disaster Management plan is prepared and has been already submitted to MoEF&CC along with EIA Report
xiv	As proposed, green belt shall be developed in 33 % of plant area as per the CPCB guidelines in consultation with the DFO.	Green belt is being developed as per the further amendment in EC obtained dtd 16.06.2020. **Green Belt within Plant**: Presently, 13% green belt is developed over 18.00 ha land within the plant premises with 2,11,388 nos of trees. Balance 18.42 Ha (3%) green belt area is to being developed with 46,200 nos of trees. Green belt developed with tree density 2500 trees/hectare and local species. **Green Belt Outside Plant in 10 Km area**: Green belt outside the plant premises has been developed over 203.00 Ha i.e. 33 % as per EC. Green belt outside the plant premises is developed in forest land in proximity of the plant area in consultation with local forest department over 51 Ha land and Mangrove Plantation over 152.00 Ha. **Hence, Condition is complied**.
xv	All the recommendations made in the Charter on Corporate Responsibility for Environment Protection (CREP) for the Steel Plants should be implemented.	**Complying with** The recommendations made in the Charter on Corporate Responsibility for Environment Protection (CREP) for the steel plants are implemented. • Coke oven plant – Tar sludge / ETP sludge are reused in the Coking process. • Blast Furnace – Energy recovery of top blast furnace gas is being done with power generation through TRT by using top pressure of BF gas. • Coke Oven Plant - Coke Dry Quenching

		systems (3 Nos) (CDQ) installed and recover the sensible heat of red hot coke, reduce energy consumption and pollution and improve the quality of coke. Each CDQ will reduce water consumption by 1920 m3/day and energy of 70 MW will be recovered along which will reduce the CO2 emissions by approx. 10.9 Lac.t CO2eq • Steel Melting Shop (SMS), secondary de-dusting system (Gas Cleaning Plants 4 Nos) has been installed to control fugitive emissions • Coal Injection Plant for direct injection of pulverized coal in furnace has been implemented. Present rate of CDI in our Blast Furnace is 200 Kg/THM (average for the year 2023-24). • Blast Furnace Slag (BF) Slag- 100% utilized in Cement plant. • Electric Arc Furnace Slag (EAF) slag- 100 % for construction activities, land filling in the low lying areas of expansion projects and is also being used for internal road making and Concrete and asphalt roads. • Presently Steel slag is used as aggregates for construction roads in National Highways with coordination with Central Road Research institute (CRRI), New Delhi. • Cast House Fume extraction system inclusive of tap holes, runners, skimmers, ladle and charging points have been provided to control Fugitive emissions from Blast Furnace. • The specific water consumption for the year 2023 – 24 (April to March 2024) was 2.49 m3/t of crude steel which is well below the targets for flat products and as well as for long products. • Online Stack Monitoring System

		have been installed on all major stacks (33 Nos) and 5 Nos Online Ambient Air Quality Monitoring System. The real time data is interlinked with MPCB and CPCB server.
xvi	The company shall adopt well laid down corporate environment policy and identified and designate responsible officers at all levels of its hierarchy for ensuring adherence to the policy and compliance with environmental clearance, environmental laws and regulations.	**Complied** Environment Policy is in place and being complied in adherence to Environmental Clearance, Environmental Laws and Rules and Regulations.
xvii	All the commitments made to the public during the Public Hearing / Public Consultation meeting held on 28th February, 2012 should be satisfactorily implemented and a separate budget for implementing the same should be allocated and information submitted to the Ministry's Regional Office at Bhopal.	**Complying with** The commitments made to the public during the Public Hearing / Public Consultation meeting held on 28th February, 2012 is being implemented and a separate budget is maintained for implementing the projects/ issues under CSR activities. In 2023-24 the industry has spent Rs 13.42 crores on CSR activities. **Following are the activities carried out in 2023-24:** **Education:** UDAAN Scholarship, School Infrastructure Development and ASPIRE – Life Skills **Distribution of School Infrastructure and skills enhancement:** **JSW UDAAN Scholarship:** **JSW ASPIRE Project**: **Health & Nutrition:** Adolescents Health & MCH Program, Care & Support to Migrating Population, Vision Care, Community Health Camps. Under this scheme JSW Steel is doing Quality & affordable healthcare services and Maternal & Child Health Care and Non Communicable diseases Control &

		rehabilitation of differently able. **Health & Wellness initiatives taken at Sanjeevani Hospital:** • The hospital covers 4.5 Acres Land and provided 73 BEDS and 10 OPDS with ICU, PICU and NICU, Maternal & Child Health Care • The facilities with services available in the Sanjeevani hospital is provided Intellectual Disability, Eye Care Services, Heart Surgeries, CT SCAN, USG, ECHO , X RAY, Knee replacement **Community Development:** Development of Rural Infrastructure and Linkage with Livelihood, Community Care, Road & Domestic Safety, Pathways & Roads, Community Halls Illumination and Govt. Schemes convergence. 15 Gram panchayats, 33 villages and more than 52000 peoples benefitted though this activities. Constructed 12 Community Buildings and 8 KM Road & Pathways in the nearby villages. **Natural Resource Management:** Water Projects: Drinking & Domestic and Mangrove restorations **Water, Environment & Sanitation scheme provided the** Water Resource through laying of pipelines at 33 villages. Provision of HDPE tanks, Roof rain water harvesting systems, Community Ponds, Pipelines, Elevated storage reservoir, Ground water reservoir, Check Dams, Bunds, Filtration units.
xviii	At least 5 % of the total cost of the project should be earmarked towards the Enterprise Social Commitment based on Public Hearing issues and item-wise details along with time	**Complying with** CSR activities in various sectors are being done in the surrounding villages and a

	bound action plan should be prepared and submitted to the Ministry's Regional Office at Bhopal. Implementation of such program should be ensured accordingly in a time bound manner.	time bound action plan for various CSR activities have been submitted to MoEF&CC as per EAC recommendation of 2.5% of project cost. **Amount spent on CSR Activities:** For 2023-23 (April to March 2023): Rs 13.42 Crores. The above amount has been spent on Social Development- (Education & Training), Skill Development, Water and Sanitization, Agriculture, Rural Development, Health, Solid Waste Management and Community Development.
xix	The company shall provide housing for 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, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.	**Industry has Complied the conditions** during installation and commissioning of the plant. Provided housing for labour within the site with all necessary Infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STPs, safe drinking water, medical health care, crèche etc. After completion of the project activities the temporary structures have been dismantled and removed.
General Conditions:		
i	The project authorities must strictly adhere to the stipulations made by the Maharashtra State Pollution Control Board and the state government.	**Complied** All the terms & conditions stipulated by Maharashtra Pollution Control Board (MPCB) and State Government are being followed.
ii	No further expansion or modification in the plant shall be carried out without prior approval of the ministry of Environment and Forests.	**Complied** As per the EC conditions, expansion or modifications of the plant was done. Industry has done in all expansion activities after obtaining prior Environmental Clearance from MoEF&CC.
iii	The gaseous emission from various process units shall conform to the load/mass based standards notified by this ministry on 19th may, 1993 and	Adequate Air Pollution Control measures have been provided to each unit of the plant and the Gaseous emissions from

	standards prescribed from time to time. The State Boards may specify more stringent standards for the relevant parameters keeping in view the nature of the industry and its size and location.	the process units are well within the prescribed standards as notified by the Ministry. Complied the Consent conditions as per the Maharashtra Pollution Control Board under The Air Act, The Water Act and Hazardous Waste Management & handling and Transboundary Rules. **Hence the point is being Complied**

iv	At least four ambient monitoring stations should be established in the downward direction as well as where maximum ground level concentration of PM10, 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 Bhopal and the SPCB/CPCB ones six months.	**Complying with**
		• Five Continuous Ambient Air Quality Monitoring stations have been installed in consultation with MPCB. All these stations are connected to URL of MPCB & CPCB & data is being transmitted online on real time basis for PM2.5, PM10, SO2, NOx & CO.
		
		• 33 Nos. Continuous Stack Emission Monitoring systems for plants under 5 MTPA (Phase I) are installed at all major stacks & connected to URL of MPCB & CPCB & data is being transmitted online on real time basis**.**
		
		• Data on Stack Emission, Ambient Air Quality and Work Environment Air Quality are being submitted to;
		  • MPCB - Once in three months,
		  • MOEF&CC, Nagpur & Delhi – Once in Six month,
		  • CPCB, New Delhi – Monthly basis
		Hence the point is being Complied.

v	Industrial wastewater 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 utilised for plantation purpose.	Industrial Waste water generated from the plant is treated in the plants and reused in the process/ slag cooling purpose. There is no discharge of industrial waste water to outside the plant premises. **Hence the point is being Complied**

vi	The overall noise level 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 level should conform to the standards prescribed under EPA rules, 1989 viz. 75dBA (daytime) and 70 dBA (night time).	Noise control measures installed in the plants like acoustic hoods, silencers, enclosures etc. on all sources of noise generation & measured noise level are well with in prescribed standards. The ambient noise level is monitored in the boundary of the plant and the values are well within the standards prescribed under EPA rules, 1989 viz. 75dBA (daytime) & 70 dBA (night time). **Hence the point is being Complied**
vii	Occupational health surveillance of the workers should be done on a regular basis and records maintained as per the factory Act.	As per the Factories Act, regular health surveillance done for all the workers and employees & records are maintained on regular basis. **Hence the point is being Complied**
viii	The company shall develop surface water harvesting structure to harvest the rain water for utilization in the lean season besides recharging the ground water table.	Roof top Rain water harvesting system is being implemented 12 buildings and the harvested rain water is being used in the cooling towers. Since the water table is very high, therefore recharging ground water table is not being done.
ix	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, drinking water supply and health care etc.	• Environmental protection measures & safeguards recommended in EIA/EMP report are being complied. • Socio – economic development activities / programmes like supply of drinking water, health care camps & community development programmes, Self Help Groups, Training and education, Rural Development, Sanitary etc. are being carried out on regular basis and will be continued as per plan. **Hence the point is being Complied.**
x	Requisite amount shall be earmarked towards capital cost and recurring cost/annum for environment pollution controls measures to implement the conditions stipulated by the	Requisite amount is earmarked towards capital cost and recurring cost/annum for environment pollution controls measures to implement the conditions stipulated by

	ministry of environment and forest as well as the state Government. An implementation schedule for implementing all the conditions stipulated herein shall be submitted to the regional office of the ministry of the Bhopal. The funds so provided shall not be diverted for any other purpose.	the MoEF&CC as well as the State Government. The funds earmarked for Environmental pollution control measures are properly utilized. The funds earmarked is not diverted any other purpose.
xi	A copy of clearance letter shall be sent by the proponent to concerned Panchayat, Zila parishad /municipal corporation, Urban local body and the local NGO, if any, from whom suggestions / 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** A copy of clearance letter is already submitted to concerned Panchayat, Zillah Parishad/Municipal Corporation, Urban Local Body and the local NGO. The Environment Clearance letter also put on the JSW Web site.
xii	The project proponent shall upload the status of compliance of the stipulated environment clearance conditions, including results of monitoring data on their website and shall update the same periodically. It shall simultaneously be sent to the regional office of the MOEF at Bhopal. The respective zonal office of the CPCB and the CECB. The criteria pollutant levels namely; PM10, SO2, NOx (ambient levels as well as stack emission) or critical sectoral parameters, indicated project shall be monitored and displayed at a convenient location near the main gate of the company in the public domain.	**Complied.** The status of compliance of the stipulated environment clearance conditions, including results of monitoring data on their website and shall update the same on six monthly basis. The EC compliance and Environmental monitoring reports are submitted to MoEFCC, CPCB. The CEMS data and CAAQMS data are displayed at the main gate.
xiii	The project proponent shall also submit six monthly reports on the status of 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 MoEF, the respective Zonal office of CPCB and the SPCB. The Regional office of this Ministry at Bhopal / CPCB / SPCB shall monitor the stipulated conditions.	**Being Complied.** The six monthly Environmental Clearance compliance report and Environmental monitoring reports are submitted to Regional Office of MoEFCC, MPCB and CPCB.
xiv	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	**Being submitted regularly** Plant wise Environment Statement for 2021-22 prepared and submitted to

	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 conditions and shall also be sent to the respective Regional Office of the MoEF at Bhopal by e-mail.	MPCB portal and uploaded on the web site of the company. Also the same are submitted to regional office of MoEFCC along with six monthly EC compliance report.
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 SPCB and may also be seen at Website of the Ministry of Environment and Forests at http/moef.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 locally concerned and a copy of the same should be forwarded to the Regional Office, Bhopal.	Published in newspaper as per guidelines namely in Local newspaper Dainik Krushiwal, Raigad Times, Ramprahar dated 24/11/2012 and English newspaper Indian Express dated 26/11/2012. **Hence this point is complied.**
xvi	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 concerned authorities and the date of commencing the land development work.	Complied
11	The ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.	Noted
12	The Ministry reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions.	Noted
13	The above conditions shall be enforced, inter-alia under the provisions of the Water (Prevention and Control of Pollution) Act 1974, the Air (Prevention and Control of Pollution) Act 1981, the Environment (Protection) Act 1986, Hazardous Wastes (Management, Handling and Transboundary Movement) Rules 2008 and the Public (Insurance) Liability Act 1991 along with their amendments and Rules.	**The plant is regularly complying for** • The water (Prevention& Control of Pollution) Act 1974, • The Air (Prevention and Control of Pollution) Act, 1981 • The Environment (Protection) Act 1986 • The Public Liability Insurance Act, 1991 along with their amendments and rules.

Annexure 1

Stack Emissions Report

JSW STEEL LIMITED

Integrated Steel Mill Complex

Geetapuram, Dolvi, Tal - Pen, Dist - Raigad

A) STACK EMISSION :

Sr. No.	Name of the Plant and Stack	Stack connected to (Name of the Unit)	Height of the Stack (m)	Diameter of the Stack (m)	Pollution Control unit provided	Date & time of Monitoring	Production fig. of the unit, during the monitoring period (TPD and MWh)	Velocity m/sec	Parameters mg/Nm^3			
									Particulate Matter (PM)	SO_2	NOx	CO
I	**Hot Strip Mill Plant**						**Plant Capacity: 3.0 MTPA**					
1	GCP - I Stack	SMS Furnace	70.5	5.5	Bag Filters	02/10/23 10:35 Hrs	10418.0	16.99	11	15.5	16.0	18.0
						10/11/23 10:00 Hrs	9584.0	16.91	11	13.0	15.0	18.0
						11/12/23 10:35 Hrs	9937.0	17.68	10	14.0	18.0	28.0
						01/01/24 10:15 Hrs	10164.0	16.23	11	15.0	12.0	18.0
						26/02/24 10:00 Hrs	10183.0	15.80	7	11.0	14.0	13.21
						08/03/24 12:30 Hrs	10030.0	16.05	7	18.0	16.0	NA
2	GCP - II Stack	SMS Furnace	70.5	5.5	Bag Filters	02/10/23 12:05 Hrs	10418.0	14.95	9	15.1	12.0	15.0
						10/11/23 12:20 Hrs	9584.0	16.45	5	25.0	16.0	22.0
						11/12/23 14:35 Hrs	9937.0	15.45	4	13.0	16.0	21.0
						01/01/24 12:10 Hrs	10164.0	17.41	14	14.0	18.0	20.0
						26/02/24 16:15 Hrs	10183.0	15.61	12	15.0	16.0	4.9
						19/03/24 17:35 Hrs	9536.0	17	4	15.0	11.8	NA
3	GCP - III Stack	SMS Furnace	66.5	3.3	Bag Filters	02/10/23 15:15 Hrs	10418.0	8.76	6	14.0	17.0	12.0
						10/11/23 15:23 Hrs	9584.0	8.51	6	18.0	27.0	13.0
						11/12/23 16:50 Hrs	9937.0	6.01	6	10.0	12.0	18.0
						01/01/24 15:26 Hrs	10164.0	8.63	6	11.0	13.0	16.0
						26/02/24 17:30 Hrs	10183.0	9	6	NA	NA	NA
						08/03/24 10:15 Hrs	10030.0	9	6	NA	NA	NA
4	Tunnel Furnace - I - A Stack	Tunnel Furnace	50	1.5	Blower	03/10/23 10:00 Hrs	6682.0	8.20	10	13.0	18.0	21.0
						04/11/23 10:00 Hrs	9758.0	7.60	9	18.0	30.0	18.0
						15/12/23 10:25 Hrs	10658.0	6.80	11	17.0	19.0	16.0
						02/01/24 10:00 Hrs	8556.0	8.50	9	13.6	8.10	12.0
						25/02/24 10:00 Hrs	10327.0	7.60	10	26.0	13.00	18
						03/03/24 10:00 Hrs	8441.0	7.90	10	17.0	13.00	NA

Preapared By
P.P.Nandusekar
Manager (Environment)

Checked By
Dr.Anand Rai
Vice President (HOD-Environment)

Sr. No.	Name of the Plant and Stack	Stack connected to (Name of the Unit)	Height of the Stack (m)	Diameter of the Stack (m)	Pollution Control unit provided	Date & time of Monitoring	Production fig. of the unit, during the monitoring period (TPD and MWh)	Velocity m/sec	Parameters mg/Nm^3			
									Particulate Matter (PM)	SO_2	NOx	CO
5	Tunnel Furnace - I - B Stack	Tunnel Furnace	50	1.5	Blower	03/10/23 12:15 Hrs	6682.0	6.90	8	18.0	16.0	23.0
						04/11/23 12:18 Hrs	9758.0	6.80	10	14.0	19.0	24.0
						15/12/23 12:28 Hrs	10658.0	7.10	8	12.0	16.0	22.1
						02/01/24 12:10 Hrs	8556.0	6.70	11	14.0	12.00	19.0
						25/02/24 12:30 Hrs	10327.0	8.20	6	17.0	16.00	12.55
						03/03/24 12:00 Hrs	8441.0	7.60	6	26.0	18.00	NA
6	Tunnel Furnace - II - A Stack	Tunnel Furnace	50	1.5	Blower	03/10/23 15:05 Hrs	6682.0	7.20	9	28.0	21.0	25.0
						04/11/23 14:35 Hrs	9758.0	7.20	12	16.0	18.0	26.0
						15/12/23 14:42 Hrs	10658.0	7.60	9	14.0	6.4	19.0
						02/01/24 14:23 Hrs	8556.0	7.20	6	15.0	18.0	13.6
						25/02/24 14:00 Hrs	10327.0	7.80	6	14.0	15.0	13.0
						03/03/24 14:15 Hrs	8441.0	7	8	16.0	14.0	NA
7	Tunnel Furnace - II - B Stack	Tunnel Furnace	50	1.5	Blower	03/10/23 16:50 Hrs	6682.0	7.80	4	12.0	26.0	24.0
						04/11/23 16:22 Hrs	9758.0	8.51	9	18.0	22.0	24.0
						15/12/23 16:10 Hrs	10658.0	6.60	4	10.0	12.0	27.0
						02/01/24 16:10 Hrs	8556.0	8.50	4	16.0	21.0	23.0
						25/02/24 16:30 Hrs	10327.0	6.80	4	17.0	25.0	22.0
						03/03/24 16:45 Hrs	8441.0	7	4	23.0	17.0	NA
8	18 TPH Boiler Stack	Boiler	65	1.8	Blower	Shut Down 31/04/2022						
9	De-Dusting System Stack	Lime & Coke Handling System	30	1.9	Bag Filters	Stack dismentled In April - 15/4/2023						
								CPCB Norms	<100	NA	50.00	NA

Preapared By
P.P.Nandusekar
Manager (Environment)

Checked By
Dr.Anand Rai
Vice President (HOD-Environment)

Sr. No.	Name of the Plant and Stack	Stack connected to (Name of the Unit)	Height of the Stack (m)	Diameter of the Stack (m)	Pollution Control unit provided	Date & time of Monitoring	Production fig. of the unit, during the monitoring period (TPD and MWh)	Velocity m/sec	Parameters mg/Nm^3			
									Particulate Matter (PM)	SO_2	NOx	CO
II	**Lime Calcination Plant**						**Plant Capacity: 0.44 MTPA**					
1	Lime Stone De-dusting system stack for Kiln I & II	Lime Stone Hopper	41.5	0.825	Bag Filters	02/12/23 10:05 Hrs	300	5	15	NA	NA	NA
						08/11/23 10:20 Hrs	600	4	13	NA	NA	NA
						02/12/23 10:05 Hrs	300	5	15	NA	NA	NA
						14/01/24 10:05 Hrs	288	6	16	NA	NA	NA
						28/02/24 10:05 Hrs	593	6	14	NA	NA	NA
						05/03/24 14:20 Hrs	618	4	16	NA	NA	NA
2	Kiln - I Stack	Kiln - I	48.7	0.914	Bag Filters	06/10/23 12:10 Hrs	294	13.0	15	10.0	15.0	18.0
						01/11/23 10:05 Hrs	261	12.0	19	12.0	21.0	24.0
						28/12/23 10:45 Hrs	300.0	14.5	24	15.0	12.00	11.0
						15/01/24 10:20 Hrs	278	14.0	23	12.0	16.0	21.0
						02/02/24 10:15 Hrs	300	16.0	34	19.0	15.0	22.0
						05/03/24 10:15 Hrs	287	12	18	12.6	18.8	NA
3	Kiln - II Stack	Kiln - II	48.7	0.914	Bag Filters	06/10/23 14:25 Hrs	294.0	12.5	22	12.0	14.00	20.0
						01/11/23 12:00 Hrs	300.0	21.5	21	18.0	16.00	28.0
						28/12/23 10:45 Hrs	290.0	14.5	24	15.0	12.00	11.0
						23/01/24 11:25 Hrs	300.0	13.2	21	10.0	14.00	19.0
						02/02/24 15:30 Hrs	325.0	18.9	23	23.0	18.00	12.0
						05/03/24 11:35 Hrs	331.0	9	18	19.6	15.60	NA
4	Lime De-dusting system Stack for Kiln I & II	Lime Storage Hopper	25.5	0.825	Bag Filters	04/10/23 10:18 Hrs	553.0	4.5	9	NA	NA	NA
						02/11/23 12:25 Hrs	456.0	5.0	14	NA	NA	NA
						02/12/23 12:15 Hrs	300.0	6.2	13	NA	NA	NA
						11/01/24 10:10 Hrs	300.0	6.8	14	NA	NA	NA
						02/02/24 12:22 Hrs	625.0	6.3	13	NA	NA	NA
						05/03/24 16:25 Hrs	618.0	5	10	NA	NA	NA

Preapared By
P.P.Nandusekar
Manager (Environment)

Checked By
Dr.Anand Rai
Vice President (HOD-Environment)

Sr. No.	Name of the Plant and Stack	Stack connected to (Name of the Unit)	Height of the Stack (m)	Diameter of the Stack (m)	Pollution Control unit provided	Date & time of Monitoring	Production fig. of the unit, during the monitoring period (TPD and MWh)	Velocity m/sec	Parameters mg/Nm^3			
									Particulate Matter (PM)	SO_2	NOx	CO
5	Lime Stone De-dusting system stack for Kiln III	Lime Stone Hopper	35	1.4	Bag Filters	25/10/23 12:25 Hrs	538	3.5	12	NA	NA	NA
						08/11/23 12:23 Hrs	575	4.1	10	NA	NA	NA
						02/12/23 15:00 Hrs	575	4.9	14	NA	NA	NA
						11/01/24 12:16 Hrs	311	5.0	12	NA	NA	NA
						07/02/24 14:35 Hrs	585	6.2	14	NA	NA	NA
						06/03/24 15:00 Hrs	585	4	15	NA	NA	NA
6	Kiln - III Stack	Kiln - III	60	1.3	Bag Filters	06/10/23 16:22 Hrs	512	14.0	11	16.0	15.00	18.0
						01/11/23 14:15 Hrs	491	12.0	13	18.0	13.00	19.0
						09/12/23 14:40 Hrs	575	15.2	19	13.0	16.00	18.0
						15/01/24 12:15 Hrs	548	16.0	20	11.0	17.00	26.0
						07/02/24 11:15 Hrs	585	15.6	21	26.0	15.00	17.0
						06/03/24 10:29 Hrs	585	13	23	23.2	19.32	NA
7	Quick Lime & Lime De-dusting system Stack for Kiln III	Lime Storage Hopper	31	0.960	Bag Filters	04/10/23 12:35 Hrs	400	5.5	15	NA	NA	NA
						02/11/23 16:30 Hrs	425	4.8	16	NA	NA	NA
						02/12/23 16:25 Hrs	575	6.2	15	NA	NA	NA
						11/01/24 14:05 Hrs	311	6.9	12	NA	NA	NA
						07/02/24 16:40 Hrs	585	7.0	11	NA	NA	NA
						06/03/24 16:35 Hrs	585	6	11	NA	NA	NA
8	Kiln - IV Stack	Kiln - IV	58	1.3	Bag Filters	06/10/23 10:00 Hrs	580	14.0	15	5.68	12.00	26.42
						01/11/23 16:45 Hrs	580	14.0	19	21.00	17.00	23.00
						09/12/23 16:33 Hrs	584	13.2	15	16.00	13.00	17.00
						15/01/24 16:00 Hrs	553	16.0	20	15.00	19.00	26.00
						10/02/24 10:45 Hrs	565	14.0	20	14.00	23.00	15.00
						06/03/24 12:15 Hrs	590	12	13	24.00	14.00	NA

Preapared By
P.P.Nandusekar
Manager (Environment)

Checked By
Dr.Anand Rai
Vice President (HOD-Environment)

Sr. No.	Name of the Plant and Stack	Stack connected to (Name of the Unit)	Height of the Stack (m)	Diameter of the Stack (m)	Pollution Control unit provided	Date & time of Monitoring	Production fig. of the unit, during the monitoring period (TPD and MWh)	Velocity m/sec	Parameters mg/Nm^3			
									Particulate Matter (PM)	SO_2	NOx	CO
9	Lime Stone De-dusting system stack for Kiln IV	Lime Stone Dedusting System	35	1.4	Bag Filters	23/10/23 15:10 Hrs	568	4.2	10	NA	NA	NA
						08/11/23 14:25 Hrs	580	3.8	13	NA	NA	NA
						04/12/23 14:00 Hrs	580	4.2	10	NA	NA	NA
						11/01/24 15:35 Hrs	553	4.0	14	NA	NA	NA
						10/02/24 12:11 Hrs	565	4.8	13	NA	NA	NA
						07/03/24 15:31 Hrs	590	4	14	NA	NA	NA
10	Lime De-dusting system Stack for Kiln IV	Lime Dedusting System	31	0.960	Bag Filters	04/10/23 15:40 Hrs	495	4.2	13	NA	NA	NA
						08/11/23 16:45 Hrs	580	4.5	15	NA	NA	NA
						04/12/23 16:25 Hrs	580	5.1	16	NA	NA	NA
						11/01/24 16:45 Hrs	553	4.2	15	NA	NA	NA
						10/02/24 16:44 Hrs	565	5.2	15	NA	NA	NA
						07/03/24 16:55 Hrs	590	6	16	NA	NA	NA
							CPCB Norms		<100	NA	100	NA
III	**Sponge Iron Plant**						**Plant Capacity: 2.0 MTPA**					
1	Flue Gas Ejector Stack	Reformer	40	2.851	I.D Fan	05/10/23 16:45 Hrs	3812.0	38.5	6	12.6	8.1	11.0
						18/11/23 16:50 Hrs	3913.0	40.0	12	25.0	28.0	33.0
						01/12/23 16:45 Hrs	3899.0	38.5	11	16.8	17.6	15.8
						25/01/24 16:35 Hrs	4226.0	39.5	13	16.4	6.1	10.6
						04/02/24 10:25 Hrs	3378.0	40.0	10	26.0	28.0	33.0
						14/03/24 16:50 Hrs	4017.0	39	9	31.3	9.4	NA
2	Furnace Dust Collector Stack	Furnace	30	0.9	Cyclone & Venturi Scrubber	05/10/23 10:00 Hrs	3812.0	5.5	13	NA	NA	NA
						07/11/23 12:05 Hrs	4026.0	5.8	18	NA	NA	NA
						01/12/23 10:20 Hrs	3899.0	6.8	19	NA	NA	NA
						25/01/24 12:20 Hrs	4226.0	7.2	16	NA	NA	NA
						15/02/24 15:50 Hrs	4217.0	12.8	19	NA	NA	NA
						14/03/24 11:15 Hrs	4017.0	11	20	NA	NA	NA

Preapared By
P.P.Nandusekar
Manager (Environment)

Checked By
Dr.Anand Rai
Vice President (HOD-Environment)

Sr. No.	Name of the Plant and Stack	Stack connected to (Name of the Unit)	Height of the Stack (m)	Diameter of the Stack (m)	Pollution Control unit provided	Date & time of Monitoring	Production fig. of the unit, during the monitoring period (TPD and MWh)	Velocity m/sec	Parameters mg/Nm^3			
									Particulate Matter (PM)	SO_2	NOx	CO
3	Screen Dust Collector Stack C304	Prodct screen Area	30	0.9	Venturi Scrubber	05/10/23 12:23 Hrs	3812.0	4.6	17.0	NA	NA	NA
						18/11/23 14:35 Hrs	3913.0	4.9	15.0	NA	NA	NA
						01/12/23 12:18 Hrs	3899.0	5.6	22.0	NA	NA	NA
						10/01/24 10:25 Hrs	3996.0	6.2	18	NA	NA	NA
						06/02/24 14:35 Hrs	3674.0	4.4	21	NA	NA	NA
						14/03/24 15:25 Hrs	4017.0	5	25	NA	NA	NA
4	Screen Dust Collector Stack I	Product Screen Area	30	0.9	Cyclone & Venturi Scrubber	05/10/23 14:25 Hrs	3812.0	5.9	16.4	NA	NA	NA
						18/11/23 10:32 Hrs	3913.0	6.1	21.0	NA	NA	NA
						01/12/23 15:22 Hrs	3899.0	7.2	16.0	NA	NA	NA
						25/01/24 10:05 Hrs	4226.0	7.6	20	NA	NA	NA
						06/02/24 16:10 Hrs	3674.0	7.9	15	NA	NA	NA
						16/03/24 10:05 Hrs	4018.0	7	18	NA	NA	NA
5	Screen Dust Collector Stack II	Product Screen Area	30	0.9	Cyclone & Venturi Scrubber	30/10/23 17:00 Hrs	3962	4.3	19.2	NA	NA	NA
						18/11/23 12:05 Hrs	3913	4.1	14.5	NA	NA	NA
						18/12/23 09:15 Hrs	3957	5.1	18.5	NA	NA	NA
						14/01/24 12:20 Hrs	3885	6.0	16	NA	NA	NA
						11/02/24 11:00 Hrs	4243	5.6	12	NA	NA	NA
						16/03/24 12:15 Hrs	4018	5	15	NA	NA	NA
6	Product Silo Dust Collector Stack	Product Silo	30	0.9	Venturi Scrubber	19/10/23 12:25 Hrs	4341	4.1	12.5	NA	NA	NA
						23/11/23 10:35 Hrs	3933	5.0	10.5	NA	NA	NA
						23/11/23 10:35 Hrs	3792	4.8	11.7	NA	NA	NA
						14/01/24 14:33 Hrs	3885	5.3	11	NA	NA	NA
						29/02/24 12:00 Hrs	3183	4.8	10	NA	NA	NA
						16/03/24 14:05 Hrs	4018	6	15	NA	NA	NA
							CPCB Norms		< 50		NA	NA

Preapared By
P.P.Nandusekar
Manager (Environment)

Checked By
Dr.Anand Rai
Vice President (HOD-Environment)

Sr. No.	Name of the Plant and Stack	Stack connected to (Name of the Unit)	Height of the Stack (m)	Diameter of the Stack (m)	Pollution Control unit provided	Date & time of Monitoring	Production fig. of the unit, during the monitoring period (TPD and MWh)	Velocity m/sec	Parameters mg/Nm^3			
									Particulate Matter (PM)	SO_2	NOx	CO
IV	**Blast Furnace Plant**					**Plant Capacity: 3.5 MTPA**						
1	De-Dusting System Stack I	Stock House	45	2.5	Bag Filters	26/10/23 10:00 Hrs	5014.0	16.0	13	NA	NA	NA
						17/11/23 10:20 Hrs	8514.0	15.0	15	NA	NA	NA
						16/12/23 14:23 Hrs	4624.0	16.2	29	NA	NA	NA
						19/01/24 10:35 Hrs	8616.0	8.6	23	NA	NA	NA
						25/02/24 12:00 Hrs	5510.0	9.9	24	NA	NA	NA
						15/03/24 11:25 Hrs	4618.0	13	26	NA	NA	0
2	De-Dusting System Stack II	Stock House	45	2.5	Bag Filters	26/10/23 12:10 Hrs	5014	7.50	22	NA	NA	NA
						03/11/23 14:35 Hrs	8266	7.80	25	NA	NA	NA
						16/12/23 10:10 Hrs	4624	7.60	28	NA	NA	NA
						07/01/24 10:15 Hrs	8806	8.50	32	NA	NA	NA
						05/02/24 14:00 Hrs	8678	6.02	33	NA	NA	NA
						19/03/24 11:30 Hrs	5962	19	28	NA	NA	NA
3	Stove Stack	Blast Furnace Stove	75	5	Heat Exchanger	26/10/23 14:30 Hrs	5014.0	6.80	10	NA	NA	NA
						03/11/23 16:50 Hrs	8266.0	10.00	16	NA	NA	NA
						16/12/23 12:25 Hrs	4624.0	7.21	19	NA	NA	NA
						07/01/24 12:35 Hrs	8806.0	7.42	8	NA	NA	NA
						05/02/24 14:00 Hrs	8678.0	6.02	12	NA	NA	NA
						15/03/24 14:15 Hrs	4618.0	10	31	NA	NA	NA
4	De-Dusting System Cast House	Cast House	45	5.5	Bag Filters	26/10/23 16:42 Hrs	5014.0	12.0	3	22.0	28.0	33.0
						17/11/23 10:20 Hrs	8514.0	13.0	5	12.0	16.0	12.0
						16/12/23 16:30 Hrs	4624.0	14.5	3	18.0	21.0	24.0
						07/01/24 16:45 Hrs	8806.0	13.5	6	26.0	36.0	40.0
						11/02/24 11:45 Hrs	1209.0	14.5	6	37.0	42.0	11.5
						16/03/24 16:25 Hrs	5427.0	13	6	8.0	123.0	NA

Preapared By
P.P.Nandusekar
Manager (Environment)

Checked By
Dr.Anand Rai
Vice President (HOD-Environment)

Sr. No.	Name of the Plant and Stack	Stack connected to (Name of the Unit)	Height of the Stack (m)	Diameter of the Stack (m)	Pollution Control unit provided	Date & time of Monitoring	Production fig. of the unit, during the monitoring period (TPD and MWh)	Velocity m/sec	Parameters mg/Nm^3			
									Particulate Matter (PM)	SO_2	NOx	CO
5	16 TPH Boiler Stack	16 TPH Boiler	59.5	1.2	Blower	17/10/23 14:30 Hrs	210.0	5.80	19	18.0	12.0	25.0
						20/11/23 15:30Hrs	82.0	6.20	16	14.0	13.0	28.0
						25/12/23 15:00 Hrs	105.0	7.60	16	15.0	17.0	16.0
						03/01/24 10:20 Hrs	233.0	7.60	18	15.0	17.0	28.0
						28/02/24 12:00 Hrs	5631.0	6.50	19	16.0	24.0	21.0
						27/03/24 16:30 Hrs	116.0	7	17	14.0	23.0	NA
6	Coal Injection Plant	Coal Injection Unit	60.5	1.7	Bag Filters	17/10/23 16:50 Hrs	8809.0	5.6	27	NA	NA	NA
						20/11/23 10:05Hrs	5648.0	6.2	28	NA	NA	NA
						25/12/23 10:00 Hrs	8613.0	7.8	33	NA	NA	NA
						03/01/24 12:00 Hrs	8703.0	7.8	30	NA	NA	NA
						02/02/24 16:23 Hrs	4319.0	7.0	34	NA	NA	NA
						27/03/24 10:30 Hrs	5536.0	8	32	NA	NA	NA
V	**Sinter Plant -I**							**Plant Capacity: 2.8 MTPA**				
1	Fuel Bag Filter Stack	Fuel Raw Material Crushing House	40	1.804	Bag Filters	10/10/23 10:10 Hrs	7053.0	4.90	17	NA	NA	NA
						09/11/23 10:00 Hrs	8249.0	5.60	17	NA	NA	NA
						12/12/23 11:45 Hrs	7360.0	6.80	16	NA	NA	NA
						09/01/24 10:10 Hrs	7333.0	5.90	18	NA	NA	NA
						14/02/24 10:15 Hrs	4883.0	6.50	19	NA	NA	NA
						11/03/24 10:45 Hrs	7079.0	5.80	25	NA	NA	NA
2	Flux ESP Stack	Raw Material Crushing & Screening House	50	2.404	Electrostatic Precipitators	10/10/23 12:15 Hrs	7053.0	6.20	19	NA	NA	NA
						09/11/23 12:05 Hrs	8249.0	6.80	20	NA	NA	NA
						14/12/23 14:35 Hrs	7252.0	5.80	19	NA	NA	NA
						09/01/24 12:20 Hrs	7333.0	6.50	21	NA	NA	NA
						14/02/24 12:23 Hrs	4883.0	7.20	23	NA	NA	NA
						11/03/24 12:05 Hrs	7079.0	7.00	26	NA	NA	NA

Preapared By
P.P.Nandusekar
Manager (Environment)

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Dr.Anand Rai
Vice President (HOD-Environment)

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									Particulate Matter (PM)	SO_2	NOx	CO
3	Propotioning ESP Stack	Propotioning House	50	2.404	Electrostatic Precipitators	10/10/23 15:35 Hrs	7053.0	6.80	24	NA	NA	NA
						09/11/23 15:25 Hrs	8249.0	5.90	27	NA	NA	NA
						14/12/23 10:00 Hrs	7252.0	5.20	30	NA	NA	NA
						09/01/24 15:25 Hrs	7333.0	7.20	26	NA	NA	NA
						03/02/24 14:35 Hrs	6794.0	7.80	28	NA	NA	NA
						11/03/24 14:35 Hrs	7079.0	7.20	29	NA	NA	NA
4	Main Stack	Sintering House	140	4.200	Electrostatic Precipitators	20/10/23 16:50 Hrs	7441.0	9.08	35	25.00	29.00	38.00
						02/11/23 10:20 Hrs	4559.0	9.01	31	26.00	32.00	44.00
						14/12/23 12:00 Hrs	7252.0	9.24	32	15.00	14.00	32.00
						22/01/24 10:40 Hrs	7368.0	9.07	39	22.00	26.00	33.00
						03/02/24 11:15 Hrs	6794.0	8.98	41	19.00	14.00	34.00
						07/03/24 11:22 Hrs	7298.0	8.30	40	19.33	16.75	NA
5	Product Sinter Sizing & Discharge End ESP Stack	Product Sinter Sizing House & Product Discharge End	60	4.508	Electrostatic Precipitators	20/10/23 15:15 Hrs	7441.0	9.65	30	NA	NA	NA
						02/11/23 14:35 Hrs	4559.0	9.29	34	NA	NA	NA
						12/12/23 15:25 Hrs	7360.0	10.50	36	NA	NA	NA
						22/01/24 16:05 Hrs	7368.0	12.24	28	NA	NA	NA
						03/02/24 16:33 Hrs	6794.0	5.83	26	NA	NA	NA
						23/03/24 10:00 Hrs	5866.0	8.67	33	NA	NA	NA
VI	**Sinter Plant -II**						**Plant Capacity: 2.5 MTPA**					
1	Main ESP	Sinter Machine	85	5.5	Electrostatic Precipitators	20/10/23 10:30 Hrs	8452.0	18.2	19	15.0	18.0	24.0
						16/11/23 10:15 Hrs	8862.0	16.7	25	17.0	36.0	42.0
						19/12/23 16:38 Hrs	8305.0	15.8	27	17.0	19.0	25.0
						05/01/24 10:32 Hrs	6917.0	14.5	42.2	16.0	20.0	9.8
						05/02/24 17:45 Hrs	8494.0	14.9	41.2	31.0	23.0	42.0
						26/03/24 11:30 Hrs	8151.0	17.8	32.0	16.2	19.1	24.0

Preapared By
P.P.Nandusekar
Manager (Environment)

Checked By
Dr.Anand Rai
Vice President (HOD-Environment)

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									Particulate Matter (PM)	SO_2	NOx	CO
2	Bag Filter- 1 (Flux/Fuel Crush Or Building	Crusher Building	35	4.7	Bag Filters	07/10/23 10:10 Hrs	8401.0	5.5	10	NA	NA	NA
						11/11/23 10:00 Hrs	9057.0	6.1	12	NA	NA	NA
						18/12/23 10:05 Hrs	8189.0	6.8	15	NA	NA	NA
						05/01/24 10:32 Hrs	6917.0	14.5	42	16.0	20.0	9.8
						05/02/24 17:45 Hrs	8494.0	14.9	41	31.0	23.0	42.0
						26/03/24 11:30 Hrs	8151.0	17.8	32	16.2	19.1	NA
3	Bag Filter- 2 (Flux/Fuel Screen Building)	Screen Building	35	1.4	Bag Filters	07/10/23 12:20 Hrs	8401.0	3.8	17	NA	NA	NA
						11/11/23 12:15 Hrs	9057.0	4.1	19	NA	NA	NA
						18/12/23 12:22 Hrs	8189.0	5.8	17	NA	NA	NA
						04/01/24 12:15 Hrs	8352.0	6.5	13	NA	NA	NA
						12/02/24 10:30 Hrs	8333.0	6.0	12	NA	NA	NA
						24/03/24 10:30 Hrs	7284.0	6.2	14	NA	NA	NA
4	Bag Filter- 3(Near Sinter Product Screen Building)	Sinter Product Screen Building	29	1.0	Bag Filters	07/10/23 14:30 Hrs	8401.0	4.2	13	NA	NA	NA
						11/11/23 14:45 Hrs	9057.0	5.2	16	NA	NA	NA
						18/12/23 15:11 Hrs	8189.0	6.2	12	NA	NA	NA
						04/01/24 15:00 Hrs	8352.0	7.2	18	NA	NA	NA
						12/02/24 12:00 Hrs	8333.0	5.8	19	NA	NA	NA
						24/03/24 12:22 Hrs	7284.0	5.0	16	NA	NA	NA
5	Bag Filter- 4 (Near Sinter Product Crusher & HLQRF)	Sinter Product Crusher & HLQRF	22	0.9	Bag Filters	09/10/23 10:30 Hrs	8579.0	5.8	18	NA	NA	NA
						11/11/23 16:25 Hrs	9057.0	6.1	24	NA	NA	NA
						18/12/23 16:33 Hrs	8189.0	5.6	19	NA	NA	NA
						06/01/24 10:15 Hrs	7780.0	6.2	22	NA	NA	NA
						12/02/24 16:42 Hrs	8333.0	5.2	21	NA	NA	NA
						24/03/24 16:42 Hrs	7284.0	4.3	23	NA	NA	NA

Preapared By
P.P.Nandusekar
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Dr.Anand Rai
Vice President (HOD-Environment)

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									Particulate Matter (PM)	SO_2	NOx	CO
6	Bag Filter- 5 (Near Banker House & JHO8)	Banker House & JHO8	32	0.9	Bag Filters	09/10/23 12:05 Hrs	8579.0	4.9	20	NA	NA	NA
						16/11/23 12:20 Hrs	8862.0	5.7	24	NA	NA	NA
						19/12/23 10:18 Hrs	8305.0	4.3	18	NA	NA	NA
						06/01/24 12:00 Hrs	7780.0	5.8	26	NA	NA	NA
						16/02/24 10:12 Hrs	8910.0	4.5	22	NA	NA	NA
						25/03/24 10:25 Hrs	8446.0	4.1	26	NA	NA	NA
7	Bag Filter- 6(Banker House)	Banker House	33.5	1.0	Bag Filters	09/10/23 15:15 Hrs	8579.0	3.6	13	NA	NA	NA
						16/11/23 14:22 Hrs	8862.0	4.2	13	NA	NA	NA
						19/12/23 12:31 Hrs	8305.0	4.0	10	NA	NA	NA
						06/01/24 14:25 Hrs	7780.0	5.0	14	NA	NA	NA
						16/02/24 12:18 Hrs	8910.0	4.0	12	NA	NA	NA
						25/03/24 12:22 Hrs	8446.0	3.7	12	NA	NA	NA
8	Bag Filter- 7 (Fuel Storage Crusher Building)	Fuel Storage Crusher Building	33.5	0.8	Bag Filters	27/10/23 14:25 Hrs	8841.0	4.6	12	NA	NA	NA
						16/11/23 16:50 Hrs	8862.0	3.9	13	NA	NA	NA
						19/12/23 14:10 Hrs	8305.0	4.8	14	NA	NA	NA
						06/01/24 16:40 Hrs	7780.0	4.2	16	NA	NA	NA
						16/02/24 16:50 Hrs	8910.0	5.0	15	NA	NA	NA
						25/03/24 15:38 Hrs	8446.0	4.4	17	NA	NA	NA
VII	**Captive Power Plant (55 MW)**											
1	Boiler Stack	Boiler	40	5.0	Blower	27/10/23 11:10 Hrs	53	12.0	2	14.0	13.0	18.0
						05/11/23 11:20 Hrs	54	13.2	3	14.0	17.0	23.0
						23/12/23 16:40 Hrs	54	15.2	4	16.0	18.0	23.0
						08/01/24 16:35 Hrs	54	15.0	4	18.0	12.0	16.0
						11/02/24 15:15 Hrs	54	13.0	4	14.6	18.0	25.0
						Plant shut down						
						CPCB Norms			<150	NA	NA	NA

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P.P.Nandusekar
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									Particulate Matter (PM)	SO_2	NOx	CO
VIII	**Billet Caster & Bar Mill (1.5 & 1.4 MTPA)**											
1	Billet Caster Stack	Laddle Heating Furnace	80	2.0	Fume extraction system	11/10/23 14:35 Hrs	365.0	10.5	6	16.0	15.0	20.0
						05/11/23 14:25 Hrs	3585.0	8.9	14	12.0	16.0	14.0
						23/12/23 12:25 Hrs	1473.0	7.8	17	12.0	15.0	20.6
						08/01/24 14:25 Hrs	3218.0	7.2	13	12.0	15.0	20.6
						19/02/24 15:45 Hrs	1801.0	8.0	10	12.0	18.0	10.3
						28/03/24 16:42 Hrs	2270.0	7.6	12	12.7	15.8	NA
2	Bar Mill Stack	Reheating Furnace	80	3.0	Bag Filter	11/10/23 11:25 Hrs	758.0	15.0	9	16.0	19.0	26.0
						20/11/23 12:05 Hrs	3257.0	13.5	10	16.0	18.0	23.0
						23/12/23 10:15 Hrs	3872.0	12.2	7	16.0	13.0	18.0
						08/01/24 10:40 Hrs	2346.0	13.5	8	14.0	12.0	18.0
						06/02/24 12:00 Hrs	3500.0	16.0	9	14.0	21.0	26.0
						28/03/24 14:30 Hrs	3460.0	15.4	6	14.0	15.0	NA
							CPCB Norms		<50	NA	NA	NA
IX	**Coke oven Plant -II**						**Plant Capacity: 2.5 MTPA**					
1	Coke Oven Battery Main Stack 1		150	11.0	Electrostatic Precipitators	28/10/23 10:25 Hrs	7142.0	10.8	32	112.0	118.0	122.0
						05/11/23 16:55Hrs	7137.0	10.6	38	86.0	105.0	123.0
						21/12/23 11:23 Hrs	7140.0	11.2	44	126.0	132.0	144.0
						17/01/24 15:35 Hrs	7127.0	12.0	46	110.0	128.0	133.0
						19/02/24 12:10 Hrs	6210	11.4	45	99	144	158
						22/03/24 11:30 Hrs	6440	10.1	37	127	131	NA
2	Coke Oven Battery Pushing Side		30	2.8	Bag Filters	11/10/23 10:00 Hrs	6556.0	4.2	6	NA	NA	NA
						06/11/23 10:05 Hrs	7136.0	4.3	8	NA	NA	NA
						06/12/23 10:20 Hrs	7403.0	5.2	10	NA	NA	NA
						17/01/24 10:10 Hrs	7127.0	6.2	10	NA	NA	NA
						08/02/24 10:12 Hrs	7043	6.8	9	NA	NA	NA
						01/03/24 10:25 Hrs	6586	6	4	NA	NA	NA

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P.P.Nandusekar
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									Particulate Matter (PM)	SO_2	NOx	CO
3	Coke Oven Battery Charging Side		29.5	1.5	Bag Filters	11/10/23 11:20 Hrs	6556.0	4.8	4	NA	NA	NA
						06/11/23 12:35 Hrs	7136.0	3.5	10	NA	NA	NA
						06/12/23 12:25 Hrs	7403.0	4.9	9	NA	NA	NA
						17/01/24 11:45 Hrs	7127.0	5.2	10	NA	NA	NA
						08/02/24 11:45 Hrs	7043	6	10	NA	NA	NA
						01/03/24 12:05 Hrs	6586	5.27	5	NA	NA	NA
4	Coal Crushing		19.5	1.5	Bag Filters	11/10/23 14:35 Hrs	6556.0	3.8	12	NA	NA	NA
						06/11/23 16:25 Hrs	7136.0	4.5	14	NA	NA	NA
						07/12/23 15:45 Hrs	7425.0	5.5	16	NA	NA	NA
						16//01/24 10:25 Hrs	7119.0	6.2	19	NA	NA	NA
						09/02/24 16:22 Hrs	7166.0	4.5	18	NA	NA	NA
						04/03/24 10:30 Hrs	6503.0	5.2	16	NA	NA	NA
5	Coke Cutting		25	1.8	Bag Filters	09/10/23 09:50 Hrs	6573.0	4.0	12	NA	NA	NA
						07/11/23 10:35 Hrs	6913.0	5.0	16	NA	NA	NA
						07/12/23 10:15 Hrs	7425.0	6.2	15	NA	NA	NA
						16//01/24 12:04 Hrs	7119.0	5.8	17	NA	NA	NA
						09/02/24 14:35 Hrs	7166.0	5.0	16	NA	NA	NA
						04/03/24 15:25 Hrs	6503.0	4.2	13	NA	NA	NA
6	Coke Bunker		30	2.5	Bag Filters	11/10/23 15:50 Hrs	6556.0	5.1	15	NA	NA	NA
						07/11/23 16:25 Hrs	6913.0	6.8	14	NA	NA	NA
						06/12/23 15:10 Hrs	7403.0	8.1	17	NA	NA	NA
						16//01/24 14:32 Hrs	7119.0	7.2	20	NA	NA	NA
						08/02/24 14:33 Hrs	7043.0	7.0	21	NA	NA	NA
						04/03/24 12:20 Hrs	6503.0	6.0	18	NA	NA	NA
7	Boiler		30	1.0		17/10/23 12:00 Hrs	354.0	7.5	16	16.0	12.0	26.0
						13/11/23 12:45 Hrs	117.0	6.9	19	16.0	14.0	28.0
						05/12/23 12:00 Hrs	307.0	9.8	18	12.0	13.0	16.0
						03/01/24 14:28 Hrs	335.0	7.8	15	16.0	12.0	20.0
						28/02/24 14:05 Hrs	317.0	8.0	16	15.0	18.0	22.0
						18/03/24 14:30 Hrs	265.0	7.1	15	10.0	15.0	NA

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									Particulate Matter (PM)	SO_2	NOx	CO
1	Coke Oven Battery Main Stack (C &D)		150	11.04	Natural Draft	28/10/23 16:00 Hrs	7142.0	8.2	25	116.0	123.0	133.0
						22/11/23 15:15 Hrs	7081.0	9.8	35	145.0	124.0	188.0
						20/12/23 16:18 Hrs	7168.0	10.0	32	120.0	142.0	138.0
						13/01/24 16:35 Hrs	7070.0	12.0	38	119.0	112.0	128.0
						27/02/24 15:45 Hrs	6409.0	11.8	35	215.0	126.0	132.0
						21/03/24 11:20 Hrs	6260.0	12.5	33	122.0	119.0	NA
2	Coke Oven Battery Pushing Side		30	2.8	Bag Filters	28/10/23 10:00 Hrs	7142.0	5.2	6	NA	NA	NA
						22/11/23 10:05 Hrs	7081.0	4.2	7	NA	NA	NA
						20/12/23 10:22 Hrs	7168.0	5.6	8	NA	NA	NA
						13/01/24 10:00 Hrs	7070.0	6.2	10	NA	NA	NA
						27/02/24 11:38 Hrs	6409.0	7.2	8	NA	NA	NA
						02/03/24 10:10 Hrs	6597.0	6.5	12	NA	NA	NA
3	Coke Oven Battery Charging Side		29.5	1.5	Bag Filters	28/10/23 12:10 Hrs	7142.0	4.5	4	NA	NA	NA
						22/11/23 11:55 Hrs	7081.0	3.5	10	NA	NA	NA
						20/12/23 12:00 Hrs	7168.0	4.8	11	NA	NA	NA
						13/01/24 12:10 Hrs	7070.0	5.0	12	NA	NA	NA
						27/02/24 10:15 Hrs	6409.0	6.8	10	NA	NA	NA
						02/03/24 11:45 Hrs	6597.0	6.8	11	NA	NA	NA

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Manager (Environment)

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