Evonith Metallics Limited

Evonith

EML/WRD/MOEF/2025

Date: 19.04.2025

To,
The Additional Principal Chief Conservator of Forest(C),
Ministry of Environment Forest & Climate Change,
Regional Office (WCZ), Ground Floor, East Wing,
New Secretariat Building, Civil Lines,
Nagpur-440001.

Subject: Six-monthly Environmental compliance report and Environment Monitoring Report for the month of oct-2024 to March-2025.

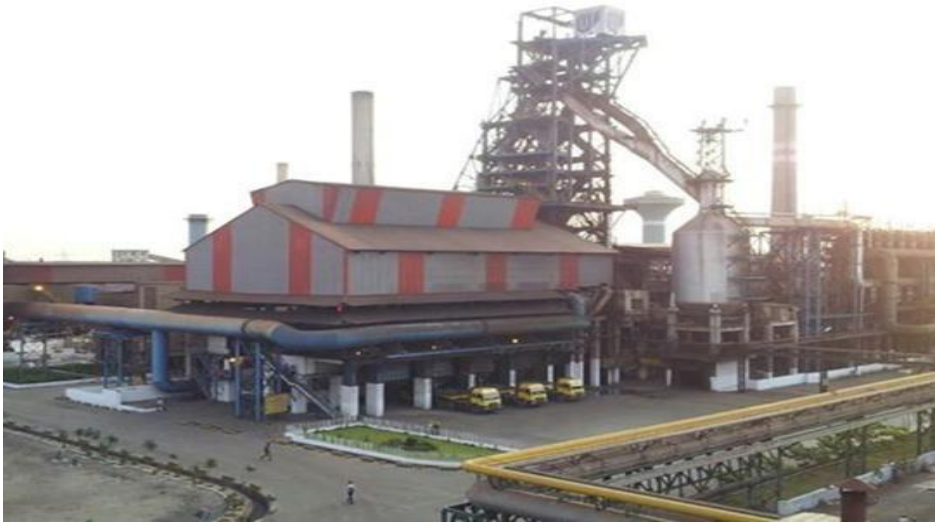
Dear Sir,
Please find the enclosed herewith the six-monthly Environmental compliance report and Environment Monitoring Report for the month of oct-2024 to March-2025 are as under.

Status of Memorandum as on 31.03.2025
Meteorological Report
Ambient Air Quality
Stacks Emission Report
Workplace Air Quality Monitoring Report
Effluent Analysis–ETP & STP (Treated)
Noise Level Report

Thanking You,
Yours Faithfully
For Evonith Metallics Limited.

R.K. Sharma
Head –HR & Admin

Encl: As above



Six Monthly Environmental Compliance & Environment Monitoring Report

(Oct-2024 – March-2025)

INTRODUCTION:

M/s. Evonith Metallics Limited (EML) unit is located at Village- Bhugaon, Wardha District in Maharashtra state. The steel unit has the capacity to manufacture Hot Metal from Blast Furnace: 12,02,000 MT/A; Sinters: 15,20,000 MT/A & Metallurgical coke: 5,00,000 MT/A.

Renewal of Consent to operate is granted from MPCB Consent No: - Format1.0/CAC/UAN No. MPCB-CONSENT-0000206279/CR/2407001593 dated 12.07.2024, valid up to 30.06.2028.

The environmental clearance from MOEF & CC is granted vide letter No. J-11011/77/2005-IA II (I) dated, 21.06.2005 & vide Letter No. F. No. J-11011/77/2005-IA II (II) dated 04.10.2010.

The environmental clearance for expansion is granted vide letter No. F.No. J-11011/358/2012-IA II (I) dated, 04.09.2014.

Status of Memorandum No. J-11011/77/2005-I A II (I) Dated: 21st June 2005.

A. SPECIFIC CONDITIONS: -

Sr. No	CONDITION	COMPLIANCE
I	The gaseous emissions from various process units should conform to the load/mass-based standards notified by this Ministry on 19th May 1993 and standards prescribed from time to time. The state Board may specify more stringent standards for the relevant parameters keeping in view the nature of the industry and its size and location. At no time the emission level should go beyond the prescribed standards. In the event of failure of any pollution control system adopted by the unit; the respective unit should not be restarted until the control measures are rectified to achieve the desired efficiency.	The industry is complying with the standards notified by the ministry on 19th May 1993 and those prescribed from time to time. The emission levels are maintained below the prescribed standards. In the event of failure of any pollution control system, the respective unit is kept closed until the control systems are rectified to achieve the desired efficiency.
II	There shall be no discharge of process effluent. As reflected in the EIA/EMP report, the company shall recycle the treated waste water through Reverse Osmosis plant. The company shall undertake water conservation measures by recycling the cooling water blow down and reuse in the process. The boiler blow down shall be used for coal pile spray. The domestic waste water after treatment in STP should be used for green belt development.	The effluent is trea ted by ETP, and the treated effluent is used for slag cooling, dust suppression, sprinkling on roads, and plantations. The domestic wastewater, after treatment in STP, is used for green belt development.
III	In plant, control measures for checking fugitive emission for spillage/raw materials handling Should be provide. Further specific measures like provisions of dust extraction and dust suppression system for product and raw material handling, water sprinkling system at the waste disposal area to control the fugitive emissions shall be provided. Data on fugitive emission shall be regularly monitored and records maintained.	A dust suppression system at raw materials handling and a water sprinkler system at the waste disposal area have been provided. Data on fugitive emissions are being regularly monitored and recorded.

IV	The project authorities shall ensure the control of fugitive emissions from the electric arc furnace and Sinter plant during charging of scrap and tapping by provision of fume extractor system.	ESP is Provided to Sinter Plant. Electric Arc Furnace is not applicable to this plant.
V	The company shall provide gas cleaning system. The waste gas from blast furnace shall be passed through the dust catcher. The waste gases from the mini blast furnace and coke oven plant shall be used in waste heat recovery steam generators to recover heat/energy. The burnt waste gases shall be passed through electrostatic precipitator to control the particulate emissions shall be controlled by installation of ESP.	Waste gas from the blast furnace and coke oven is used in Steam Generators to recover heat/energy. ESPs are provided to control particulate emissions.
VI	The company shall undertake measures for installation of continuous ambient air quality monitoring stations and data sent electronically to SPCB/Central Pollution Control Board.	CAAQMS is installed, and ambient air quality monitoring reports are sent to MPCB & CPCB regularly.
VII	Solid waste would be generated in the form of slag and sold to cement manufacturer. The mill scale, machine returns and flue dust shall be used as raw material in Sinter plant. Fly ash shall be Utilized as per Government of India guidelines. The bottom ash shall be used for brick manufacturing and leveling of low-lying area and road making. The used oil will be sold to authorized recyclers.	Slag from the Blast Furnace is sold to cement manufacturers. Fly ash is sent to brick manufactures. The mill scale, machine returns, and flue dust are used as raw material in the Sinter plant. The used oil is sold to authorized recyclers.
VIII	The company shall raise green belt in an area of 50 ha. In addition to 40 ha. Of area already afforested as per the CPCB guidelines.	Total land: 140 Ha Green Belt: 57.00 Ha % of green belt: 40.71%
IX	Occupational Health Surveillance of the workers should be done on a regular basis and records maintained as per the Factories Act.	Occupational Health Surveillance of workers is done on a regular basis, and its record is maintained as per the Factory Act.
X	Recommendations made in the Corporate Responsibility for Environment Protection (CREP) should beimplemented.	1. Meeting parameters related to PLD, PLL, PLO etc. in coke Oven. 2. The Coal Dust Injection (CDI) system for the BF has been envisaged. 3. 100% utilization of Slag / Fly ash. 4. Water conservation scheme.

B. GENERAL CONDITIONS

Sr. No	CONDITION	COMPLIANCE
I	The project authorities must strictly adhere to the stipulations made by the Maharashtra Pollution Control Board and the State Government.	Agreed and are being adhered to.
II	No further expansion or modification in the plant should be carried out without prior approval of the Ministry of Environment and Forests.	Agreed.
III	At least four ambient air quality monitoring stations should be established in the downward direction as well as where maximum ground level concentration of SPM, SO2 and NOx are anticipated in consultation with the State Pollution Control Board. Data on ambient air quality and stack emission should be regularly submitted to this ministry including its regional Office at Bhopal and the State Pollution Control Board/ Central Pollution Control Board once in six months.	Ambient air monitoring is done at four locations in the downward direction. Results for ambient air monitoring and stack emissions are regularly submitted to MPCB and MOEF & CC at Nagpur once every six months.
IV	Industrial waste water shall be properly collected, treated so as to conform to the standards prescribed under GSR 422 (E) dated 19th May 1993 and 31st December 1993 or as amended from time to time. The treated waste water should be utilized for plantation purpose.	Waste water is properly collected and treated in ETP. The result of treated wastewater meets the prescribed norms. The treated wastewater is utilized for plantation purposes & slag cooling.
V	The overall noise levels in & around the plant area should be kept well within the standards (85 dBA) by providing noise control measures including acoustic hoods, silencers, enclosure etc. on all sources of noise generation. The ambient noise levels shall conform to the standards prescribed under EPA Rules 1989 viz. 75 dBA (daytime) and 70 dBA (night time).	Noise level is measured at points selected as per guideline and all results are well within the prescribed norms.

VI	The project proponent shall also comply with all the environmental protection measures and safeguards recommended in the EIA/EMP report. Further the company must undertake socio-economic development – activities in the surrounding villages like community development programs, education programmes, drinking water supply and health care etc.	We have implemented and complied with all the environmental protection measures and safeguards recommended in the EIA/EMP report. The company undertakes socio-economic development activities like community development programs, education programs, drinking water supply and health care etc. In the surrounding villages.
VII	The project authorities will provide adequate funds recurring and non - recurring to implement the conditions stipulated by the Ministry of Environment and Forests as well as the State Government along with the implantation schedule for all the conditions stipulated herein. The funds so provided should not be diverted for any other purposes.	Adequate funds are provided, especially for environmental protection and control of pollution. The funds so provided are not diverted for any other purposes.
VIII	The regional office of this Ministry Bhopal/Central Pollution Control Board/State Pollution Control Board will monitor the stipulated conditions. A six-monthly compliance report and the monitoring data along with statistical interpretation should be submitted to them regularly.	We strictly comply with the stipulated conditions made by CPCB/SPCB. The reports are regularly submitted. A six-monthly compliance report and the monitoring data along with statistical interpretation are submitted regularly.
IX	The project proponent should inform the public that the project has been in accorded environmental clearance by the Ministry and copies of the clearance letter are available with the State Pollution Control Board/ Committee and may also be seen at website of the Ministry of Environment and Forest at http://envror.nic.in they should be advertised withinseven days from the date of issue of the clearance letter, at least in two local newspapers the area 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.	Being complied.

X	The project authorities should 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.	Accepted.
XI	The Ministry may revoke or suspend the clearance, ifimplementation of any of the above conditions is not satisfactory.	Noted & accepted.
XII	The Ministry reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner will implement these conditions.	Noted.

Compliance of the condition in Environmental Clearance of MoEF NO. J-11011/77/ 2005-IA II(I) Dated, October 4, 2010.

Sr. No	Condition	Compliance
I	On-line ambient air quality monitoring and continuous stack monitoring facilities for all stacks shall be provided and sufficient air pollution control devices viz. Electrostatic precipitator (ESP), gas cleaning plant, bag filters etc. Shall be provided to keep the emission levels below 50mg/Nm3 installing energy efficient technology.	Industry has provided on-line ambient air quality monitoring and continuous stack monitoring facilities for all stacks. Adequate APC devices, such as Electrostatic Precipitator (ESP), gas cleaning plant, bag filters, are available to achieve emission levels below 50 mg/Nm3.
II	The National Ambient Air standards issued by the Ministry vide G.S.R.No.826 (E) dated 16th November, 2009 shall be followed.	Industry is being followed with the National Ambient Air standards issued by the Ministry vide G.S.R.No.826 (E) dated 16th November, 2009.
III	The project proponent shall upload the status of compliance of the stipulated environment clearance 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 MOEF, the respective Zonal Office of CPCB and SPCB. The criteria pollutant levels namely, RSPM, SO2, Nox (Ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the projects shall be monitored and displayed at a convenient location near the main gate of	Industry regularly submits environmental monitoring reports to MOEF & CC and MPCB. The criteria pollutant levels, namely PM10, PM2.5, SO2, Nox are monitored regularly and displayed at a convenient location near the main gate of the company in the public domain.

	the company in the public domain.	
IV	In plant control measures like bag filters, de-dusting and dust suppression system shall be provided to control fugitive emissions from all the vulnerablesources. Dust extraction and suppression system shall be provided at all the transfer points, coal handlingplant and coke sorting plant of coke oven plant. Bag filters shall be provided to hoods and dust collectors to coal and coke handling to control secondary fugitive dust emissions generated during screening, loading, unloading, handling and storage of raw materials etc.	All adequate APC equipment like ESP, Bag house, Cyclone separator, and bag filters are installed along with adequate stack height. Bag filters are provided to hoods and dust collectors to coal and coke handling to control secondary fugitive dust emissions generated during screening, loading, unloading, handling, and storage of raw materials, etc.
V	Efforts shall be made to make use of rain water harvested. If needed, capacity of the reservoir shall be enhanced to meet the maximum water requirement. Only the balance water requirement shall be met from other sources.	2 nos. Surface runoff water storage ponds have been provided, with sizes of 50×40×6 and 50×30×6. An additional reservoir has also been provided. Rooftop rainwater harvesting is provided at 3 locations.
VI	Regular monitoring of effluent and effluent surface, subsurface and ground water shall be ensured andtreated waste water should meet the norms prescribed by the state pollution Control Board or described under the Environment (Protection) Act, 1986 whichever are more stringent. Leachate study for the effluent generated and analysis shall also be regularly carried out and reports submitted to the Ministry Regional Office at Bhopal, SPCB and CPCB.	We regularly monitor effluent, effluent surface, subsurface, and groundwater to ensure that they meet the norms prescribed by the State Pollution Control Board. Leachate studies for the generated effluent and analysis also regularly carried out, and reports are submitted to the Ministry Regional Office at Nagpur and SPCB.
VII	All the coal fines, char from DRI plant and washeryrejects shall be utilized in AFBC boiler of power plant and no char shall be used for briquette making or disposed off anywhere else. AFBC boiler shall be installed simultaneously along with the DRI plant to ensure full utilization of char from the beginning. All the blast furnace (BF) slag shall be provided to the cement manufactures. Scrap shall be used in steel melting shop (SMS) and SMS slag and Kiln accretions shall be properly utilized. All the other solid waste including broken	The slag from the blast furnace is sold to cement manufacturing units. DRI plant and SMS are not applicable to this plant. Other solid waste, including broken refractory mass, is properly disposed of in an environmentally-friendly manner.

	refractory mass shall be properly disposed off in environment-friendly manner.	
VIII	The green belt all over the plant shall be strengthened and plantations shall be raised in 33% of the plant area as per the CPCB guidelines in consultation with the DFO.	Green belt has been developed on approximately 40.71 % of the plant area.
IX	The prescribed emission standards for coke oven plants, as notified vide notification no. GSR 46 (E) dated 3rd February, 2006 and subsequently amended shall becomplied with.	Industry complies with prescribed emission standards for coke oven plants, as notified vide notification no. GSR 46 (E) dated 3rd February 2006.
X	Proper utilization of fly ash shall be ensured as per Fly Ash Notification, 1999 and subsequently amendment in2003	100% fly ash is sold to brick manufacturers.
XI	Vehicular Pollution due to transportation of raw material and finished products shall be controlled. Proper arrangement shall also be made to control dustemissions during loading and unloading of the raw materials and finished products.	The industry takes proper care during the transportation of raw materials and finished products. To control dust emissions, water sprinkling systems are provided on raw material transportation routes.
XII	Transportation of raw coal during the initial phase shall be by 40–T mechanically covered or tarpaulin. Covered trucks from the coal mines to the washery. The raw coal, washed coal and coal waste (rejects) shall be stacked properly at an earmarked site(s). Within sheds/stockyards are fitted with wind breakers /shields. Adequate measures shall be taken to ensure that the stored minerals do not catch fire.	Transportation is done by rail rack to our railway siding. From the storage yard, the coal is transferred through the closed conveyor belt system.
XIII	Hoppers of the coal crushing unit at the crushing shed and washery unit shall be fitted with high efficiency bagfilters/Dust extractors and mist spray water sprinkling system shall be installed and operated effectively at all times of operation to check fugitive emissions from crushing operations, transfer points of belt conveyor system which shall be closed and from transportation	Hoppers of the coal crushing unit at the crushing shed are fitted with high-efficiency bag filters/dust extractors. The industry has provided water sprinkling systems to control fugitive emissions from crushing operations and transfer points.

	roads.	
XIV	A time-bound action plan shall be submitted to reduce solid waste, its proper utilization and disposal.	Proper utilization of solid waste has been accomplished.
XV	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, CECB and CPCB within 3 months of issue of Environment clearance letter.	Being implemented.
XVI	At least 5% of the total cost of the project should be earmarked towards the corporate social responsibility and item-wise details along with a time-bound action plan should be submitted to the Ministry's Regional Office at Bhopal. Implementation of such program should be ensured accordingly in a time-bound manner.	Industry regularly conducts CSR activities throughout the year with time-bound action plans. In FY 2024-25, Rs. 2.33 Cr have been contributed to various CSR activities.
XVII	The environmental statement for each financial yearending 31st March in From –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 Offices of the MOEF by e-mail.	Industry regularly submits Form –V to MPCB. We submit the status of compliance of environmental conditions to MPCB & MOEF & CC at Nagpur.

Compliance of the condition in Environmental Clearance of MoEF NO. J- 11011/358/2012-I A II (I) Dated: 4th September 2014		
S. No.	**Condition**	**Compliance**
A.	**SPECIFIC CONDITIONS**	
i	The company shall adopt dry quenching of coke. The prescribed standards for emissions from coke oven plants as notified vide Notification No. GSR (E) dated 3rd February 2006 and subsequent amendment thereto shall be complied with.	We are complying with the prescribed standards for emissions from coke oven plants as notified vide Notification No. GSR (E) dated 3rd February 2006 and the conditions as per MPCB. Reports are regularly submitted to MPCB.
ii	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), bag filter, etc shall be provide to keep the emission levels below 50mg/Nm3 by installing energy efficient technologies.	We have installed an on-line ambient air quality monitoring system, and continuous stack monitoring facilities have been provided for all the stacks. Sufficient air pollution control devices, viz., Electrostatic precipitator (ESP), bag filter, have been provided to keep the emission levels below 50mg/Nm3 by using energy-efficient technologies.
iii	In-Plant control measures such as bag filters, de-dusting and dust suppression system shall be provided to control fugitive emissions from all the vulnerable sources. Dust extraction and suppression systems shall be provided at all the transfer points, coal handling plant and coke sorting plant of coke oven plant. Bag filters shall be provided to hoods and dust collectors to coal and coke handling to control dust emissions. Water sprinkling system shall be provided to control secondary fugitive dust emissions generated during screening, loading, unloading, handling and storage of raw materials, etc.	Bag filters, de-dusting, and dust suppression systems have been provided to control fugitive emissions from all the vulnerable sources. Dust extraction and suppression systems are provided at all the transfer points, coal handling plant, and coke sorting plant of the coke oven plant. Bag filters are provided to hoods and dust collectors for coal and coke handling to control dust emissions. A water sprinkler system is provided to control secondary fugitive dust emissions generated during the screening, loading, unloading, handling, and storage of raw materials, etc.
iv	Gaseous emissions levels including secondary fugitive emissions from all the sources shall be controlled within the latest permissible limits if MOEF Notification GSR 414 (E) dated 30th May 2008 and regularly monitored. Guidelines/Code of Practice issued by	Gaseous emissions levels, including secondary fugitive emissions from all sources, are controlled and regularly monitored as per the guidelines issued by CPCB.

	CPCB shall be followed.	
v	Multi-stage scrubber, cyclone and bag filters, etc to control particulate emissions within the prescribed limits from coke oven shall be provided. Carbon Monoxide (CO) shall also be monitored along with other parameters and standards notified under Environment (Protection) Act 1986, shall be followed.	Multi-stage scrubbers, cyclone and bag filters have been provided to control particulate emissions from coke oven. Carbon Monoxide (CO) is monitored along with other parameters and standards notified under the Environment (Protection) Act 1986.
vi	Hot gases from DRI kiln shall be passed though the Dust Settling Chamber (DSC) to remove coarse solids and After Burning Chamber (ABC) to burn CO completely and used in Waste Heat Recovery Boiler (WHRB). The gas shall then be cleaned in ESP before dispersion out into the atmosphere through an ID fan and stack. ESP shall be installed to control the particulate emissions from the WHRB.	DRI plant is not applicable to this plant. Being Complied. ESP is installed to control the particulate emissions from the WHRB.
vii	Total make-up water requirement shall not exceed 21,195m3/d. The water consumption shall not exceed as per the standards prescribed for sponge iron plants and steel plants.	The total make-up water requirement is within the limit. The total water consumption is 6300 m3/day.
viii	Efforts shall be made to use maximum water from rainwater harvesting sources. If needed, capacity of the reservoir shall be enhanced to meet the maximum water requirement and the balance 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 requirements shall be modified accordingly.	We have provided an extra reservoir.
ix	All the effluents shall be treated and used for dust suppression and for green belt development. No effluents shall be discharged and 'zero' discharge shall be adopted. Domestic wastewater shall be treated in a sewage treatment plant.	All effluents are treated at ETP and treated water is used for dust suppression & green belt development. No effluent is discharged outside the plant premises. The 'zero' discharge has been adopted. Sewage treatment plants are provided for the treatment of all domestic wastewater.

x	Regular monitoring of effluent and effluent surface, sub-surface and ground water shall be ensured and treated waste water shall meet the norms prescribed by the state pollution control board or prescribed under E (P) act 2006, whichever is more stringent. Leachate study for the effluent generated and analysis shall also be regularly carried out and report submitted to Ministry's regional office at Bhopal, SPCB and CPCB	The industry regularly monitors and analysis of effluent samples, ground water, and treated water to ensure they meet the prescribed norms. All analysis reports are submitted to the Ministry's regional office at Nagpur, MPCB and CPCB.
xi	Sulphur and ash content of coal shall not exceed 0.65% and 9.5% respectively.	Agreed and is being complied with. Sulphur content is less than 0.60 % and the ash percentage is 9.0%.
xii	In case source of coal supply is to be changed at a later stage (now proposed imported coal from Australia), the project proponent shall intimate the Ministry well in advance along with necessary requisite documents for its concurrence for allowing the change.	Being complied. Any changes in coal supply will be intimated well in advance along with the necessary requisite documents for its concurrence for allowing the change.
xiii	Risk and Disaster management Plan along with 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 environmental clearance letter.	Being implemented.
xiv	All the blast furnace (BF) slag shall be granulated and provided to cement manufacturers for further utilization. Flue dust from pellet plant, sinter plant, DRI and SMS and sludge from BF shall be re-used in Sinter Plant. Coke breeze from coke oven plant shall be used in sinter and pellet plant. SMS slag shall be given for metal recovery or utilized. All the other solid waste including broken refractory mass shall be properly disposed off in environmentally friendly manner.	All blast furnace slag is sold to cement manufacturing units for further utilization. All solid waste is utilized and disposed of as per the conditions.
xv	A time-bound action plan shall be submitted to reduce solid waste, its proper utilization and disposal.	Disposal & utilization of solid waste have been accomplished as per the conditions.

xvi	Coal and coke fines shall be recycled and reused in the process. The breeze coke and dust from air pollution control system shall be reused in sinter plant. The sinter dust shall be recycled in the sinter plant. The waste oil shall be properly disposed of as per the Hazardous Waste (management, Handling and Trans-boundary Movement) Rules, 2008.	Coal and coke fines and dust from air pollution control system are used in the Sinter plant, and sinter dust is recycled in the sinter plant. Waste oil is disposed of to authorized re-processor/recyclers in accordance with the Hazardous Waste (Management, Handling, and Transboundary Movement) Rules, 2008.
xvii	Green belt shall be developed in 33% of the plant area within 3 years of grant of environmental clearance. Selection of plant species shall be as per the CPCB guidelines in consultation with the DFO/expert.	Currently, out of the 140 ha, approximately 40.71% ha has been developed as green belt.
xviii	All the recommendations made in the Charter on Corporate Responsibility for Environment Protection (CREP) for Steel Plant and Coke Oven Plants shall be implemented.	Being complied and implemented.
xix	At least 5% of the total cost of the project shall be earmarked towards Enterprise Social Commitment (ESC) based on locals' needs and the activity- wise details and village-wise details along with time-schedule for implementation shall be prepared and Submitted to the Ministry's Regional Office at Bhopal. Implementation of such programme shall be ensured accordingly in a time-bound manner.	Industry regularly conducts CSR activities throughout the year with time-bound action plans. In FY 2024-25, Rs. 2.33 Cr have been contributed to various CSR activities.
xx	The Company shall submit within 3 months, their policy towards Corporate Environment Responsibility, which shall inter-alia addresses: (i) Standard operating process/procedure to being into focus any infringement/deviation/violation of environmental or forest laws/ 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 of environmental	We have submitted the new policy towards Corporate Environment Responsibility as per the conditions.

	norms to the Board of Directors of the company and/or stakeholders or shareholders.	
xxi	All the commitments made in the Public Hearing/Public Consultation meeting held on 21.11.2013 shall be satisfactorily implemented and a separate budget for implementing the same shall be allocated and information submitted to the Ministry's Regional Office at Bhopal.	We have implemented the commitments made in the Public Hearing/Public Consultation meeting held on 21.11.2013.
xxii	Provision shall be made for housing of construction labour within the site with all necessary infrastructure and facilities such as cooking, mobile toilets, mobile STP, safe drinking water, medical health care, crèche, etc. The housing and infrastructure may be in the form of temporary structures to be removed after the completion period.	Housing facilities with all necessary infrastructure and facilities such as cooking, mobile toilets, mobile STP, safe drinking water, medical health care were provided to the construction workers during execution of project. After completion of Project work the housing and infrastructure has been removed from the site.
B	**GENERAL CONDITIONS**	
I.	The project authorities must strictly adhere to the stipulations made by the Maharashtra State Pollution Control Board and the State Government.	Agreed.
II.	No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment and Forests.	Agreed.
III.	At least four ambient air quality monitoring stations should be established in the downward direction as well as where maximum ground level concentration of 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 Bhubaneswar and the SPCB/CPCB once every six months.	Four ambient air quality monitoring stations have been installed, and data on ambient air quality and stack emission monitoring are regularly submitted to the SPCB/CPCB once every six months.
IV.	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	Industrial wastewater is properly collected and treated in the ETP. The result of treated wastewater meets the prescribed norms. The treated wastewater is utilized for plantation and slag cooling purposes.

	shall be utilized for plantation purpose.	
V.	The overall noise levels in and around the plant area shall be kept well within the standards (85 dBA) by providing noise control measures including acoustic hoods, silencers, enclosures etc. on all sources of noise generation. The ambient noise levels should conform to the standards prescribed under EPA Rules, 1989 viz. 75 dBA (daytime) and 70 dBA (nighttime).	Noise levels are measured at points selected as per guidelines, and all results are well within the prescribed norms.
VI.	Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.	Being complied with. Health surveillance of the workers is done on a regular basis, and records are maintained as per the Factories Act.
VII.	The company shall develop surface water harvesting structures to harvest the rain water for utilization in the lean season besides recharging the ground water table.	Being complied with. 2 nos. Surface runoff water storage ponds have been provided, with sizes of 50×40×6 and 50×30×6. Rooftop rainwater harvesting is provided at 3 locations.
VIII.	The project proponent shall also comply with all the environmental protection measures and safeguards recommended in the EIA/EMP report. Further, the company must undertake socio-economic development activities in the surrounding villages like community development programmes, educational programmes, drinking water supply and health care etc.	Agreed and implemented. We have provided a medical van with free medicine distribution in thirteen villages. Agriculture production activities, AI (artificial insemination) fertile for cattle, Awareness session/programmes, for adolescent girls and boys and young women etc. for ten villages. We are regularly undertaking socio-economic development activities such as community development programmes, educational programmes, drinking water supply, and healthcare in the surrounding villages throughout the year
IX.	Requisite amount shall be earmarked towards capital cost and recurring cost/annum for environment pollution control measures to implement the conditions stipulated by the Ministry of Environment and Forests as well as the State Government. An implementation schedule for implementing all the conditions stipulated herein shall be	The requisite amount is earmarked towards capital cost and recurring cost/annum for environmental pollution control measures. The funds provided are not be diverted for any other purpose.

	submitted to the Regional Office of the Ministry. The funds so provided shall not be diverted for any other purpose.	
X.	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.	A copy of the clearance letter was sent to the concerned offices.
XI.	The project proponent shall upload the status of compliance of the stipulated environment clearance 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 MOEF. The respective Zonal Office of CPCB and the SPCB. The criteria pollutant levels namely; PM10, PM2.5, SO2, NOx (ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the projects shall be monitored and displayed at a convenient location near the main gate of the company in the public domain.	Being complied with. Status of compliance with the stipulated environmental clearance conditions, including the results of monitored data uploaded on the company's website. It is also submitted to the Regional Office of the MOEF & CC and the MPCB at Nagpur. The pollutant levels, PM10, PM2.5, SO2, NOx (ambient levels as well as stack emissions) parameters, are monitored and displayed at a convenient location near the company's main gate of the company in the public domain.
XII.	The project proponent shall also submit six monthly reports on the status of the compliance of the stipulated environmental conditions including results of monitored data (both in hard copies as well as by e-mail) to the Regional Office of MOEF, the respective Zonal Office of CPCB and the SPCB. The Regional Office of this Ministry / CPCB / SPCB shall monitor the stipulated conditions.	Being complied with. The six-monthly reports on the status of compliance with stipulated environmental conditions, including results of monitored data, are regularly submitted to the Regional Office of MOEF& at Nagpur by e-mail and hard copy to MPCB Nagpur.

XIII.	The environmental statement for each financial year ending 31st March in Form-V 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 MOEF by e-mail.	We regularly submit an environmental statement with the status of compliance of environmental conditions in the prescribed Form -V to MPCB.
XIV.	The Project Proponent shall inform the public that the project has been accorded environmental clearance by the Ministry and copies of the clearance letter are available with the SPCB and may also be seen at Website of the Ministry of Environment and Forests at http://envfor.nic.inThis 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 Bhubaneswar.	The advertisement was published in two local newspapers, as per the conditions, in the languages English and Marathi.
XV.	Project authorities shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities and the date of commencing the land development work.	Being Complied with.

1. Pollution Control

1.1. Pollution Control Measures

Evonith Metallics Limited is well-versed with their corporate responsibilities and is very keen on undertaking various steps to control pollution from different environmental attributes, viz air, noise, and water, etc.

1.2. Air Pollution Control

Installed adequate APC device such as Electrostatic Precipitator (ESP), gas cleaning plant, bag filters are available at plant to achieve emission.

1.3. Green Belt Development

- A comprehensive plan is envisaged for the development of Green Belt around the perimeter and inside the plant. An experienced horticulturist has been engaged in carrying out the plantation programmers.
- The Green belt development helps in controlling the dust emission as well as acts as barriers for reducing the noise levels.
- Dense tree belts, Lawns & Gardens are developed in and around the plant and colony.
- Trees have been planted on either side of the inside roads used for transportation to arrest the air born dust.

1.4. Noise Pollution Control

Other than the regular maintenance of various equipment, the ear plugs & ear muffs are provided to all employees working close to noise-generating units. Apart from this, the following steps have been undertaken for reduction of noise levels:

- Frequent lubrication of pumps.
- Encasement of noise-generating equipment.
- Provided noise-proof cabins to operators.

2. ENVIRONMENTAL DATA ANALYSIS

2.1. Meteorology

Meteorological data were collected from the online meteorological system installed in the premises. Wind speed, wind direction, relative humidity, and temperatures were recorded at hourly intervals continuously.

2.2. Methodology of Sampling

Micro-meteorological data were observed for wind direction, wind speed, temperature, and relative humidity from the online system.

2.3. Observations on Primary Data

The site-specific data is presented in Table- 2.1 and is discussed below:

TABLE – 2.1
SUMMARY OF THE METEOROLOGICAL DATA GENERATED AT SITE
(OCTOBER 2024– MARCH 2025)

Month	Temperature (°C)		Relative Humidity (%)	
	Max.	Min.	Max.	Min.
October -2024	31.18	26.8	79.27	60.66
November -2024	29.74	22.31	66.51	54.18
December -2024	28.70	21.42	75.01	47.60
January- 2025	34.19	20.84	69.07	40.92
February – 2025	30.11	24.81	56.43	40.86
March - 2025	34.96	26.53	51.27	31.42

2.4. Temperature

It was observed that the temperature ranged from 20.84°C to 34.96°C. The maximum temperature was recorded in the month March 2025 as 34.96°C and minimum temperature was recorded in the month of January 2025 as 20.84°C. The monthly variations in temperature are presented in Table 2.1.

2.5. Relative Humidity

During the period of observation, the relative humidity recorded was moderately low to high and ranged from 31.42 % to 79.27 %. The maximum humidity, 79.27 %, was observed in October 2024. The lowest, 31.42 %, was recorded in the month of March 2025. The monthly variation in relative humidity is presented in Table 2.1.

2.6. Wind Speed / Direction

The predominant winds along with wind speeds during the study period are discussed below:

- **Wind Pattern during October 2024**

The wind speed observed during the period is in the range from calm to 1.49 m/s. The predominant wind direction was SSE for 32.26 % of the total time.

- **Wind Pattern during November 2024**

The wind speed observed during this period is in the range from calm to 1.97 m/s. The predominant wind direction was SSE for 46.67 % of the total time.

- **Wind Pattern during December 2024**

The wind speed observed during this period is in the range from calm to 2.15 m/s. The predominant wind direction was SE for 38.71 % of the total time.

- **Wind Pattern during January 2025**

The wind speed observed during the period is in the range from calm to 9.94 m/s. The predominant wind directions were ESE for 32.26 % of the total time.

- **Wind Pattern during February 2025**

The wind speed observed during the period is in the range from calm to 2.06 m/s. The predominant wind direction was SSW for 28.57 % of the total time.

- **Wind Pattern during March 2025**

The wind speed observed during the period is in the range from calm to 1.90 m/s. The predominant wind direction was SSW for 30 % of the total time.

3. AMBIENT AIR QUALITY

The ambient air quality with respect to the study zone around the plant forms the baseline information. All the sampling locations fall within a 10 km radial distance from the plant. To assess the effect of plant activities on the air, environmental parameters like Particulate Matter (PM10) & (PM2.5), Sulphur Dioxide (SO2) and Nitrogen Dioxide (NO2) were monitored. The results of monitoring carried out for the study period (Oct 2024 to Mar 2025) are presented. The details of the sampling locations with respect to the Plant are given below in Table –2.2 (A)

TABLE-2.2 (A)

AMBIENT AIR QUALITY SAMPLING LOCATIONS

Sampling Code	Locations	Sampling Height (mt)	Location Details
AAQ1	Near Time Office	3.5	Represents Core zone air quality
AAQ2	Near Bapukuti Sewagram Village	3.5	Represents air quality
AAQ3	Near Canteen	3.5	Represents Core zone air quality

3.1. Methodology of Sampling

Sampling was carried out continuously for twice a week at each station during the study period using pre-calibrated respirable dust samplers. In each of the stations earmarked, samples were collected for SO2, NOx, Particulate Matter (PM10) & (PM2.5). Samples were collected at twenty-four hourly intervals and it were sent to the Laboratory for analysis.

3.2. Analytical Procedure

WHATMAN GF/A filter paper was used in the high-volume sampler for PM10 & PM 2.5 and weighed by electronic balance and computed as per standard methods.

Ambient air samples were analyzed for SO2 concentration levels using Improved West – Geake method using pre-programmed HACH spectrophotometer at a wavelength of 560 nm. NOx concentration levels were estimated using Jacob and Hocheiser modified (Na-As) method using pre-programmed HACH spectrophotometer at a wavelength of 540 nm.

The survey results of all the sampling locations are presented in Table-2.2 C & 2.2 E. Various statistical parameters like maximum and minimum values have been computed from the observed raw data for all the AAQ monitoring stations. The summary of these results for all the locations is presented in Table – 2.2 (B). These are compared with the standards prescribed by the Central Pollution Control Board (CPCB)

3.3. Observation based on Primary Data

AAQ1: Near Time office

The values for PM10 & PM2.5 ranged from 51 to 82 µg/m3 & 32 to 53 µg/m3 during the study period. Similarly, SO2 and NO2 levels were recorded in the range of 8.9 to 22.48 µg/m3 & 9.4 to 23.65 µg/m3 respectively.

AAQ2: Bapukuti (Sewagram Village)

The values for PM10 & PM2.5 ranged from 34 to 72 µg/m3 and 16 to 48 µg/m3 during the study period. Similarly, SO2 and NO2 levels were recorded in the range of 7.52 to 22.37 µg/m3, and 8.7 to 20.76 µg/m3 respectively.

AAQ3: Near EML Canteen

The values for PM10 & PM2.5 ranged from 55 to 82 µg/m3 and 20 to 52 µg/m3 during the study period. Similarly, SO2 and NO2 levels were recorded in the range of 7.14 to 22.35 µg/m3, and 8.35 to 23.56 µg/m3 respectively.

TABLE – 2.2 (B)

SUMMARY OF AMBIENT AIR QUALITY RESULT (OCT-2024 – MAR-2025)

Location	PM10		PM 2.5		SO2		NO2	
	Max	Min	Max	Min	Max	Min	Max	Min
Near Time office	82	51	53	32	22.48	8.9	23.65	9.4
Bapukuti (Sewagram Village)	72	34	48	16	22.37	7.52	20.76	8.7
Near EML Canteen	82	55	52	20	22.35	7.14	23.56	8.35

Note: All values are expressed in µg/m3.

TABLE – 2.2 (C)

AMBIENT AIR QUALITY

LOCATION: NEAR TIME OFFICE

Week	Date of Monitoring	PM10 (µg/m3)	PM2.5 (µg/m3)	SO2 (µg/m3)	NO2 (µg/m3)
NAAQMS STANDARD		100	60	80	80
Oct-24					
I	02.10.2024	68	45	16.25	22.53
	03.10.2024	69	48	18.52	10.64
II	09.10.2024	75	49	19.56	18.43
	10.10.2024	82	52	17.52	14.94
III	16.10.2024	72	48	19.31	12.54
	17.10.2024	69	39	10.52	10.85
IV	23.10.2024	65	38	15.65	9.46
	24.10.2024	68	35	14.23	12.65
V	29.10.2024	67	38	16.15	14.96
	30.10.2024	76	43	17.35	12.38
Nov- 2024					
I	01.11.2024	75	53	13.46	10.58
	02.11.2024	70	50	15.82	23.65
II	08.11.2024	65	48	11.52	22.85
	09.11.2024	69	46	18.69	15.22
III	15.11.2024	73	48	22.48	17.50
	16.11.2024	79	50	17.47	10.52
IV	22.11.2024	69	45	12.31	09.62
	23.11.2024	64	38	10.59	18.26
V	29.11.2024	68	42	9.65	13.95
	30.11.2024	70	49	16.71	14.59
DEC-2024					
I	02.12.2024	51	32	10.5	9.7
	03.12.2024	52	34	11.6	10.6
II	09.12.2024	56	36	10.6	12.5
	10.12.2024	54	32	8.9	10.4
III	16.12.2024	68	41	10.8	9.4
	17.12.2024	65	38	9.5	10.8
IV	23.12.2024	69	40	14.5	12.5
	24.12.2024	64	36	16.5	10.8
V	30.12.2024	72	42	12.8	13.2
	31.12.2024	70	39	16.3	18.5

JAN-2025					
I	02.01.2025	68	41	10.8	9.4
	03.01.2025	65	38	9.5	10.8
II	09.01.2025	69	39	14.5	12.5
	10.01.2025	64	36	16.5	10.8
III	16.01.2025	69	38	13.0	14.2
	17.01.2025	72	42	11.5	12.4
IV	23.01.2025	73	38	10.8	10.6
	24.01.2025	70	40	9.4	12.4
V	30.01.2025	76	45	15.6	10.8
	31.01.2025	80	48	17.5	20.4
FEB- 2025					
I	03.02.2025	72	49	12.34	11.52
	04.02.2025	69	46	15.22	10.65
II	10.02.2025	75	50	10.98	16.22
	11.02.2025	77	52	16.35	14.56
III	17.02.2025	74	48	15.29	10.62
	18.02.2025	72	46	12.01	19.35
IV	24.02.2025	68	43	10.68	16.31
	25.02.2025	65	45	13.56	15.46
MAR-25					
I	03.03.2025	76	48	16.32	11.52
	04.03.2025	78	50	13.25	15.32
II	10.03.2025	73	46	12.61	10.53
	11.03.2025	74	48	11.83	13.13
III	17.03.2025	68	41	10.85	9.44
	18.03.2025	65	38	9.54	10.85
IV	24.03.2025	69	39	14.56	12.56
	25.03.2025	72	42	12.86	13.23
V	30.03.2025	70	37	11.94	14.80
	31.03.2025	68	40	12.63	16.32

***As per National Ambient Air Quality Standards – S.O. 384(E), Notification 11.4.1994 as amended 18.11.2009*

TABLE – 2.2 (D)

AMBIENT AIR QUALITY

LOCATION: SEWAGRAM NEAR BAPUKUTI

Week	Date of Monitoring	PM10 (µg/m3)	PM2.5 (µg/m3)	SO2 (µg/m3)	NO2 (µg/m3)
NAAQMS STANDARD		**100**	**60**	**80**	**80**
OCT-2024					
I	02.10.2024	65	46	16.23	12.38
	03.10.2024	62	42	12.96	10.52
II	09.10.2024	68	44	14.35	11.98
	10.10.2024	64	38	11.25	16.23
III	16.10.2024	62	39	10.65	10.52
	17.10.2024	60	35	16.39	9.65
IV	23.10.2024	59	33	12.95	13.24
	24.10.2024	65	42	10.63	12.05
V	29.10.2024	63	40	8.66	10.64
	30.10.2024	69	46	12.52	13.26
NOV-2024					
I	01.11.2024	65	45	22.37	20.76
	02.11.2024	59	38	12.34	15.37
II	08.11.2024	62	42	16.73	12.63
	09.11.2024	57	35	13.85	10.39
III	15.11.2024	58	32	12.22	16.26
	16.11.2024	62	39	10.52	13.56
IV	22.11.2024	64	42	16.35	16.53
	23.11.2024	62	38	15.29	12.65
V	29.11.2024	60	36	12.35	16.32
	30.11.2024	58	33	19.56	15.95
DEC-2024					
I	02.12.2024	58	38	9.7	8.7
	03.12.2024	53	35	9.5	8.9
II	09.12.2024	51	32	10.5	9.7
	10.12.2024	52	34	11.6	10.6
III	16.12.2024	55	30	15.6	13.5
	17.12.2024	58	38	11.4	11.8
IV	23.12.2024	56	36	10.6	12.5
	24.12.2024	54	32	8.9	10.4
V	30.12.2024	59	40	13.2	12.9
	31.12.2024	60	38	16.6	10.5

JAN-25					
I	02.01.2025	50	37	20.1	15.3
	03.01.2025	55	46	11.5	14.4
II	09.01.2025	72	39	9.4	10.2
	10.01.2025	59	48	16.2	12.7
III	16.01.2025	51	32	10.5	9.7
	17.01.2025	52	34	11.6	10.6
IV	23.01.2025	58	38	11.4	11.8
	24.01.2025	56	36	10.6	12.5
V	30.01.2025	54	32	8.9	10.4
	31.01.2025	59	35	13.2	11.9
FEB-25					
I	03.02.2025	65	42	10.64	15.22
	04.02.2025	62	38	12.35	14.32
II	10.02.2025	59	35	16.22	16.25
	11.02.2025	67	44	11.54	10.63
III	17.02.2025	62	36	13.15	17.26
	18.02.2025	63	38	14.52	15.34
IV	24.02.2025	65	37	12.78	16.20
	25.02.2025	58	39	13.25	12.52
MAR-25					
I	03.03.2025	55	28	16.23	15.34
	04.03.2025	68	35	10.20	9.25
II	10.03.2025	60	29	18.94	18.62
	11.03.2025	50	37	20.15	15.32
III	17.03.2025	47	16	9.48	13.40
	18.03.2025	51	24	12.84	11.74
IV	24.03.2025	34	19	8.91	10.80
	25.03.2025	39	25	9.72	13.56
v	30.03.2025	68	35	7.52	11.47
	31.03.2025	59	40	12.53	10.95

*** As per National Ambient Air Quality Standards – S.O. 384(E), Notification 11.4.1994 as amended 18.11.2009.*

TABLE- 2 (E)

AMBIENT AIR QUALITY
LOCATION: NEAR EML CANTEEN

Week	Date of Monitoring	PM10 (µg/m3)	PM2.5 (µg/m3)	SO2 (µg/m3)	NO2 (µg/m3)
NAAQMS STANDARD		**100**	**60**	**80**	**80**
OCT-2024					
I	02.10.2024	63	46	12.22	16.35
	03.10.2024	69	44	10.35	15.20
II	09.10.2024	75	49	16.53	10.22
	10.10.2024	69	42	14.26	9.35
III	16.10.2024	64	40	11.53	14.26
	17.10.2024	68	40	15.56	13.52
IV	23.10.2024	64	39	14.23	14.56
	24.10.2024	75	49	12.30	11.35
V	29.10.2024	79	50	10.63	13.29
	30.10.2024	70	42	9.34	8.35
NOV-2024					
I	01.11.2024	72	46	16.43	23.56
	02.11.2024	68	40	12.99	20.62
II	08.11.2024	70	43	10.52	15.26
	09.11.2024	73	45	19.35	12.85
III	15.11.2024	65	39	18.23	17.56
	16.11.2024	62	35	22.35	14.52
IV	22.11.2024	69	42	20.63	18.24
	23.11.2024	65	36	14.29	12.35
V	29.11.2024	62	38	16.34	14.52
	30.11.2024	68	40	15.52	17.45
DEC-2024					
I	02.12.2024	69	42	13.6	10.2
	03.12.2024	65	38	11.5	12.6
II	09.12.2024	65	38	11.5	12.6
	10.12.2024	63	34	12.6	14.8
III	16.12.2024	56	30	8.6	13.4
	17.12.2024	57	31	13.4	12.6
IV	23.12.2024	68	42	11.9	13.4
	24.12.2024	65	40	13.6	10.5
V	30.12.2024	62	38	14.5	16.8
	31.12.2024	59	34	12.6	13.7

JAN-25					
I	02.01.2025	64	39	16.5	13.1
	03.01.2025	55	36	10.3	11.9
II	09.01.2025	59	34	12.5	13.2
	10.01.2025	64	40	16.4	10.8
III	16.01.2025	59	38	12.9	15.6
	17.01.2025	62	39	11.4	12.2
IV	23.01.2025	56	30	8.6	13.4
	24.01.2025	57	31	13.4	12.6
V	30.01.2025	68	42	11.9	13.4
	31.01.2025	70	46	9.4	8.9
FEB-25					
I	03.02.2025	75	51	16.32	13.20
	04.02.2025	73	45	14.29	12.82
II	10.02.2025	78	48	12.59	14.32
	11.02.2025	72	42	15.53	19.35
III	17.02.2025	70	40	10.25	12.54
	18.02.2025	69	36	14.53	10.63
IV	24.02.2025	75	46	12.98	16.35
	25.02.2025	72	42	13.31	18.74
MAR-25					
I	03.03.2025	59	20	13.42	15.25
	04.03.2025	61	29	9.31	11.67
II	10.03.2025	72	31	7.14	13.25
	11.03.2025	67	42	9.13	16.14
III	17.03.2025	65	38	12.65	14.21
	18.03.2025	82	52	19.05	12.22
IV	24.03.2025	63	35	11.24	14.20
	25.03.2025	55	28	16.41	15.37
V	30.03.2025	68	35	10.56	9.25
	31.03.2025	60	30	13.31	10.65

4. Work Place Monitoring

It covers the sampling of workplace air samples for measurement of Particulate Matter i.e., SPM, in Workplace location as identified, RMHS, sinter plant, CPP 15MW, Boiler 40TPH, Boiler100TPH, Blast Furnace-II, Coke oven area etc. in Table No. 2.2 A (I) to 2.2 A (V)

TABLE – 2.2 A (I)

MONTH: - OCT-2024

WORKPLACE AIR QUALITY MONITORING REPORT

Sr.No.	Sections	SPM (ug/m3)	
		NORMS	ACTUAL
1	Blast Furnace-II (Transfer point)	2000	365
2	Coke Oven (Over size Discharge)	2000	524
3	Boiler 40TPH (Product Separation area)	2000	470
4	CPP 15MW (Shop Floor)	2000	565
5	RMHS (Vibration Screen)	2000	935
6	RMHS (Transfer Point)	2000	443

TABLE – 2.2 A – (II)

MONTH: - NOV-2024

WORKPLACE AIR QUALITY MONITORING REPORT

Sr.No.	Sections	SPM (ug/m3)	
		NORMS	ACTUAL
1	Sinter Plant-II (Hopper storage Bin)	2000	967
2	Blast Furnace-II (Hot Metal Unloading	2000	644
3	Coke Oven (Transfer Point area)	2000	775
4	Boiler 100 TPH (Near Boiler Area)	2000	307
5	RMHS (Stock Bin Area)	2000	796
6	RMHS (Transfer Point)	2000	363

TABLE – 2.2 A – (III)

MONTH: - DEC-2024

WORKPLACE AIR QUALITY MONITORING REPORT

Sr.No.	Sections	SPM (ug/m3)	
		NORMS	ACTUAL
1	Sinter Plant-II (Near Crusher area)	2000	278
2	Blast Furnace-II (Stock house dedusting	2000	366
3	Blast Furnace-II (Cast house dedusting	2000	329
4	Coke Oven (Near Feeder Area)	2000	1921
5	RMHS (Near Wagan Tripler)	2000	1703
6	Sinter Plant-II (Near Over size area)	2000	550

TABLE – 2.2 A – (IV)

MONTH: JAN-2025

WORKPLACE AIR QUALITY MONITORING REPORT

Sr.No.	Sections	SPM (ug/m3)	
		NORMS	ACTUAL
1	Sinter Plant-II (Magnetic Separation area)	2000	246
2	RMHS (Vibrating screen Area)	2000	1518
3	Boiler 100TPH (Feeding Area)	2000	1025
4	Sinter plant -II (Cooler Discharge transfer	2000	929
5	RMHS (Screen area)	2000	575
6	Sinter Plant-II (Mixing area)	2000	814

TABLE – 2.2 A – (V)

MONTH: - FEB-2025

WORKPLACE AIR QUALITY MONITORING REPORT

Sr. No.	Sections	SPM (ug/m3)	
		NORMS	ACTUAL
1	Coke Oven (over Size Discharge)	2000	601
2	Blast Furnace-I (Transfer Point)	2000	1651
3	CPP 15 MW (Shop Floor)	2000	901
4	Boiler 100 TPH (Product Separation Area)	2000	884
5	RMHS (Crushing area)	2000	839
6	RMHS (Transfer point area)	2000	1360

TABLE – 2.2 A – (VI)

MONTH: - MAR-2025

WORKPLACE AIR QUALITY MONITORING REPORT

Sr. No.	Sections	SPM (µg/m3)	
		NORMS	ACTUAL
1	Coke Oven (Transfer Point)	2000	595
2	RMHS (Crushing Area)	2000	1301
3	Boiler 100TPH (Boiler Area)	2000	205
4	Blast Furnace-I (Hot Metal Unloading	2000	270
5	RMHS (Stock Bin area)	2000	629
6	Sinter Plant-II (Hopper Storage Bin area)	2000	1013

5. SOURCE EMISSION MONITORING

There are 11 No. of stacks at various sections to control particulate and gaseous emissions. The technical details are tabulated in Table No. 2.3 (A)

TABLE 2.3 (A)

Details of Stack and Control Equipment's

Sr. NO	Stack Attached to	Blast Furnace-2 (HBS)	Blast Furnace-2 Blast Furnace Stock & Cast house	Blast Furnace-1 (HBS)	Sinter Plant exhaust gas de-dusting -II	Sinter Plant de-dusting system (Tail Bag Filter)-II	Metallurgical Coke Oven	Steam Generating Boiler	Waste Heat Recovery Steam Generator	DG Set 1010KVA (Coke Oven)	DG Set 1010KVA (Coke Oven)	DG Set 650KVA (BF-II)
1	Stack height	60 mtr	35 mtr	60 mtr	100 mtr	50 mtr	90 mtr	60 mtr	60 mtr	12 mtr	12 mtr	15 mtr
2	Stack diameter	3.2	1.2	3.2	4.7	3.2	4.0	3.6	2.62	0.25	0.25	0.2
3	Material Of Construction	RCC	Steel	RCC	RCC	Steel	RCC	RCC	RCC	Steel	Steel	Steel
4	Type of fuel	Coke	NA	Coke	Waste Flue Gas	NA	COG	Coal	Blast Furnace gas	HSD	HSD	HSD
5	Consumption of Fuel	1249 MT/Day	0	750 MT/Day	6000 Nm3/hr	NA	12500 Nm3/hr	400 TPD	70000 Nm3/hr	80 lit/hr	80 lit/hr	50 lit/hr
6	Control Equipment	Bag Filter	Bag Filter	Bag Filter	ESP	Bag Filter	Cyclone Dust Collector	ESP	Bag Filter	NA	NA	NA
7	Nature of Pollutants likely to be present	PM, SO2,NOx	PM	PM, SO2,NOx	PM, SO2, NOx	PM	PM, SO2, NOx	PM, SO2, NOx	PM,SO2, NOx	PM, SO2, NOX	PM, SO2, NOX	PM, SO2, NOX

5.1. Methodology of Sampling

The stack sampling was carried out using an **ISO-KINATIC METHOD using a** pre-calibrated stack kit. Cellulose and Glass Fiber thimbles were used for collecting particulate matter. The Sulphur Dioxide is estimated as per IS: 11255 Part –II. NOx is estimated as per IS: USEPA (PDSA Method).

5.2. Results and Discussions

Stack emission monitoring was carried out. The emission rates were meeting the limits prescribed by MPCB and the results were tabulated in Table-2.3 (B) to (G).

TABLE - 2.3 (B)
MONTH: - OCT-2024
STACKS EMISSION REPORT

Sr. No.	Sections	SPM (mg/Nm^3)		SO_2 (mg/Nm^3)		NOx (mg/Nm^3)		CO (mg/Nm^3)	
		NORMS	ACTUAL	NORMS	ACTUAL	NORMS	ACTUAL	NORMS	ACTUAL
1	Blast Furnace Stove (Phase II)	30	28	250	226	200	184	-	39
2	Sinter Plant-II exhaust gas de-dusting (Main ESP)	50	20	500	135	500	149	-	-
3	Sinter Plant-II de-dusting system (Tail Bag Filter)	50	30	-	-	-	-	-	-
4	Metallurgical Coke Oven	50	27	500	199	500	263	-	47
5	Steam Generating Boiler (100TPH)	50	18	-	171	-	250	-	-
6	Waste Heat Recovery (CPP)	50	18	-	110	-	194	-	-
7	Blast Furnace-II DG Set 650kVA	-	34	-	28	-	249	-	36
8	Coke Oven DG Set-1 1010 kVA	-	28	-	44	-	272	-	49
9	Coke Oven DG Set-2 1010 kVA	-	31	-	39	-	249	-	51
10	Blast Furnace-II Stock & Cast house	50	26	-	-	-	-	-	-

TABLE - 2.3 (C)
MONTH: - NOV-2024
STACKS EMISSION REPORT

Sr. No.	Sections	SPM (mg/Nm^3)		SO_2 (mg/Nm^3)		NOx (mg/Nm^3)		CO (mg/Nm^3)	
		NORMS	ACTUAL	NORMS	ACTUAL	NORMS	ACTUAL	NORMS	ACTUAL
1	Blast Furnace Stove (Phase I)	30	26	250	210	200	169	-	40
2	Blast Furnace Stove (Phase II)	30	26	250	199	200	178	-	36
3	Sinter Plant-II exhaust gas de-dusting (Main ESP)	50	22	500	149	500	157	-	-
4	Sinter Plant-II de-dusting system (Tail Bag Filter)	50	27	-	-	-	-	-	-

5	Metallurgical Coke Oven	50	24	500	215	500	272	-	44
6	Steam Generating Boiler (100TPH)	50	21	-	149	-	237	-	-
7	Waste Heat Recovery (CPP)	50	21	-	132	-	213	-	-
8	Blast Furnace-II DG Set 650kVA	-	30	-	22	-	257	-	39
9	Coke Oven DG Set-1 1010 kVA	-	25	-	33	-	260	-	47
10	Coke Oven DG Set-2 1010 kVA	-	28	-	28	-	233	-	42
11	Blast Furnace-II Stock & Cast house	50	29	-	-	-	-	-	-

TABLE - 2.3 (D)

MONTH: - DEC-2024

STACKS EMISSION REPORT

Sr. No.	Sections	SPM (mg/Nm^3)		SO2 (mg/Nm^3)		NOx (mg/Nm^3)		CO (mg/Nm^3)	
		NORMS	ACTUAL	NORMS	ACTUAL	NORMS	ACTUAL	NORMS	ACTUAL
1	Blast Furnace Stove (Phase I)	30	29	250	221	200	190	-	33
2	Blast Furnace Stove (Phase II)	30	29	250	235	200	188	-	39
3	Sinter Plant-II exhaust gas de-dusting (Main ESP)	50	27	500	197	500	210	-	-
4	Sinter Plant-II de-dusting system (Tail Bag Filter)	50	33	-	-	-	-	-	-
5	Metallurgical Coke Oven	50	31	500	265	500	289	-	
6	Steam Generating Boiler (100TPH)	50	28	-	173	-	266	-	-
7	Waste Heat Recovery (CPP)	50	28	-	148	-	237	-	-
8	Blast Furnace-II DG Set 650kVA	-	22	-	16	-	224	-	36
9	Coke Oven DG Set-1 1010 kVA	-	30	-	23	-	288	-	54
10	Coke Oven DG Set-2 1010 kVA	-	24	-	30	-	255	-	47

TABLE - 2.3 (E)
MONTH: -JAN-2025
STACKS EMISSION REPORT

Sr. No.	Sections	SPM (mg/Nm^3)		SO2 (mg/Nm^3)		NOx (mg/Nm^3)		CO (mg/Nm^3)	
		NORMS	ACTUAL	NORMS	ACTUAL	NORMS	ACTUAL	NORMS	ACTUAL
1	Blast Furnace Stove (Phase I)	30	28	250	218	200	172	-	45
2	Blast Furnace Stove (Phase II)	30	30	250	212	200	176	-	37
3	Sinter Plant-II exhaust gas de-dusting (Main ESP)	50	20	500	111	500	181	-	-
4	Sinter Plant-II de-dusting system (Tail Bag Filter)	50	22	-	-	-	-	-	-
5	Metallurgical Coke Oven	50	27	500	222	500	256	-	56
6	Steam Generating Boiler (100TPH)	50	27	-	146	-	245	-	-
7	Waste Heat Recovery (CPP)	50	27	-	174	-	212	-	-
8	Blast Furnace-II DG Set 650kVA	-	24	-	25	-	242	-	33
9	Coke Oven DG Set-1 1010 kVA	-	34	-	42	-	269	-	47
10	Coke Oven DG Set-2 1010 kVA	-	29	-	42	-	239	-	59
11	Blast Furnace-II Stock & Cast house	50	30	-	-	-	-	-	-

TABLE - 2.3 (F)
MONTH: - FEB-2025
STACKS EMISSION REPORT

Sr. No.	Sections	SPM (mg/Nm^3)		SO2 (mg/Nm^3)		NOx (mg/Nm^3)		CO (mg/Nm^3)	
		NORMS	ACTUAL	NORMS	ACTUAL	NORMS	ACTUAL	NORMS	ACTUAL
1	Blast Furnace Stove (Phase I)	30	22	250	72	200	42	-	27
2	Blast Furnace Stove (Phase II)	30	27	250	243	200	160	-	15
3	Sinter Plant-II exhaust gas de-dusting (Main ESP)	50	31	500	33	500	165	-	-
4	Sinter Plant-II de-dusting system (Tail Bag Filter)	50	24	-	-	-	-	-	-

5	Metallurgical Coke Oven	50	28	500	110	500	68	-	16
6	Steam Generating Boiler (100TPH)	50	28	-	72	-	41	-	-
7	Waste Heat Recovery (CPP)	50	28	-	10	-	27	-	-
8	Blast Furnace-II DG Set 650kVA	-	24	-	39	-	217	-	36
9	Coke Oven DG Set-1 1010 kVA	-	35	-	55	-	245	-	43
10	Coke Oven DG Set-2 1010 kVA	-	31	-	44	-	268	-	46
11	Blast Furnace-II Stock & Cast house	50	24	-	-	-	-	-	-

TABLE - 2.3 (G)

MONTH: - MAR-2025

STACKS EMISSION REPORT

Sr. No.	Sections	SPM (mg/Nm^3)		SO2 (mg/Nm^3)		NOx (mg/Nm^3)		CO (mg/Nm^3)	
		NORMS	ACTUAL	NORMS	ACTUAL	NORMS	ACTUAL	NORMS	ACTUAL
1	Blast Furnace Stove (Phase I)	30	25	250	138	200	117	-	55
2	Blast Furnace Stove (Phase II)	30	28	250	209	200	170	-	49
3	Sinter Plant-II exhaust gas de-dusting (Main ESP)	50	18	500	67	500	166	-	-
4	Sinter Plant-II de-dusting system (Tail Bag Filter)	50	25	-	-	-	-	-	-
5	Metallurgical Coke Oven	50	30	500	56	500	49	-	57
6	Steam Generating Boiler (100TPH)	50	28	-	61	-	45	-	-
7	Waste Heat Recovery (CPP)	50	26	-	69	-	56	-	-
8	Blast Furnace-II DG Set 650kVA	-	23	-	17	-	210	-	39
9	Coke Oven DG Set-1 1010 kVA	-	29	-	54	-	267	-	47
10	Coke Oven DG Set-2 1010 kVA	-	27	-	51	-	279	-	51
11	Blast Furnace-II Stock & Cast house	50	24	-	-	-	-	-	-

6. WASTE WATER QUALITY

ETP effluents were found to be confirmed to the limits prescribed by the MPCB. Analysis results during the study period are shown in Table – 2.4.

TABLE – 2.4

WASTE WATER QUALITY – ETP (Treated)

Parameters	OCT 2024	NOV 2024	DEC 2024	JAN 2025	FEB 2025	MAR 2025	Limits as per MPCB
pH	8.2	8.4	8.3	8.3	8.3	8.3	5.5 – 9.0
Total Suspended Solids (mg/l)	BQL (LOQ:5)	BQL (LOQ:5)	BQL (LOQ:5)	BQL (LOQ:5)	6	6	100
Total Dissolve Solids (mg/l)	299	364	314	291	269	260	2100
Chloride (mg/l)	20.0	27	20.5	18.5	17.5	17.0	600
Sulphate (mg/l)	30.7	26	15.7	39	41.1	20.6	1000
BOD (3 days at 27 °C) (mg/l)	6.3	2.6	3.6	5.7	4.2	6.6	30
COD (mg/l)	20	9	12	20	16	24	250
Oil and Grease mg/l)	BQL (LOQ:2)	BQL (LOQ:2)	BQL (LOQ:2)	BQL (LOQ:2)	BQL. (LOQ:2)	BQL (LOQ:2)	10
Iron (mg/l)	0.515	0.244	0.266	0.144	0.183	0.154	5
Chromium Hexavalent (as Cr6*)	BQL (LOQ:0.02)	BQL (LOQ:0.02)	BQL (LOQ:0.02)	BQL (LOQ:0.02)	BQL (LOQ:0.02)	BQL (LOQ:0.02)	0.1
Total Chromium (as Cr)	BQL (LOQ:0.01)	BQL (LOQ:0.01)	BQL (LOQ:0.01)	BQL (LOQ:0.01)	BQL (LOQ:0.01)	BQL (LOQ:0.01)	2.0
Zinc (as Zn)	BQL (LOQ:0.02)	BQL (LOQ:0.02)	BQL (LOQ:0.02)	BQL (LOQ:0.02)	BQL (LOQ:0.02)	BQL (LOQ:0.02)	-

7. NOISE LEVEL

Work place Noise measured at different work places. The ambient noise levels were also measured at four locations, viz. Southern, Northern, Eastern & Western Boundary, during the study period (Oct 2024 – March 2025). The details of the noise sampling locations are given in Table - 2.5 A & B

7.1. Methodology of Sampling

The noise monitoring was carried out continuously on hourly basis over a period of one day at each location. The noise level monitoring was carried out using an analog noise level meter.

TABLE- 2.5 (A)

NOISE LEVEL MONITORING LOCATIONS IN SIDE THE PLANT

Sample Code	Locations
NL1	Blast Furnace-2 Front Near Cast house
NL 2	Blast Furnace-2 Near Stock house
NL3	Blast Furnace-2 Near D.G set 650 KVA
NL4	Coke Oven Battery Near D.G Set
NL5	Coke Oven Battery Front
NL6	Coke Oven Battery Rear
NL7	RMHS Near Store
NL8	Sinter Main lD Fan
NL9	Sinter Rear Near MND
NL10	PCM
NL11	Waste Heat Recovery Boiler (CPP) Front
NL 12	Waste Heat Recovery Boiler (CPP) Turbine

TABLE- 2.5 (B)

AMBIENT NOISE LEVEL MONITORING LOCATIONS

Sample Code	Locations
NL13	Southern Boundary
NL14	Northern Boundary
NL15	Eastern Boundary
NL16	Western Boundary

7.2. Results and Discussions

The noise levels recorded at different locations around the plant during the study period (Oct-2024 –March- 2025) are given in Table 2.5 C to H and Table 2.5 I & J

7.3. Day time Noise Levels (L Day)

Industrial Zone: The day time noise levels at all the industrial locations were observed in the range of 68.9 dB (A) to 74.1 dB (A). The lowest is 68.9 dB (A) was observed at the Southern Boundary in the month of Nov-2024, while the maximum of 74.1 dB (A) was recorded at the Eastern Boundary in the month of Feb-2025. The noise levels are within the permissible limits of 75 dB (A) during the study period.

7.4. Night Noise Levels (L night)

industrial Zone: The night noise levels in all the industrial locations were observed to be in the range of 61.9 dB (A) to 69.2 dB (A). The lowest is 61.9 dB was observed at Eastern Boundary in the month of Mar-2025, while the maximum of 69.2 dB (A) was recorded at the Eastern Boundary in the month of Feb-2025. The noise levels are within the permissible limits of 70 dB (A) during the study period.

7.5. Work Zone Noise Levels

The noise levels recorded at the different workplaces in the plant are given in Table-2.5 (I & J). Noise levels near the work zone measured at 4.0 mtr distance from the machines, were found in the range of 70.2 db to 87.8 dB (A), against the OSHA prescribed limits of 90 dB (A) for 8 Hrs. exposure noise level, the lowest at 70.2 dB was observed in the month of Nov-2024 at PCM, while the maximum of 87.8 dB (A) was recorded in the month of Dec-2024 at Waste Heat Recovery Boiler (CPP) Turbine. However, workers at the work zone near the machinery are provided with earmuffs.

TABLE – 2.5 (C) NOISE LEVEL

OCT-2024

Locations	Noise Level dB(A)			
	L day	Standards	L night	Standards
Eastern Boundary	71.9	75.0	68.8	70.0
Western Boundary	70.6	75.0	66.8	70.0
Northern Boundary	72.6	75.0	68.1	70.0
Southern Boundary	70.3	75.0	65.7	70.0

TABLE – 2.5 (D) NOISE LEVELS

NOV-2024

Locations	Noise Level dB(A)			
	L day	Standards	L night	Standards
Eastern Boundary	69.8	75.0	64.2	70.0
Western Boundary	68.9	75.0	62.7	70.0
Northern Boundary	70.1	75.0	63.9	70.0
Southern Boundary	68.9	75.0	64.5	70.0

TABLE – 2.5 (E) NOISE LEVELS

DEC-2024

Locations	Noise Level dB(A)			
	L day	Standards	L night	Standards
Eastern Boundary	72.7	75.0	63.3	70.0
Western Boundary	70.6	75.0	63.9	70.0
Northern Boundary	71.1	75.0	65.4	70.0
Southern Boundary	69.1	75.0	64.7	70.0

TABLE – 2.5 (F) NOISE LEVELS

JAN-2025

Locations	Noise Level dB(A)			
	L day	Standards	L night	Standards
Eastern Boundary	71.9	75.0	64.6	70.0
Western Boundary	71.3	75.0	63.9	70.0
Northern Boundary	72.9	75.0	65.9	70.0
Southern Boundary	71.1	75.0	64.9	70.0

TABLE – 2.5 (G) NOISE LEVELS

FEB-2025

Locations	Noise Level dB(A)			
	L day	Standards	L night	Standards
Eastern Boundary	74.1	75.0	69.2	70.0
Western Boundary	71.2	75.0	63.9	70.0
Northern Boundary	73.7	75.0	68.0	70.0
Southern Boundary	70.1	75.0	65.3	70.0

TABLE – 2.5 (H) NOISE LEVELS

MAR-2025

Locations	Noise Level dB(A)			
	L day	Standards	L night	Standards
Eastern Boundary	70.3	75.0	61.9	70.0
Western Boundary	73.1	75.0	65.6	70.0
Northern Boundary	71.7	75.0	68.3	70.0
Southern Boundary	69.8	75.0	62.6	70.0

TABLE – 2.5 (I)

WORK PLACE NOISE LEVELS dB (A)
(OCT 2024 to DEC 2024)

Sr. No.	Location	OCT-2024		NOV-2024		DEC-2024	
		Min	Max	Min	Max	Max	Min
1	Blast Furnace-2 Front Near Cast house	78.1	82.4	71.3	76.5	76.9	83.4
2	Blast Furnace-2 Near Stock house	78.4	81.3	79.1	81.3	82.4	86.7
3	Blast Furnace-2 Near D.G set 650 KVA	80.9	83.2	77.9	81.4	82.8	86.3
4	Coke Oven Battery Near D.G Set	80.6	83.4	78.8	82.6	83.5	87.3
5	Coke Oven Battery Front	78.9	82.6	75.9	80.4	80.7	85.3
6	Coke Oven Battery Rear	80.3	83.1	75.2	79.9	80.2	85.4
7	RMHS Near Store	78.7	81.9	75.3	79.8	80.1	85.4
8	Sinter Main ID Fan	82.7	85.2	79.4	83.8	80.3	85.4
9	Sinter Rear Near MND	78.6	81.7	74.5	78.4	78.6	83.5
10	PCM	76.6	79.7	70.2	77.4	74.1	82.7
11	Waste Heat Recovery Boiler (CPP) Front	76.5	81.8	73.9	78.7	81.7	86.6
12	Waste Heat Recovery Boiler (CPP) Turbine	82.1	84.5	78.1	81.2	83.3	87.8

TABLE – 2.5 (J)
WORK PLACE NOISE LEVELS dB (A)
(JAN-2025 to MAR-2025)

Sr. No.	Location	JAN-2025		FEB-2025		MAR-2025	
		Min	Max	Min	Max	Min	Max
1	Blast Furnace-2 Front Near Cast house	74.1	81.5	77.8	82.7	72.9	80.2
2	Blast Furnace-2 Near Stock house	79.3	82.4	79.1	81.5	80.4	84.2
3	Blast Furnace-2 Near D.G set 650 KVA	78.9	82.1	80.1	82.5	75.3	83.8
4	Coke Oven Battery Near D.G Set	80.8	83.6	80.7	84.2	82.3	86.5
5	Coke Oven Battery Front	80.6	83.8	78.2	81.9	78.2	81.6
6	Coke Oven Battery Rear	74.8	83.1	80.2	83.5	76.2	81.1
7	RMHS Near Store	78.3	82.9	78.5	82.9	76.9	80.8
8	Sinter Main lD Fan	81.4	84.8	82.9	85.8	82.6	86.3
9	Sinter Rear Near MND	79.8	83.1	78.5	83.8	80.5	84.2
10	PCM	76.4	80.7	76.8	80.9	73.7	78.9
11	Waste Heat Recovery Boiler (CPP) Front	78.1	81.2	78.9	83.5	75.9	84.8
12	Waste Heat Recovery Boiler (CPP) Turbine	80.4	84.9	79.8	83.8	82.6	85.4

The maximum limit is 90 dB as per The Factories Act, 1948. The Maharashtra Factory Rules, 1963, schedule XXIV