



Ref. No. – TSG/EC/2025-26/May-26/01

19/05/2026

**To,**

**Deputy Director General of Forests (C)  
Ministry of Environment, Forest and Climate Change  
Integrated Regional Office, 2nd Floor, Headquarter- Jharkhand State Housing Board  
Harmu Chowk, Ranchi, Jharkhand – 834002**

**Subject:** Half yearly environmental clearance compliance report of Tata Steel Limited, Gamharia for the period from Oct 2025 to March 2026

**Reference:**

1. Environment clearance vide letter no. J/11011/681/2007 – IA II (I) dt. 11.10.2007
2. Environment clearance vide letter no. J/11011/611/2010 – IA II (I) dt. 25.10.2011

Sir,

We are herewith submitting half yearly compliance report along with environmental monitoring report of Tata Steel Limited, Gamharia situated at Adityapur Industrial Area, Village: Jhurkuli, Tehsil: Gamharia, District: Saraikela-Kharsawan. The compliance report is for the period from Oct 2025 to March 2026.

This is for your kind information and necessary records please.

Thanking you,

Yours sincerely  
For **Tata Steel Limited, Gamharia**

Ravi Ranjan Prason  
Head - Environment

Cc:

1. The Zonal Head, CPCB, Kolkata
2. The Member Secretary, JSPCB
3. The Regional Officer, JSPCB

**TATA STEEL LIMITED**

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Corporate Identity Number L27100MH1907PLC000260

**Half yearly Environment Clearance Compliance Status  
(From Oct. 2025 to March 2026)**

EC Accord No :  
F. No. J-11011/681/2007 - IA II (I)

Issue date: 11.10.2007

S.N.	EC Conditions	Compliance Status
	<b>Specific conditions</b>	
i	Electrostatic precipitator (ESP) to captive power plant, bag house to sinter plant and bag filter to blast furnace shall be provided to control gaseous emissions within the permissible limits of Jharkhand SPCB or prescribed under E (P) A whichever is more stringent. Agglomerative dust suppression system shall be provided to coal crusher screens, coal transfer points and sinter plant. Fume extraction system shall be provided to steel melting shop. Sprinklers shall be provided in dust prone areas including roads.	<p><b>Complied.</b> Adequate pollution control systems have been installed at all requisite locations to ensure emissions are maintained within the prescribed norms. The details of the installed equipment are as follows:</p> <p><b>Captive Power Plant (CPP):</b> Electrostatic Precipitators (ESPs) have been installed in all Waste Heat Recovery Boilers (WHRBs) and coal-based boilers. Water sprinkling systems, dry fog systems, sprinklers, and rain guns are provided in coal handling areas, including crushers, screens, and transfer points, for effective dust suppression.</p> <p><b>Sinter Plant:</b> ESPs are installed in the sinter process and product circuits to control emissions. Bag filters are provided in the flux crusher and screening circuits. A dry fog dust suppression system is installed at the ground hopper, and rain gun sprinklers are deployed in material storage yards to minimize dust generation during handling.</p> <p><b>Blast Furnace:</b> Bag filters are installed in the Raw Material Handling System (RMHS) and Cast House. A Gas Cleaning Plant (GCP) is provided for effective blast furnace gas cleaning. Additionally, seven (07) mist beam water cannons are installed in the RMHS and Cast House areas for dust suppression during material handling operations.</p> <p><b>Steel Melting Shop (SMS):</b> The steel melting shop is equipped with a fume extraction system. Bag filters are installed across all raw material handling circuits to control fugitive dust emissions.</p> <p>Water sprinklers have also been installed at all dust-prone areas, such as slag handling zones and material storage yards, to further mitigate dust emissions.</p> <p>A detailed list of the Air Pollution Control (APC) systems installed is enclosed as <b>Annexure-3</b>.</p>
ii	Secondary fugitive emissions from arc furnace and sinter plant shall be controlled within the latest permissible limits issued by the Ministry and regularly monitored. Guideline/ Code of Practice issued by the CPCB shall be followed.	<p><b>Complied.</b> Secondary emissions from the Steel Melting Shop (SMS) and Sinter Plant are effectively controlled through a high-capacity Fume Extraction System (FES) and bag filters, respectively.</p> <p>Work-zone air quality monitoring is conducted at regular intervals through a NABL-accredited agency, and monitored parameters are consistently maintained within the prescribed permissible limits.</p> <p>All applicable guidelines and codes of practice issued by statutory</p>

**Tata Steel Limited,**

**Address: Adityapur Industrial Area, Gamharia, District: Saraikela- Kharsawan, Jharkhand**

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		<p>authorities from time to time are duly complied with.</p> <p>The work-zone air quality monitoring reports are enclosed as <b>Annexure-5</b>.</p>
iii	<p>Total water requirement from River Subranarekha shall not exceed 12,110 m<sup>3</sup>/day as per the permission accorded by the State Govt. No ground water shall be used. All the wastewater shall be recycled and reused for industrial applications, dust suppressions, ash disposal and green belt development and no wastewater shall be discharged outside the premises. Domestic effluent shall be treated in septic tank followed by dispersion trench/ soak pits.</p>	<p><b>Complied.</b> Process water requirements are met through withdrawal from Subarnarekha River, in accordance with permission granted by the Water Resources Department, Government of Jharkhand.</p> <p>All wastewater generated is treated in the Effluent Treatment Plant (ETP) of 7200 KLD capacity and subsequently reused within process, ensuring zero Effluent discharge. The treated water is utilized for slag granulation, coke quenching, cooling systems in Pellet Plant, road dust suppression, and plantation/horticulture activities.</p> <p>Domestic wastewater is treated through a Sewage Treatment Plant (STP) of 250 KLD capacity, along with septic tank and soak pit arrangements. The treated domestic effluent is also reused within plant premises for applications such as plantation, gardening, and other non-potable purposes.</p>
iv	<p>Continuous monitoring of Total Organic Compounds (TOCs) shall be done at the outlet of ETP (BOD plant).</p>	<p><b>Complied.</b> As there is no recovery-type Coke Oven installed in plant, the requirement for BOD plant and continuous monitoring of Total Organic Carbon (TOC) is not applicable.</p> <p>An online monitoring system for pH, Total Suspended Solids (TSS), Chemical Oxygen Demand (COD), and Biochemical Oxygen Demand (BOD) has been installed at outlet of centralized Effluent Treatment Plant (ETP).</p>
v	<p>Ground water monitoring around the solid waste disposal site/ secured landfill (SLF) shall be carried out regularly and report submitted to the Ministry's Regional Office at Bhubaneswar, CPCB and Jharkhand SPCB.</p>	<p><b>Complied.</b> Groundwater monitoring is conducted at regular intervals around solid waste disposal site through a NABL-accredited agency. The monitoring reports are submitted to the respective statutory authorities in accordance with the stipulated conditions.</p> <p>The groundwater monitoring reports are enclosed as <b>Annexure-6</b>.</p>

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vi	All the solid wastes shall be properly utilized. Rolling mill scrap shall be recycled as steel scrap. Mill scale shall be sold to cement industry. Grinding dust and dust from steel melting shop and fume extraction system shall be used in blast furnace. Dust from blast furnace gas cleaning plant shall be sold to smokeless fuel industry. Slag/ coke from blast furnace shall be used in sinter plant or used in making fly ash bricks. Slag from arc furnace shall be used in road construction. Waste oil shall be used in blast furnace.	<b>Being Complied.</b> Solid waste generated within the plant is systematically segregated, and majority is recycled or reused within the process. Details are as follows:  <ol style="list-style-type: none"> <li>1. Rolling mill scrap is partially recycled as steel scrap in Steel Melting Shop (SMS), while balance is sold to authorized external vendors.</li> <li>2. Mill scale is utilized in sinter making process at Sinter Plant, and surplus is sold to external vendors.</li> <li>3. FES dust generated from SMS is reused in Sinter Plant and Pellet Plant.</li> <li>4. Flue dust from Blast Furnace, along with bag filter dust and wet GCP dust, is also utilized in Sinter Plant and Pellet Plant.</li> <li>5. 100 Percent of blast furnace granulated slag is sold in open market, predominantly to cement industry.</li> <li>6. Metallics are recovered from Electric Arc Furnace (EAF) slag and recycled back into process, while non-metallic slag is utilized for backfilling of low-lying area development.</li> <li>7. Used oil, waste oil, and spent oil are collected, stored at designated locations, and disposed of through authorized recyclers in compliance with statutory requirements.</li> </ol>
vii	All the char from DRI plant shall be utilized in AFBC boiler of power plant and no char shall be accumulated anywhere else.	<b>Complied.</b> Char generated from DRI process is utilized in power plant as a partial replacement for coal, thereby contributing to reduction of CO <sub>2</sub> emissions. Any excess char is sold to external users.
viii	All the fly ash shall be provided to cement and brick manufacturers for further utilization and bottom ash shall be used for land filling. Proper utilization of fly ash shall be ensured as per Fly ash Notification, 1999 and subsequent amendment in 2003.	<b>Complied.</b> Fly ash and bottom ash are supplied to local fly ash brick manufacturers for production of fly ash bricks. TSG has successfully obtained stabilization certification for legacy ash mound from Jharkhand State Pollution Control Board (JSPCB), marking a significant milestone within Tata Steel ecosystem.  Furthermore, TSG has achieved 100 Percent ash utilization over a three-year cycle (FY'23-FY'24-FY'25) in compliance with Fly Ash Notification, 2021.
ix	Permission and recommendation of the State Forest Department regarding impact of proposed expansion on the protected forest located at 2.5 km shall be obtained and all the recommendation shall be implemented.	<b>Agreed.</b>
x	Permission and recommendations of the Chief Wildlife Warden regarding impact of the proposed expansion of the iron and steel Plant on Dalma Sanctuary shall be obtained and all the recommendations shall be implemented.	<b>Complied.</b> As per Letter No. 1221 dated 26.07.2004 issued by the Chief Conservator of Forests–cum–Chief Wildlife Warden, Jharkhand, Dalma Wildlife Sanctuary is located beyond 15 km from plant premises and is therefore outside impact zone.  The referenced letter is enclosed as <b>Annexure-11</b> .
	<b>General Conditions</b>	

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i	The project authorities must strictly adhere to the stipulation made by the Jharkhand Pollution Control Board (Jharkhand SPCB) and the State Government.	<b>Agreed.</b> TSG confirm that all stipulations, conditions, and directives issued by Jharkhand State Pollution Control Board (Jharkhand SPCB) as well as the State Government are being strictly complied with. The TSG operations are carried out in accordance with prescribed environmental regulations, standards, and guidelines, ensuring full adherence to statutory requirements at all times.
ii	No further expansion or modifications in the plant should be carried out without prior approval of the Ministry of Environment and Forests.	<b>Agreed.</b> Expansion or modification in the plant shall not be carried out without prior approval of MoEFCC.
iii	The gaseous emissions from various process units shall conform load the load/ mass-based standards notified by this Ministry on 19 <sup>th</sup> 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. Online stack monitoring facilities for all the stacks including new sinter plant and powerhouse and sufficient air pollution control devices shall be provided to keep the emission levels below the permissible limit and reports submitted to the Jharkhand SPCB & CPCB. At no time, the emission level shall go beyond the prescribed standards. Interlocking facilities shall be provided so that process can be automatically stopped in case emission level exceeds the limit.	<p><b>Complied.</b> Periodic monitoring of gaseous pollutants is carried out across all major stacks, and records are duly maintained. The monitoring reports are regularly submitted to concerned statutory authorities.</p> <p>Online Continuous Emission Monitoring Systems (OCEMS) have been installed in all major stacks. Adequate air pollution control devices, such as Electrostatic Precipitators (ESPs) and bag filters, have been provided to control stack emissions, and particulate matter levels are consistently maintained within the prescribed norms.</p> <p>The stack monitoring results are enclosed as <b>Annexure-1</b>.</p>
iv	At least four ambient air quality monitoring stations shall be established in the downwind direction as well as where maximum ground level concentration of SPM, SO <sub>2</sub> and NO <sub>x</sub> are anticipated in consultation with the Jharkhand SPCB. Data on ambient air quality and stack emission should be regularly submitted to this Ministry including its Regional Office at Bhubaneswar and the Jharkhand SPCB/ CPCB once in six months.	<p><b>Complied.</b> Four Continuous Ambient Air Quality Monitoring Stations (CAAQMS) have been installed within the plant premises in consultation with Jharkhand State Pollution Control Board (JSPCB). Ambient air quality and stack monitoring are carried out through a JSPCB-accredited agency, and the monitoring reports are submitted to JSPCB, CPCB, and the Regional Office of MoEF&amp;CC on a half-yearly basis.</p> <p>The stack monitoring results are enclosed as <b>Annexure-1</b>, and the ambient air quality monitoring results are enclosed as <b>Annexure-2</b>.</p>

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v	In - plant control measures for checking fugitive emissions from all the vulnerable sources shall be provided. Dust extraction system and dry fogging system shall be provided to control air emissions at material transfer and sizing plants. ESP and bag filters shall be provided wherever required to keep the emission levels below permissible limit. Gas cleaning plant shall be provided to BF. Further, specific measures like water sprinkling shall be carried out and fugitive emissions shall be controlled, regularly monitored and records maintained.	<p><b>Being Complied.</b> Adequate Air Pollution Control Equipment (APCE) has been installed across various units for effective control of emissions. The details of the pollution control equipment installed at different locations are as follows:</p> <ol style="list-style-type: none"> <li>1. <b>DRI:</b> Bag filters</li> <li>2. <b>Power Plant:</b> Electrostatic Precipitators (ESPs), bag filters</li> <li>3. <b>Sinter Plant:</b> ESPs, dry fog systems, bag filters</li> <li>4. <b>Steel Melting Shop (SMS):</b> Fume Extraction Systems (FES), bag filters</li> <li>5. <b>Blast Furnace:</b> Bag filters, dry and wet Gas Cleaning Plants (GCPs)</li> </ol> <p>Dust conditioning systems are provided at appropriate locations to minimize dust generation during unloading from hoppers and silos. Additionally, fixed and mobile water sprinkling systems are deployed at dust-generating points to control fugitive emissions. Monitoring records are maintained accordingly.</p> <p>A detailed list of the Air Pollution Control (APC) systems installed, along with other environmental initiatives, is enclosed as <b>Annexure-3</b>.</p>
vi	Industrial wastewater shall be properly collected, treated so as to conform to the standards prescribed under GSR 422 (E) dated 19 <sup>th</sup> May, 1993 and 31 <sup>st</sup> December 1993 or as amend from time to time. The treated wastewater shall be utilized for plantation purpose.	<p><b>Complied.</b> Industrial effluent generated from various units within the plant is collected and treated in a centralized Effluent Treatment Plant (ETP) with a capacity of 7,200 KLD. The treated water is effectively reused within the plant in units such as the Pellet Plant, Blast Furnace, and Coke Oven for applications including slag granulation, coke quenching, road dust suppression, and plantation and horticulture activities.</p> <p>Analysis report of treated ETP water is enclosed as <b>Annexure-7</b>.</p>
vii	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).	<p><b>Being Complied.</b> Noise-generating sources are appropriately isolated using acoustic enclosures. Equipment is fitted with silencers and acoustic hoods to minimize noise at the source. Ambient noise levels are consistently maintained within the limits prescribed under the Environment (Protection) Act, 1986.</p> <p>The ambient noise monitoring report is enclosed as <b>Annexure-8</b>.</p>

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viii	Green belt shall be developed in 33% area within and around the plant premises as per the CPCB guidelines in consultation with DFO.	<b>Complied.</b> Continuous efforts are made to plant more trees within the plant area. We have achieved 33 percent green belt within the plant. Plan is drawn and executed every year during monsoon for plantation of saplings of different species viz. Gulmohar, Peltophorum, Mahogany, Kadam, Neem, Pipal, Bargad, Jamun, Mango, Guava, Alstonia etc. In addition, we adopted Miyawaki plantation method for developing dense forest inside plant.  Details of green Belt developed, and landscape area given in <b>Annexure-4.</b>
ix	The company shall develop surface as well as ground water harvesting structures to harvest the rainwater for utilization in the lean season besides recharging the ground water table.	<b>Being Complied.</b> The rainwater harvesting plan, as approved by the Ground Water Directorate, Jharkhand, has been implemented within the plant premises. Rainwater harvesting structures have been established at key locations, including the Sinter Plant, Power Plant, DRI, and Mill areas.
x	Occupational Health Surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.	<b>Complied.</b> Periodic health check-ups of workers are conducted, and records are systematically maintained. The examinations include Liver Function Tests (LFT), audiometric tests, ophthalmic examinations, X-ray investigations, as well as routine urine and blood tests.
xi	Recommendations made in the Corporate Responsibility for Environment Conservation (CREP) issued for the steel plants shall be implemented.	<b>Complied.</b> Recommendations under the Corporate Responsibility for Environmental Protection (CREP) guidelines for steel plants are regularly reviewed and effectively implemented.  CREP compliance status is enclosed as <b>Annexure-10.</b>
xii	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 village like community development program, educational program, drinking water supply and health care etc.	<b>Being Complied.</b> Environmental protection measures outlined in the EIA/EMP are being systematically implemented. The Company, through its dedicated CSR team, undertakes various socio-economic initiatives in the surrounding panchayats. The CSR department follows a structured approach to identify and deliver need-based interventions, implemented through both short-term and long-term CSR plans for the benefit of the local community.  Key CSR activities of Tata Steel Limited, Gamharia are enclosed as <b>Annexure-9.</b>
xiii	As mentioned in the EIA/ EMP, Rs. 90.00 Crores and 2.10 Crores earmarked towards the capital cost and recurring cost/ annum for environmental pollution control measures shall be judiciously utilized to implement the conditions stipulated by the Ministry of Environment and Forests as well as the State Government. The funds so provided shall not be diverted for any other purpose.	<b>Complied.</b> Separate funds for environment management are allocated and spent for betterment of environment.

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xiv	The Regional Office of this Ministry at Bhubaneswar / CPCB/ Jharkhand SPCB will monitor the stipulated conditions. A six-monthly compliance report and the monitored data along with statistical interpretation shall be submitted to them regularly.	<p><b>Complied.</b> Half-yearly compliance reports, along with monitoring data, are regularly submitted to the Regional Office of MoEFCC, CPCB, and JSPCB in accordance with stipulated guidelines. The previous compliance report (Ref. No. TSG/EC/2025-26/Nov-25/01 dated 18.11.2025) was submitted on 19.11.2025.</p> <p>A copy of the submission on the PARIVESH Portal is enclosed as <b>Annexure-14.</b></p>
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 OSPCB/ Committee and may also be seen at Website of the Ministry of Environment and Forests at <a href="http://envfor.nic.in">http://envfor.nic.in</a> . This shall be advertised within seven days from the date of issue of the clearance letter, at least in two local newspaper that are widely circulated in the region of which one shall be in the vernacular language of the locality concerned and a copy of the same shall be forwarded to the Regional office.	<b>Complied.</b>
xvi	Project authorities should inform the Regional Office as well as 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.	<p><b>Complied.</b></p> <p>Date of Financial closure: 2007 Date of issue of consent to establish by JSPCB: - 17.11.2007 vide letter no. - 4250</p>

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**COMPLIANCE OF STIPULATED CONDITIONS OF ENVIRONMENTAL CLEARANCE**

SN	EC Conditions	Compliance Status
<b>A</b>	<b>Specific conditions</b>	
i	Efforts shall be made to mitigate RSPM levels in the ambient air and a time bound action plan shall be submitted. On-line ambient air quality monitoring and continuous stack monitoring facilities for all stacks shall be provided.	<p><b>Being Complied:</b> Multiple measures are implemented to mitigate Respirable Suspended Particulate Matter (RSPM) levels in ambient air. The key dust control measures are summarized below:</p> <ol style="list-style-type: none"> <li>1. Fixed water sprinkling systems, including rain guns, have been installed in raw material handling areas.</li> <li>2. Seven (07) water mist cannons are deployed in the Raw Material Handling System (RMHS) and MBF slag dumping areas to control fugitive emissions during material handling.</li> <li>3. Mobile water sprinklers are utilized to suppress dust emissions from internal roads.</li> <li>4. Source emissions are effectively controlled through the operation of air pollution control systems such as Electrostatic Precipitators (ESPs), bag filters, and dry fog systems.</li> <li>5. Broad-leaved trees are planted in open areas within the plant premises and along the periphery to serve as natural dust barriers.</li> <li>6. RCC roads are constructed within the plant to minimize dust generation.</li> <li>7. All paved roads are regularly cleaned using vacuum road sweepers to control dust arising from vehicular movement.</li> <li>8. Raw material stockyards are covered with tarpaulin sheets to prevent windblown dust.</li> <li>9. Four (04) coal storage sheds have been established at the DRI, MBF, CPP, and Coke Oven units.</li> <li>10. New bag filters are installed at MBF-2 RMHS, Coke Circuit, Sinter Storage Bins, and SMS-3 RMHS for enhanced control of fugitive emissions.</li> <li>11. Additionally:</li> <li>12. Four (04) Continuous Ambient Air Quality Monitoring Stations (CAAQMS) are installed at strategic locations within the plant for real-time ambient air quality monitoring.</li> <li>13. Total of nine (09) online gas analysers and twenty-four (24) online dust monitors are installed across various stacks for continuous emission monitoring.</li> </ol>

**Tata Steel Limited**

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		The stack monitoring results are enclosed as <b>Annexure-1</b> , and the ambient air quality monitoring results are enclosed as <b>Annexure-2</b> .
ii	Stack monitoring facilities for all the major stacks and adequate air pollution control systems to control particulate emissions within the prescribed limits from coke oven shall be provided. Carbon mono-oxide (CO) shall also be monitored along with other parameters and standards notified under the Environment (Protection) Act shall be followed. ESP shall be installed to control the particulate emissions from the pellet plant. The reports shall be submitted to the Ministry's Regional Office at Bhubaneswar, SPCB and CPCB.	<p><b>Complied:</b> Stack monitoring facilities are provided at all major stacks. A total of nine (09) online gas analyzers and twenty-four (24) online dust monitors are installed, ensuring continuous emission monitoring across all major stacks.</p> <p>Adequate air pollution control systems have been installed to effectively control particulate matter emissions from the Coke Oven and Pellet Plant.</p> <p>Key parameters such as Particulate Matter (PM), Sulphur Dioxide (SO<sub>2</sub>), and Oxides of Nitrogen (NO<sub>x</sub>) in the flue gas of the Coke Oven are monitored at regular intervals. The monitoring reports are routinely submitted to MoEF&amp;CC (Ranchi Regional Office), CPCB, and JSPCB in compliance with statutory requirements.</p> <p>The stack monitoring results are enclosed as <b>Annexure-1</b>.</p>
iii	Multistage scrubber shall be installed to control gaseous and dust emissions from the coke oven stack. Measures shall be taken to prevent leakages from coke oven plant.	<b>Complied.</b> The Coke Oven installed is of the non-recovery type; therefore, emissions of dust and gaseous pollutants are minimal. Non-recovery ovens operate under negative pressure conditions, which significantly reduces the possibility of leakages, ensuring negligible fugitive emissions.
iv	The prescribed emission standards for coke oven plants, as notified vide notification no. GSR 46 (E) dated 3 <sup>rd</sup> February 2006 and subsequently amended shall be complied with.	<b>Complied.</b> The prescribed emission standards are applicable to recovery-type coke ovens; however, the Coke Ovens installed at TSG are of the non-recovery type, and hence, the specified standards are not applicable.
v	In-plant control measures like bag filters, de-dusting and dust suppression systems 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,	<p><b>Being Complied.</b> Adequate air pollution control devices have been installed at all requisite locations to effectively manage emissions.</p> <p>Water sprinkling arrangements are provided at critical points, such as vehicular movement areas and ground hoppers, to control secondary fugitive dust emissions.</p> <p>A detailed list of the Air Pollution Control (APC) systems installed, along with other environmental initiatives, is enclosed as <b>Annexure-3</b>.</p>

**Tata Steel Limited**

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	unloading, handling and storage of raw materials etc.	
vi	Secondary fugitive emissions shall be controlled within the prescribed limits, regularly monitored and records maintained. Guidelines / code of Practice issued by the CPCB in this regard shall be followed.	<p><b>Complied.</b> Secondary emissions from the Steel Melting Shop (SMS) and Sinter Plant are effectively controlled through a high-capacity Fume Extraction System (FES) and bag filters, respectively.</p> <p>Work-zone air quality monitoring is conducted at regular intervals through a NABL-accredited agency, and the monitored values are consistently maintained within the prescribed permissible limits.</p> <p>All applicable guidelines and codes of practice issued by statutory authorities from time to time are duly adhered to.</p> <p>The work-zone air quality monitoring reports are enclosed as <b>Annexure-5.</b></p>
vii	Vehicular pollution due to transportation of raw material and finished product shall be controlled. Proper arrangements shall be made to control dust emissions during loading and unloading of the raw material and finished product. Efforts shall also be made to reduce impact of the transport of the raw materials and end products on the surrounding environment including agricultural land. All the raw materials including fly ash shall be transported in the closed containers only and shall not be overloaded. Vehicular emissions shall be regularly monitored and records kept.	<p><b>Being Complied:</b> Fugitive emissions arising from vehicular movement are controlled through regular water spraying. Both fixed and mobile sprinkling systems are deployed at strategic locations to maintain dust suppression.</p> <p>Dust extraction systems are installed along conveyor belts to control dust generation during material transfer. Material-carrying vehicles are closely monitored to prevent overloading. Additionally, vehicles transporting fines and other materials are covered with tarpaulin sheets to minimize emissions during transit.</p>
viii	Total requirement of the water for the proposed expansion shall not exceed 3,440 m <sup>3</sup> /day. All the treated wastewater shall be recycled for dust suppression and green belt development. Domestic wastewater shall be treated in septic tank followed by soak pit and used for green belt development. Zero effluent discharge shall be strictly followed and no wastewater shall be discharged outside the premises.	<p><b>Complied.</b> Water needed for the process is drawn from Subranarekha river as per the permission granted by Water Resources department, Govt. of Jharkhand. All wastewater generated is reused back in the process after appropriate treatment in the Effluent Treatment Plant (ETP). ETP treated water is used for slag granulation, coke quenching, in cooling circuit of Pellet Plant, spraying over roads for dust suppression, plantation and horticulture activities. Domestic effluent is treated through sewage treatment plant with Capacity 250 KLD and septic tank / soak pit arrangement. The treated effluent is used within the plant for various process such as plantation, gardening etc.</p>

**Tata Steel Limited**

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ix	Efforts shall be made to make use of rain water harvesting. If needed, capacity of the reservoir shall be enhanced to meet the maximum water requirement. Only balance water requirement shall be met from other sources.	<b>Being Complied.</b> Rainwater harvesting plan as approved by Ground Water Directorate, Jharkhand is implemented within the plant. Rainwater harvesting structures have been set-up at Sinter plant, Power plant, DRI and Mill area.
x	Waste from the hard coke unit, shall be used as fuel in the captive power plant or sold. The iron ore sludge shall be sold to the bricks manufacturing units. Coal and coke fines shall be recycled and reused in the process. The waste oil shall be properly disposed off as per the Hazardous Waste (Management, Handling and Transboundary Movement) Rules, 2008.	<b>Complied.</b> Coke breeze from Coke Oven Plant is 100 Percent re-used internally in Sinter Plant. Waste Oil generated within the plant is disposed of periodically to authorized recycler.
xi	As proposed, green belt shall be developed in 33% of the plant area within and around the project site to mitigate the impact of fugitive emissions as per the CPCB guidelines in consultation with local DFO.	<b>Complied.</b> Continuous efforts are made to plant more trees within the plant area. We have achieved 33 percent green belt within the plant. Plan is drawn and executed every year during monsoon for plantation of saplings of different species viz. Gulmohar, Peltophorum, Mahogany, Kadam, Neem, Pipal, Bargad, Jamun, Mango, Guava, Alstonia etc. In addition, we adopted Miyawaki plantation method for developing dense forest inside plant.  Details of green Belt developed, and landscape area given in <b>Annexure-4</b>
xii	The recommendations made in the Charter on Corporate Responsibility for Environment Protection (CREP) for the Coke Oven Plant shall be implemented.	<b>Complied.</b> The recommendation of CREP applicable to integrated Iron & Steel Industry is implemented and reviewed regularly.  CREP Compliance status is attached <b>Annexure-10</b>
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 Bhubaneswar, SPCB and CPCB within 3 months of issue of environmental clearance letter.	<b>Complied.</b> Risk & disaster management plan has been prepared & submitted to JSPCB.
xiv	At least 5% of the total cost of the project shall be earmarked towards the Enterprise Social Commitment based on locals need and item-wise details along with time bound action plan should be prepared and submitted to the	<b>Being Complied.</b> Environment protection measures stated in EIA/EMP are systematically implemented. Company through its dedicated CSR team undertakes multiple socio-economic initiatives in surrounding panchayats. The CSR department follows a logical process to extend the required and most

<b>Half yearly Environment Clearance Compliance Status (From Oct. 2025 to March 2026)</b>	EC Accord No: F. No: J-11011/611/2010-IA-II (I)
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	Ministry's Regional Office at Bhubaneswar. Implementation of such program should be ensured accordingly in a time bound manner. The action plan shall include major items like school, vocational training etc.	needed benefits to its local community through its short-term and long-term CSR plans.  Key CSR activities in Tata Steel Limited, Gamharia are attached as <b>Annexure-9</b>
xv	The company shall provide housing for construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, safe drinking water, medical health care, creche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.	<b>Complied.</b> Required infrastructure as directed in EC were provided during project and commissioning stages of the plant.
xvi	The company shall submit within three months their policy towards Corporate Environment Responsibility which should inter-alia address (i) Standard operating process/procedure to being into focus any infringement/deviation/violation of environmental or forest norms/conditions, (ii) Hierarchical system or Administrative order of the company to deal with environmental issues and ensuring compliance to the environmental clearance conditions and (iii) System of reporting of noncompliance / violation environmental norms to the Board of Board of Directors of the company and/or stakeholders or shareholders.	<b>Complied.</b> The company has a well-defined IMS (Integrated Management System) covering all aspects of environmental governance. Standard Operating Procedure (SOP) / Work Instruction (WI) are prepared for all key environmental activities. An environment management cell comprising of scientists and engineers are established to oversee the environmental functions with the plant.
<b>B</b>	<b>General Conditions:</b>	
i	The project authorities shall strictly adhere to the stipulations made by the Jharkhand Pollution Control Board (JSPCB) and State Govt.	<b>Agreed.</b> TSG confirm that all stipulations, conditions, and directives issued by Jharkhand State Pollution Control Board (Jharkhand SPCB) as well as the State Government are being strictly complied with. The TSG operations are carried out in accordance with prescribed environmental regulations, standards, and guidelines, ensuring full adherence to statutory requirements at all times.

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ii	At no time, the emissions shall exceed the prescribed limits. In the event of failure of any pollution control system adopted by the unit, the unit shall be immediately put out of operation and shall not be restarted until the desired efficiency has been achieved.	<b>Complied.</b> Measures are taken to maintain emissions within permitted norms. The performance of pollution control equipment is constantly evaluated through scheduled O & M practices. Preventive maintenance schedules are drawn for equipment to reduce unforeseen break downs or failures.
iii	No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment and Forests. In case of deviations or alterations in the project proposal from those submitted to this Ministry for clearance, a fresh reference shall be made to the Ministry to assess the adequacy of conditions imposed and to add additional environmental protection measures required, if any.	<b>Complied.</b> No expansion or modification in the plant shall be carried out without prior approval of MoEFCC.
iv	The gaseous emissions from various process units shall conform to the load/mass-based standards notified by this Ministry on 19 <sup>th</sup> 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.	<b>Complied.</b> These features are taken care of in Design & Engineering of the project and emissions are maintained within norms.
v	The project authorities shall strictly comply with the rules and regulations under Manufacture, Storage and import of Hazardous Chemicals Rules, 1989 as amended in October 1994 and January 2000. Authorization from JSPCB shall be obtained for collection, treatment, storage, and disposal of hazardous wastes.	<b>Complied.</b> The provisions of Hazardous Chemicals Rules 1989 and its amendment are strictly followed. Handling and disposal of hazardous waste is also done as per Hazardous and Other Wastes Rules, 2016. The unit has obtained valid authorization for its handling from JSPCB.  Hazardous Waste Authorization copies are attached as <b>Annexure-20</b>

**Half yearly Environment Clearance Compliance Status  
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EC Accord No: F. No:  
J-11011/611/2010-IA-II (I)

Issue date : 25-10-2011

vi	The project authorities must strictly comply with the rules and regulations with regard to handling and disposal of hazardous wastes in accordance with the Hazardous Wastes (Management, Handling and Transboundary Movement) Rules, 2008. Authorization from Jharkhand Pollution Control Board must be obtained for collection/treatment/storage/disposal of hazardous wastes.	<b>Complied.</b> Responsibilities applicable under Hazardous Wastes (Management, Handling & Trans-boundary movement) Rules, 2008 and its last amendment in 2016 are strictly complied. Hazardous wastes generated in the plant are disposed to authorized recyclers.
vii	The overall noise levels in and around the plant area shall be kept well within the standards 85 dB(A) by providing noise control measures including acoustic hoods, silencers, enclosures etc. on all sources of noise generation. The ambient noise levels shall conform to the standards prescribed under Environment (Protection) Act, 1986 Rules, 1989 viz. 75 dB(A) (day time) and 70 dB(A) (night time).	<b>Being Complied.</b> Acoustic hoods, Silencers, Mufflers, and enclosures are provided at high noise generation areas for control of noise pollution. Noise level in and around the plant monitored and precautionary steps are taken in high noise areas.  Ambient Noise Monitoring Report is attached as <b>Annexure-8</b>
viii	The company shall develop rainwater harvesting structures to harvest the rainwater for utilization in the lean season besides recharging the ground water table.	<b>Being Complied.</b> Rainwater harvesting plan as approved by Ground Water Directorate, Jharkhand is implemented within the plant. Rainwater harvesting structures have been set-up at Sinter plant, Power plant, DRI and Mill area.
ix	Occupational Health Surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.	<b>Complied.</b> Health check-up for workers is done at periodic intervals and records maintained. The test conducted includes LFT, audiometric tests, ophthalmic investigations, X ray, routine urine and blood tests.
x	The project proponent shall also comply with all the environmental protection measures and safeguards recommended in the EIA/EMP report.	<b>Being Complied.</b> Environmental protection measures proposed in the EIA/EMP of the project are systematically implemented.
xi	A separate Environmental Management Cell equipped with full-fledged laboratory facilities shall be set up to carry out the environmental management and monitoring functions.	<b>Complied.</b> A multi-disciplinary team of engineers and environmental scientists is set up to oversee the environmental management function of the plant. An environmental laboratory is also established to conduct various analysis of air and water.

**Tata Steel Limited**

**Address: Adityapur Industrial Area, Gamharia, District: Saraikela- Kharsawan, Jharkhand**

**Half yearly Environment Clearance Compliance Status  
(From Oct. 2025 to March 2026)**

EC Accord No: F. No:  
J-11011/611/2010-IA-II (I)

Issue date : 25-10-2011

xii	As proposed, Rs. 50 Crores and Rs. 2.5 Crores shall be earmarked towards total capital cost and recurring cost/annum for environmental pollution control measures and judiciously used to implement the conditions stipulated by the Ministry of Environment and Forests as well as the State Government. A time bound implementation schedule shall be submitted to the Ministry and its Regional Office at Bhubaneswar to implement all the conditions stipulated herein. The funds so provided shall not be diverted for any other purpose.	<b>Complied.</b> The funds provided for EMP are not diverted for any other purpose.
xiii	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.
xiv	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 PCB. The criteria pollutant levels namely; RSPM (PM2.5 and PM10), 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.	<b>Complied.</b> Status of compliance of the EC conditions is being uploaded in the website of the company. The status of the same is periodically updated and sent to various government bodies including MoEFCC, CPCB and JSPCB twice in a year. The monitored data of stack emissions, ambient air quality and effluent quality is displayed in the electronic display board near the main gate of the company.  Photographs of the electronic display board are attached as <b>Annexure-12</b>

**Tata Steel Limited**

**Address: Adityapur Industrial Area, Gamharia, District: Saraikela- Kharsawan, Jharkhand**

<b>Half yearly Environment Clearance Compliance Status (From Oct. 2025 to March 2026)</b>	EC Accord No: F. No: J-11011/611/2010-IA-II (I)
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xv	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 Regional Office of MoEF, the respective Zonal Office of CPCB and JPCB. The Regional Office of this Ministry/CPCB/JSPCB shall monitor the stipulated conditions.	<b>Complied.</b> Compliance and monitoring reports are submitted in PARIVESH portal once in every six months as stipulated.  Acknowledgement copy is attached as <b>Annexure-14</b>
xvi	The environmental statement for each financial year ending 31 <sup>st</sup> March in Form-V as is mandated to be submitted by the project proponent to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be put on the website of the company along with the status of compliance of environmental conditions and shall also be sent to the respective Regional Offices of the MoEF by e-mail.	<b>Complied.</b> Environmental Statement for each financial year is submitted regularly to JSPCB before 30 <sup>th</sup> of September every year. Last Environment Statement (Refer. No. TSG/EMD/ES/FY'25) is submitted on 05/09/2025.  Last ES copy is attached as <b>Annexure-16</b>
xvii	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 JSPCB and may also be seen at website of the Ministry of Environment and Forests at <a href="http://envfor.nic.in">http://envfor.nic.in</a> . This 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.	<b>Complied.</b> The issuance of environmental clearance was advertised in local newspaper - Prabhat Khabar & Avenue Mail dated 01.07.2012.  Paper cutting of Prabhat Khabar is attached as <b>Annexure-17</b>
xviii	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.	<b>Complied.</b> Date of financial closure: 01.02.12. NOC issue date by JSPCB: 18.01.12. Land development job started on: 15.02.12

**Tata Steel Limited**

**Address: Adityapur Industrial Area, Gamharia, District: Saraikela- Kharsawan, Jharkhand**

**STACK EMISSION MONITORING REPORT**

S.No	Unit	Stack Attached to	Report No.	Sampling on	Flue Gas Temp. (Deg.C)	Stack Gas Velocity (m/s)	Gas Flow (Nm3/hr)	PM (mg/Nm3)	SO2 (mg/Nm3)	NOX (mg/Nm3)
1	SMS	FES of SMS - 3	RN-250303003 S07	11.02.2026	96	5.7	314307	25.9	-	-
2	Sinter Plant	Tail ESP	RN-250303003 S04	09.02.2026	106	6.0	260618	24.7	-	-
3	MBF - 2	Cast House	RN-250303003 S06	10.02.2026	46	7.6	142482	16.5	-	-
4		PCI Stack	RN-250303003 S05	10.02.2026	76	6.7	15586	20.8	-	-
5		Stock House	RN-250303003 S10	12.02.2026	58	6.7	72765	16.6	-	-
6		RMHS	RN-250303003 S02	06.02.2026	45	5.7	28739	16.8	-	-
7		RMHS-1	RN-250303003 S01	06.02.2026	49	7.3	61317	21.6	-	-
8	CPP	CPP 30 MW Stack	RN-250303003 S02	23.03.2026	118	7.3	196770	28.2	486.3	194.7
9		WHRB - 1 & 40 TPH	RN-250303003 S05	24.03.2026	145	7.3	145862	37.4	315.6	69.3
10		WHRB - 2 & 3 (DRI-2 & 3)	RN-250303003 S04	24.03.2026	115	7.0	151424	34.3	263.4	66.8
11		WHRB - 4 & 5 (DRI-4 & 5)	RN-250303003 S03	24.03.2026	121	5.6	118787	30.6	284.5	116.8
12		Coke Oven WHRB - 1	RN-250303003 S06	25.03.2026	210	11.4	120765	19.5	214.8	54.2
13		Coke Oven WHRB - 2	RN-250303003 S07	25.03.2026	200	11.0	119316	18.5	226.9	85.4
14	SMS	FES of SMS - 1 & 2	RN-250303003 S10	27.03.2026	65	5.9	357020	21.8	-	-
15		FES of SMS - 3	RN-250303003 S01	13.03.2026	100	5.7	310777	20.4	-	-
16	WRM	Reheating Furnace	RN-250303003 S14	31.03.2026	405	10.6	28829	22.2	72.1	155.2
17	Blooming Mill	Reheating Furnace	RN-250303003 S08	26.03.2026	390	9.2	45246	25.6	91.2	165.8
18	Sinter Plant	Process ESP	RN-250303003 S09	27.03.2026	125	6.2	485246	49.9	70.5	144.1
19	Pellet Plant	Process ESP	S/D	-	-	-	-	-	-	-
20	MBF-1	Cast House	RN-250303003 S12	30.03.2026	45	5.0	51652	19.4	-	-
21		Ground Hopper	RN-250303003 S13	30.03.2026	45	13.8	28828	18	-	-
22		Stock House	RN-250303003 S11	30.03.2026	52	6.8	24678	17.4	-	-
23	MBF-2	Stoves	RN-250303003 S15	31.03.2026	165	6.2	61237	15.2	65.8	95.1

# INSTITUTE FOR ENVIRONMENTAL MANAGEMENT

Corporate office - A-8, Modi Heights, Opp.-All India Radio Station, Ratu Road, Ranchi, Jharkhand - 834001

Laboratory Site - H No. - A-13, Saket Vihar, Near Sohrai Bhawan, Harmu Housing Colony,

Ranchi-834002, Jharkhand, India

Ph - 8407804253, 8407804251, Email - iem2012@rediffmail.com



TC-16125

## TEST REPORT

ULR No.:	T	C	I	6	1	3	3	2	6	0	0	0	0	0	6	4	7
Discipline: Chemical	Group: Atmospheric Pollution										Sub-Group: Stack Emission						
Report Issue Date: 16-03-2026	Test Report No.: RN-250303003S01																
Sample ID: 260313AP04001	Sample Description: Stack Emission																
Challan No./P.O. No.: 3000179897/J02	Challan No./P.No. Date: 03-03-2025																
Name and Contact Details of Customer: M/s Tata Steel Limited, Gamaharia Phase-V, Adityapur Industrial Area, Seraikela-Kharsawan, Jharkhand-832108 E-mail Id- kishor.pramanik1@tatasteel.com Kishor Pramanik (9905340012)																	
Type of Industry: Iron & Steel									Condition of Sample: Fit For Test								
Sampling Protocol: IS:11255; 2009									Sampling Date: 13-03-2026 (10:40 am - 11:21 am)								
Protocol: CPCB Guideline (LATS/80/2013-14) & IS Method 11255 Series																	
Sampling Location: SMS-3 FES																	
Field Meteorological Information						A. Temp. (°C): 28			R.H. (%): 52			W.C.: Sunny			W.D.: NW to SE		
Location of performance of the Laboratory Activity: IEM Laboratory, Ranchi																	
Sample Receiving Date: 13-03-2026						Testing Started: 13-03-2026						Testing Ended: 16-03-2026					

### Information obtained from Customer

Stack Identification	Single	Stack Height from Ground Level (m)	43
Emission Due to	EAF	Port Hole Height from Ground Level (m)	33.3
Plat Form	Permanent	Inner Dimension of Stack (m)	5
Stack Description	SMS-3 FES	Type of Fuel Used	Electricity
Shape of Stack	Circular	Production Capacity	---
Sampling Port	Yes	Pollution Control Device (if any)	Bag Filter
Flue Gas Temperature (°C): 100		Flue Gas Velocity (m/s): 5.7	
Flue Gas Volumetric Flow Rate (Nm <sup>3</sup> /hr): 310777			

---Test Result---

Sl. NO.	Parameters	Test Methods	Unit	Norms**	Result
1.	Particulates Matter (PM)	IS 11255 (Part-1)	mg/Nm <sup>3</sup>	---	20.4
2.	Sulphur Dioxide (SO <sub>2</sub> )	IS 11255 (Part-2)	mg/Nm <sup>3</sup>	---	44.8
3.	Oxides of Nitrogen (NO <sub>x</sub> )	IS 11255 (Part-7)	mg/Nm <sup>3</sup>	---	120.6

Env. Condition of Lab.	Laboratory is maintaining Temperature 27± 2°C and Relative Humidity 65±5 % in all testing area as per IS 196:1966(C).
Abbreviation	MDL: Minimum Detection Limit. BDL: Below Detection Limit
Norms** is Specified	As per the IS Method 11255 Series.
Remark	Sample Comply with prescribed specification.
Opinion & Interpretation	Not Practiced.
Tested by	Anjali Kumari
Sample Drawn by	Rahul Singh & Team
Disclaimers	<ul style="list-style-type: none"> <li>The results relate only to the item tested, calibrated or sampled.</li> <li>Additions to, deviations, or exclusions from the method is not practiced if not mentioned.</li> <li>Results from external providers are not used if not specified.</li> </ul>

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6. In case of feedback/complaints, please send an email at [gem@iemecol@gmail.com](mailto:gem@iemecol@gmail.com)

On the basis of Quality Checked and Technical data verified by the Authorized signatory, the report is issued by the Director of the Organization.

Reviewed by Authorized Signatory

(Akanksha Sourabh)
(Dr. S. C. Jain)

Dy. Technical Manager

Director

---End of Report---



# INSTITUTE FOR ENVIRONMENTAL MANAGEMENT

Corporate office - A-8, Modi Heights, Opp.-All India Radio Station, Ratu Road, Ranchi, Jharkhand - 834001

Laboratory Site - H. No. - A-13, Saket Vihar, Near Sohrai Bhawan, Harmu Housing Colony,

Ranchi-834002, Jharkhand, India

Ph - 8407804253, 8407804251, Email - iem2012@rediffmail.com



TC-16135

## TEST REPORT

ULR No.:	T	C	1	6	1	3	5	2	6	0	0	0	0	0	0	6	4	8		
Discipline: Chemical	Group: Atmospheric Pollution										Sub-Group: Stack Emission									
Report Issue Date: 02-04-2026	Test Report No.: RN-250303003S02																			
Sample ID: 260331AP05001	Sample Description: Stack Emission																			
Challan No./P.O. No.: 3000179897/J02	Challan No./P.No. Date: 03-03-2025																			
Name and Contact Details of Customer: M/s Tata Steel Limited, Gamaharia Phase-V, Adityapur Industrial Area, Seraikela-Kharsawan, Jharkhand-832108 E-mail Id- kishor.pramanik1@tatasteel.com Kishor Pramanik (9905340012)																				
Type of Industry: Iron & Steel										Condition of Sample: Fit For Test										
Sampling Protocol: IS:11255; 2009										Sampling Date: 23-03-2026 (11:00 am - 11:32 am)										
Protocol: CPCB Guideline (LATS/80/2013-14) & IS Method 11255 Series																				
Sampling Location: CPP 30 MW																				
Field Meteorological Information						A. Temp. (°C): 28			R.H. (%): 52			W.C.: Sunny			W.D.: NW to SE					
Location of performance of the Laboratory Activity: IEM Laboratory, Ranchi																				
Sample Receiving Date: 31-03-2026						Testing Started: 31-03-2026						Testing Ended: 02-04-2026								

### Information obtained from Customer

Stack Identification	Single	Stack Height from Ground Level (m)	79.7		
Emission Due to	Boiler	Port Hole Height from Ground Level (m)	26.5		
Plat Form	Permanent	Inner Dimension of Stack (m)	3.6		
Stack Description	CPP 30 MW	Type of Fuel Used	Coal		
Shape of Stack	Circular	Production Capacity	---		
Sampling Port	Yes	Pollution Control Device (if any)	ESP		
Flue Gas Temperature (°C): 118		Flue Gas Velocity (m/s): 7.3		Flue Gas Volumetric Flow Rate (Nm <sup>3</sup> /hr): 196770	

---Test Result---

Sl. NO.	Parameters	Test Methods	Unit	Norms**	Result
1.	Particulates Matter (PM)	IS 11255 (Part-1)	mg/Nm <sup>3</sup>	---	28.2
2.	Sulphur Dioxide (SO <sub>2</sub> )	IS 11255 (Part-2)	mg/Nm <sup>3</sup>	---	486.3
3.	Oxides of Nitrogen (NO <sub>x</sub> )	IS 11255 (Part-7)	mg/Nm <sup>3</sup>	---	194.7
4.	Carbon Dioxide (CO <sub>2</sub> )	IS 13270:1992	% v/v	---	7.8
5.	Carbon Monoxide (CO)	IS 13270:1992	Ppm	---	152
6.	Oxygen (O <sub>2</sub> )	IS 13270:1992	% v/v	---	7.1

Env. Condition of Lab.	Laboratory is maintaining Temperature 27± 2°C and Relative Humidity 65±5 % in all testing area as per IS 196:1966(C).
Abbreviation	MDL: Minimum Detection Limit, BDL: Below Detection Limit
Norms** is Specified	As per the IS Method 11255 Series.
Remark	Sample Comply with prescribed specification.
Opinion & Interpretation	Not Practiced.
Tested by	Anjali Kumari
Sample Drawn by	Rahul Singh & Team
Disclaimers	<ul style="list-style-type: none"> <li>The results relate only to the item tested, calibrated or sampled.</li> <li>Additions to, deviations, or exclusions from the method is not practiced if not mentioned.</li> <li>Results from external providers are not used if not specified.</li> </ul>

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- In case of feedback/ complaints, please send an email at [gem@iemo.com](mailto:gem@iemo.com)

On the basis of Quality Checked and Technical data verified by the Authorized signatory, the report is issued by the Director of the Organization.

Reviewed by	Authorized Signatory
(Akanksha Sourabh)	(Dr. S. C. Jain)
Dy. Technical Manager	Director

---End of Report---



# INSTITUTE FOR ENVIRONMENTAL MANAGEMENT

Corporate office - A-8, Modi Heights, Opp.-All India Radio Station, Ratu Road, Ranchi, Jharkhand - 834001

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Ranchi-834002, Jharkhand, India

Ph - 8407804253, 8407804251. Email - icm2012@rediffmail.com



TC-16155

## TEST REPORT

ULR No.:	T	C	1	6	1	3	3	2	6	0	0	0	0	0	0	0	6	4	9					
Discipline: Chemical	Group: Atmospheric Pollution									Sub-Group: Stack Emission														
Report Issue Date: 02-04-2026	Test Report No.: RN-250303003S03																							
Sample ID: 260331AP08001	Sample Description: Stack Emission																							
Challan No./P.O. No.: 3000179897/J02	Challan No./P.No. Date: 03-03-2025																							
Name and Contact Details of Customer: M/s Tata Steel Limited, Gamaharia Phase-V, Adityapur Industrial Area, Seraikela-Kharsawan, Jharkhand-832108 E-mail Id- kishor.pramanik1@tatasteel.com Kishor Pramanik (9905340012)																								
Type of Industry: Iron & Steel										Condition of Sample: Fit for Test														
Sampling Protocol: IS:11255: 2009										Sampling Date: 24-03-2026 (10:25 am - 11:07 am)														
Protocol: CPCB Guideline (LATS/80/2013-14) & IS Method 11255 Series																								
Sampling Location: WHRB - 4 & 5 (DRI)																								
Field Meteorological Information					A. Temp. (°C): 30					R.H. (%): 51					W.C.: Sunny					W.D.: West to East				
Location of performance of the Laboratory Activity: IEM Laboratory, Ranchi																								
Sample Receiving Date: 31-03-2026					Testing Started: 31-03-2026					Testing Ended: 02-04-2026														

### Information obtained from Customer

Stack Identification	Common	Stack Height from Ground Level (m)	63
Emission Due to	DRI Making Process	Port Hole Height from Ground Level (m)	22.2
Plat Form	Permanent	Inner Dimension of Stack (m)	3.2
Stack Description	WHRB - 4 & 5 (DRI)	Type of Fuel Used	Coal.
Shape of Stack	Circular	Production Capacity	---
Sampling Port	Yes	Pollution Control Device (if any)	ESP
Flue Gas Temperature (°C): 121		Flue Gas Velocity (m/s): 5.6	
Flue Gas Volumetric Flow Rate (Nm <sup>3</sup> /hr): 118787			

### ---Test Result---

Sl. NO.	Parameters	Test Methods	Unit	Norms**	Result
1.	Particulates Matter (PM)	IS 11255 (Part-1)	mg/Nm <sup>3</sup>	---	30.6
2.	Sulphur Dioxide (SO <sub>2</sub> )	IS 11255 (Part-2)	mg/Nm <sup>3</sup>	---	284.5
3.	Oxides of Nitrogen (NO <sub>2</sub> )	IS 11255 (Part-7)	mg/Nm <sup>3</sup>	---	116.8
4.	Carbon Dioxide (CO <sub>2</sub> )	IS 13270:1992	% v/v	---	5.2
5.	Carbon Monoxide (CO)	IS 13270:1992	Ppm	---	151
6.	Oxygen (O <sub>2</sub> )	IS 13270:1992	% v/v	---	11.5

Env. Condition of Lab.	Laboratory is maintaining Temperature 27± 2°C and Relative Humidity 65±5 % in all testing area as per IS 196:1966(C).
Abbreviation	MDL: Minimum Detection Limit, BDL: Below Detection Limit
Norms** is Specified	As per the IS Method 11255 Series.
Remark	Sample Comply with prescribed specification.
Opinion & Interpretation	Not Practiced.
Tested by	Anjali Kumari
Sample Drawn by	Rahul Singh & Team
Disclaimers	<ul style="list-style-type: none"> <li>The results relate only to the item tested, calibrated or sampled.</li> <li>Additions to, deviations, or exclusions from the method is not practiced if not mentioned.</li> <li>Results from external providers are not used if not specified.</li> </ul>

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On the basis of Quality Checked and Technical data verified by the Authorized signatory, the report is issued by the Director of the Organization.

Reviewed by	Authorized Signatory
(Akanksha Sourabh)	(Dr. S. C. Jain)
Dy. Technical Manager	Director

---End of Report---



# INSTITUTE FOR ENVIRONMENTAL MANAGEMENT

Corporate office - A-8, Modi Heights, Opp.-All India Radio Station, Ratu Road, Ranchi, Jharkhand - 834001

Laboratory Site - H.No. - A-13, Saket Vihar, Near Sohrai Bhawan, Harmu Housing Colony,

Ranchi-834002, Jharkhand, India

Ph - 8407804253, 8407804251, Email - iem2012@rediffmail.com



TC-16135

## TEST REPORT

ULR No.:	T	C	1	6	1	3	5	2	6	0	0	0	0	0	6	5	0
Discipline: Chemical	Group: Atmospheric Pollution									Sub-Group: Stack Emission							
Report Issue Date: 02-04-2026	Test Report No.: RN-250303003S04									Sample Description: Stack Emission							
Sample ID: 260331AP08002	Challan No./P.O. No.: 3000179897/J02									Challan No./P.No. Date: 03-03-2025							
Name and Contact Details of Customer: M/s Tata Steel Limited, Gamaharia Phase-V, Adityapur Industrial Area, Seraikela-Kharsawan, Jharkhand-832108 E-mail Id- kishor.pramanik1@tatasteel.com Kishor Pramanik (9905340012)																	
Type of Industry: Iron & Steel									Condition of Sample: Fit for Test								
Sampling Protocol: IS:11255: 2009									Sampling Date: 24-03-2026 (12:10 am - 12:43 am)								
Protocol: CPCB Guideline (LATS/80/2013-14) & IS Method 11255 Series																	
Sampling Location: WHRB - 2 & 3 (DRI)																	
Field Meteorological Information						A. Temp. (°C): 30			R.H. (%): 51			W.C.: Sunny			W.D.: West to East		
Location of performance of the Laboratory Activity: IEM Laboratory, Ranchi																	
Sample Receiving Date: 31-03-2026						Testing Started: 31-03-2026						Testing Ended: 02-04-2026					

### Information obtained from Customer

Stack Identification	Common	Stack Height from Ground Level (m)	63
Emission Due to	DRI Making Process	Port Hole Height from Ground Level (m)	20.2
Plat Form	Permanent	Inner Dimension of Stack (m)	3.2
Stack Description	WHRB - 2 & 3 (DRI)	Type of Fuel Used	Coal
Shape of Stack	Circular	Production Capacity	---
Sampling Port	Yes	Pollution Control Device (if any)	ESP
Flue Gas Temperature (°C): 115		Flue Gas Velocity (m/s): 7.0	
Flue Gas Volumetric Flow Rate (Nm <sup>3</sup> /hr): 151424			

---Test Result---

Sl. NO.	Parameters	Test Methods	Unit	Norms**	Result
1.	Particulates Matter (PM)	IS 11255 (Part-1)	mg/Nm <sup>3</sup>	---	34.3
2.	Sulphur Dioxide (SO <sub>2</sub> )	IS 11255 (Part-2)	mg/Nm <sup>3</sup>	---	263.4
3.	Oxides of Nitrogen (NO <sub>x</sub> )	IS 11255 (Part-7)	mg/Nm <sup>3</sup>	---	66.8
4.	Carbon Dioxide (CO <sub>2</sub> )	IS 13270:1992	% v/v	---	5.4
5.	Carbon Monoxide (CO)	IS 13270:1992	Ppm	---	805
6.	Oxygen (O <sub>2</sub> )	IS 13270:1992	% v/v	---	11.5

Env. Condition of Lab.	Laboratory is maintaining Temperature 27± 2°C and Relative Humidity 65±5 % in all testing area as per IS 196:1966(C).
Abbreviation	MDL: Minimum Detection Limit, BDL: Below Detection Limit
Norms** is Specified	As per the IS Method 11255 Series.
Remark	Sample Comply with prescribed specification.
Opinion & Interpretation	Not Practiced.
Tested by	Anjali Kumari
Sample Drawn by	Rahul Singh & Team
Disclaimers	<ul style="list-style-type: none"> <li>The results relate only to the item tested, calibrated or sampled.</li> <li>Additions to, deviations, or exclusions from the method is not practiced if not mentioned.</li> <li>Results from external providers are not used if not specified.</li> </ul>

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On the basis of Quality Checked and Technical data verified by the Authorized signatory, the report is issued by the Director of the Organization.

Reviewed by	Authorized Signatory
(Akanksha Sourabh)	(Dr. S. C. Jain)
Dy. Technical Manager	Director

---End of Report---



# INSTITUTE FOR ENVIRONMENTAL MANAGEMENT

Corporate office - A-8, Modi Heights, Opp.-All India Radio Station, Ratu Road, Ranchi, Jharkhand - 834001

Laboratory Site - H.No. - A-13, Saket Vihar, Near Sohrai Bhawan, Harmu Housing Colony,

Ranchi-834002, Jharkhand, India

Ph - 8407804253, 8407804251, Email - iem2012@rediffmail.com



TC-18135

## TEST REPORT

ULR No.:	T	C	1	6	1	3	5	2	6	0	0	0	0	0	6	5	1
Discipline: Chemical	Group: Atmospheric Pollution							Sub-Group: Stack Emission									
Report Issue Date: 02-04-2026	Test Report No.: RN-250303003S05							Sample Description: Stack Emission									
Sample ID: 260331AP08003	Challan No./P.O. No.: 3000179897/302							Challan No./P.No. Date: 03-03-2025									
Name and Contact Details of Customer: M/s Tata Steel Limited, Gamaharia Phase-V, Adityapur Industrial Area, Seraikela-Kharsawan, Jharkhand-832108 E-mail Id- kishor.pramanik1@tatasteel.com Kishor Pramanik (9905340012)																	
Type of Industry: Iron & Steel	Condition of Sample: Fit For Test							Sampling Protocol: IS:11255; 2009									
Sampling Protocol: IS:11255; 2009							Sampling Date: 24-03-2026 (02:55 pm - 03:27 pm)										
Protocol: CPCB Guideline (LATS/80/2013-14) & IS Method 11255 Series																	
Sampling Location: WHRB - 1 & 40 TPH (DRI)																	
Field Meteorological Information			A. Temp. (°C): 30			R.H. (%): 51			W.C.: Sunny			W.D.: West to East					
Location of performance of the Laboratory Activity: IEM Laboratory, Ranchi																	
Sample Receiving Date: 31-03-2026					Testing Started: 31-03-2026					Testing Ended: 02-04-2026							

### Information obtained from Customer

Stack Identification	Common	Stack Height from Ground Level (m)	63
Emission Due to	DRI Making Process	Port Hole Height from Ground Level (m)	32
Plat Form	Permanent	Inner Dimension of Stack (m)	3.2
Stack Description	WHRB - 1 & 40 TPH (DRI)	Type of Fuel Used	Coal
Shape of Stack	Circular	Production Capacity	---
Sampling Port	Yes	Pollution Control Device (if any)	ESP
Flue Gas Temperature (°C): 145		Flue Gas Velocity (m/s): 7.3	
Flue Gas Volumetric Flow Rate (Nm <sup>3</sup> /hr): 145862			

### ---Test Result---

Sl. NO.	Parameters	Test Methods	Unit	Norms**	Result
1.	Particulates Matter (PM)	IS 11255 (Part-1)	mg/Nm <sup>3</sup>	---	37.4
2.	Sulphur Dioxide (SO <sub>2</sub> )	IS 11255 (Part-2)	mg/Nm <sup>3</sup>	---	315.6
3.	Oxides of Nitrogen (NO <sub>x</sub> )	IS 11255 (Part-7)	mg/Nm <sup>3</sup>	---	69.3
4.	Carbon Dioxide (CO <sub>2</sub> )	IS 13270:1992	% v/v	---	8.1
5.	Carbon Monoxide (CO)	IS 13270:1992	Ppm	---	375
6.	Oxygen (O <sub>2</sub> )	IS 13270:1992	% v/v	---	6.6

Env. Condition of Lab.	Laboratory is maintaining Temperature 27± 2°C and Relative Humidity 65±5 % in all testing area as per IS 196:1966(C).
Abbreviation	MDL: Minimum Detection Limit, BDL: Below Detection Limit
Norms** is Specified	As per the IS Method 11255 Series.
Remark	Sample Comply with prescribed specification.
Opinion & Interpretation	Not Practiced.
Tested by	Anjali Kumari
Sample Drawn by	Rahul Singh & Team
Disclaimers	<ul style="list-style-type: none"> <li>The results relate only to the item tested, calibrated or sampled.</li> <li>Additions to, deviations, or exclusions from the method is not practiced if not mentioned.</li> <li>Results from external providers are not used if not specified.</li> </ul>

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Reviewed by	Authorized Signatory
(Akanksha Soursahy)	(Dr. S. C. Jain)
Dy. Technical Manager	Director

---End of Report---



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Corporate office - A-8, Modi Heights, Opp. All India Radio Station, Ratu Road, Ranchi, Jharkhand - 834001  
 Laboratory Site - H.No. - A-13, Saket Vihar, Near Sohrai Bhawan, Harmu Housing Colony,  
 Ranchi-834002, Jharkhand, India  
 Ph - 8407804253, 8407804251, Email - iem2012@rediffmail.com



TC-16136

## TEST REPORT

ULR No.:	T	C	1	6	1	3	5	2	6	0	0	0	0	0	0	6	5	2	
Discipline: Chemical	Group: Atmospheric Pollution						Sub-Group: Stack Emission												
Report Issue Date: 02-04-2026	Test Report No.: RN-250303003S06																		
Sample ID: 260331AP11001	Sample Description: Stack Emission																		
Challan No./P.O. No.: 3000179897/02	Challan No./P.No. Date: 03-03-2025																		
Name and Contact Details of Customer: M/s Tata Steel Limited, Gamaharia Phase-V, Adityapur Industrial Area, Seraikela-Kharsawan, Jharkhand-832108 E-mail Id- kishor.pramanik1@tatasteel.com Kishor Pramanik (9905340012)																			
Type of Industry: Iron & Steel	Condition of Sample: Fit For Test																		
Sampling Protocol: IS:11255; 2009	Sampling Date: 25-03-2026(11:00 am - 11:46 am)																		
Protocol: CPCB Guideline (LATS/80/2013-14) & IS Method 11255 Series																			
Sampling Location: Coke Oven Unit-1																			
Field Meteorological Information	A. Temp. (°C): 28			R.H. (%): 53			W.C.: Sunny			W.D.: North to South									
Location of performance of the Laboratory Activity: IEM Laboratory, Ranchi																			
Sample Receiving Date: 31-03-2026					Testing Started: 31-03-2026					Testing Ended: 02-04-2026									

### Information obtained from Customer

Stack Identification	Single	Stack Height from Ground Level (m)	45.5
Emission Due to	Oven	Port Hole Height from Ground Level (m)	32
Plat Form	Permanent	Inner Dimension of Stack (m)	2.5
Stack Description	Coke Oven Unit-1	Type of Fuel Used	Coking Coal
Shape of Stack	Circular	Production Capacity	---
Sampling Port	Yes	Pollution Control Device (if any)	N/A

Flue Gas Temperature (°C): 210	Flue Gas Velocity (m/s): 11.4	Flue Gas Volumetric Flow Rate (Nm <sup>3</sup> /hr): 120765
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---Test Result---

Sl. NO.	Parameters	Test Methods	Unit	Norms**	Result
1.	Particulates Matter (PM)	IS 11255 (Part-1)	mg/Nm <sup>3</sup>	---	19.5
2.	Sulphur Dioxide (SO <sub>2</sub> )	IS 11255 (Part-2)	mg/Nm <sup>3</sup>	---	214.8
3.	Oxides of Nitrogen (NO <sub>x</sub> )	IS 11255 (Part-7)	mg/Nm <sup>3</sup>	---	54.2
4.	Carbon Dioxide (CO <sub>2</sub> )	IS 13270:1992	% v/v	---	10.2
5.	Carbon Monoxide (CO)	IS 13270:1992	Ppm	---	0
6.	Oxygen (O <sub>2</sub> )	IS 13270:1992	% v/v	---	6.8

Env. Condition of Lab.	Laboratory is maintaining Temperature 27± 2°C and Relative Humidity 65±5 % in all testing area as per IS 196:1966(C).
Abbreviation	MDL: Minimum Detection Limit, BDL: Below Detection Limit
Norms** is Specified	As per the IS Method 11255 Series.
Remark	Sample Comply with prescribed specification.
Opinion & Interpretation	Not Practiced.
Tested by	Anjali Kumari
Sample Drawn by	Rahul Singh & Team
Disclaimers	<ul style="list-style-type: none"> <li>The results relate only to the item tested, calibrated or sampled.</li> <li>Additions to, deviations, or exclusions from the method is not practiced if not mentioned.</li> <li>Results from external providers are not used if not specified.</li> </ul>

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On the basis of Quality Checked and Technical data verified by the Authorized signatory, the report is issued by the Director of the Organization.

Reviewed by	Authorized Signatory
 (Akanksha Sourabh)	 (Dr. S. C. Jain)
Dy. Technical Manager	Director

---End of Report---



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Laboratory Site - H.No. - A-13, Saket Vihar, Near Sohrai Bhawan, Harmu Housing Colony,

Ranchi-834002, Jharkhand, India

Ph - 8407804253, 8407804251, Email - lem2012@rediffmail.com



TC-18138

## TEST REPORT

ULR No.:	T	C	1	6	1	3	5	2	6	0	0	0	0	0	0	6	5	3	
Discipline: Chemical	Group: Atmospheric Pollution										Sub-Group: Stack Emission								
Report Issue Date: 02-04-2026	Test Report No.: RN-250303003S07																		
Sample ID: 260331AP11002	Sample Description: Stack Emission																		
Challan No./P.O. No.: 3000179897/102	Challan No./P.No. Date: 03-03-2025																		
Name and Contact Details of Customer: M/s Tata Steel Limited, Gamaharia Phase-V, Adityapur Industrial Area, Seraikela-Kharsawan, Jharkhand-832108 E-mail Id- kishor.pramanik1@tatasteel.com Kishor Pramanik (9905340012)																			
Type of Industry: Iron & Steel	Condition of Sample: Fit For Test																		
Sampling Protocol: IS: 11255; 2009	Sampling Date: 25-03-2026 (12:40 pm - 01:28 pm)																		
Protocol: CPCB Guideline (LATS/80/2013-14) & IS Method 11255 Series																			
Sampling Location: Coke Oven Unit-2																			
Field Meteorological Information	A. Temp. (°C): 28					R.H. (%): 53					W.C.: Sunny				W.D.: North to South				
Location of performance of the Laboratory Activity: IEM Laboratory, Ranchi																			
Sample Receiving Date: 31-03-2026	Testing Started: 31-03-2026						Testing Ended: 02-04-2026												

### Information obtained from Customer

Stack Identification	Single	Stack Height from Ground Level (m)	45.5
Emission Due to	Oven	Port Hole Height from Ground Level (m)	32
Plat Form	Permanent	Inner Dimension of Stack (m)	2.5
Stack Description	Coke Oven Unit-2	Type of Fuel Used	Cooking Coal
Shape of Stack	Circular	Production Capacity	---
Sampling Port	Yes	Pollution Control Device (if any)	N/A

Flue Gas Temperature (°C): 200	Flue Gas Velocity (m/s): 11.0	Flue Gas Volumetric Flow Rate (Nm <sup>3</sup> /hr): 119316
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---Test Result---

Sl. NO.	Parameters	Test Methods	Unit	Norms**	Result
1.	Particulates Matter (PM)	IS 11255 (Part-1)	mg/Nm <sup>3</sup>	---	18.5
2.	Sulphur Dioxide (SO <sub>2</sub> )	IS 11255 (Part-2)	mg/Nm <sup>3</sup>	---	226.9
3.	Oxides of Nitrogen (NO <sub>x</sub> )	IS 11255 (Part-7)	mg/Nm <sup>3</sup>	---	85.4
4.	Carbon Dioxide (CO <sub>2</sub> )	IS 13270:1992	% v/v	---	0.4
5.	Carbon Monoxide (CO)	IS 13270:1992	Ppm	---	0
6.	Oxygen (O <sub>2</sub> )	IS 13270:1992	% v/v	---	13.3

Env. Condition of Lab.	Laboratory is maintaining Temperature 27± 2°C and Relative Humidity 65±5 % in all testing area as per IS 196:1966(C).
Abbreviation	MDL: Minimum Detection Limit, BDL: Below Detection Limit
Norms** is Specified	As per the IS Method 11255 Series.
Remark	Sample Comply with prescribed specification.
Opinion & Interpretation	Not Practiced.
Tested by	Anjali Kumari
Sample Drawn by	Rahul Singh & Team
Disclaimers	<ul style="list-style-type: none"> <li>The results relate only to the item tested, calibrated or sampled.</li> <li>Additions to, deviations, or exclusions from the method is not practiced if not mentioned.</li> <li>Results from external providers are not used if not specified.</li> </ul>

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Reviewed by	Authorized Signatory
(Akanksha Sourabh)	(Dr. S. C. Jain)
Dy. Technical Manager	Director

---End of Report---



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Ranchi-834002, Jharkhand, India

Ph - 8407804253, 8407804251, Email - iem2012@rediffmail.com



TC-10136

## TEST REPORT

ULR No.:	T	C	1	6	1	3	5	2	6	0	0	0	0	0	0	6	5	4
Discipline: Chemical	Group: Atmospheric Pollution									Sub-Group: Stack Emission								
Report Issue Date: 02-04-2026	Test Report No.: RN-250303003S08									Sample ID: 260331AP13001								
Sample ID: 260331AP13001	Sample Description: Stack Emission									Challan No./P.O. No.: 3000179897/J02								
Challan No./P.O. No.: 3000179897/J02	Challan No./P.No. Date: 03-03-2025									Name and Contact Details of Customer: M/s Tata Steel Limited, Gamaharia Phase-V, Adityapur Industrial Area, Seraikela-Kharsawan, Jharkhand-832108 E-mail Id- kishor.pramanik1@tatasteel.com Kishor Pramanik (9905340012)								
Type of Industry: Iron & Steel									Condition of Sample: Fit For Test									
Sampling Protocol: IS:11255; 2009									Sampling Date: 26-03-2026 (10:29 am - 11:26 am)									
Protocol: CPCB Guideline (LATS/80/2013-14) & IS Method 11255 Series																		
Sampling Location: Blooming Mill																		
Field Meteorological Information						A. Temp. (°C): 29			R.H. (%): 50			W.C.: Sunny			W.D.: NE to SW			
Location of performance of the Laboratory Activity: IEM Laboratory, Ranchi																		
Sample Receiving Date: 31-03-2026						Testing Started: 31-03-2026						Testing Ended: 02-04-2026						

### Information obtained from Customer

Stack Identification	Single	Stack Height from Ground Level (m)	80
Emission Due to	Reheating Furnace	Port Hole Height from Ground Level (m)	22
Plat Form	Permanent	Inner Dimension of Stack (m)	2
Stack Description	Blooming Mill	Type of Fuel Used	BF Gas & LDO
Shape of Stack	Circular	Production Capacity	---
Sampling Port	Yes	Pollution Control Device (if any)	N/A
Flue Gas Temperature (°C): 390	Flue Gas Velocity (m/s): 9.2	Flue Gas Volumetric Flow Rate (Nm <sup>3</sup> /hr): 45246	

---Test Result---

Sl. NO.	Parameters	Test Methods	Unit	Norms**	Result
1.	Particulates Matter (PM)	IS 11255 (Part-1)	mg/Nm <sup>3</sup>	---	25.6
2.	Sulphur Dioxide (SO <sub>2</sub> )	IS 11255 (Part-2)	mg/Nm <sup>3</sup>	---	91.2
3.	Oxides of Nitrogen (NO <sub>x</sub> )	IS 11255 (Part-7)	mg/Nm <sup>3</sup>	---	165.8
4.	Carbon Dioxide (CO <sub>2</sub> )	IS 13270:1992	% v/v	---	4.1
5.	Carbon Monoxide (CO)	IS 13270:1992	Ppm	---	96
6.	Oxygen (O <sub>2</sub> )	IS 13270:1992	% v/v	---	13.7

Env. Condition of Lab.	Laboratory is maintaining Temperature 27± 2°C and Relative Humidity 65±5 % in all testing area as per IS 196:1966(C).
Abbreviation	MDL: Minimum Detection Limit, BDL: Below Detection Limit
Norms** is Specified	As per the IS Method 11255 Series.
Remark	Sample Comply with prescribed specification.
Opinion & Interpretation	Not Practiced.
Tested by	Anjali Kumari
Sample Drawn by	Rahul Singh & Team
Disclaimers	<ul style="list-style-type: none"> <li>The results relate only to the item tested, calibrated or sampled.</li> <li>Additions to, deviations, or exclusions from the method is not practiced if not mentioned.</li> <li>Results from external providers are not used if not specified.</li> </ul>

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Reviewed by	Authorized Signatory
(Akanksha Sorega)	(Dr. S. C. Jain)
Dy. Technical Manager	Director

---End of Report---



# INSTITUTE FOR ENVIRONMENTAL MANAGEMENT

Corporate office - A-8, Modi Heights, Opp.-All India Radio Station, Ratu Road, Ranchi, Jharkhand - 834001  
 Laboratory Site - H.No. - A-13, Saket Vihar, Near Sohrai Bhawan, Harmu Housing Colony,  
 Ranchi-834002, Jharkhand, India  
 Ph - 8407804253, 8407804251, Email - iem2012@rediffmail.com



## TEST REPORT

ULR No.:	T	C	I	6	1	3	3	2	0	0	0	0	0	0	6	3	3
Discipline: Chemical	Group: Atmospheric Pollution						Sub-Group: Stack Emission										
Report Issue Date: 02-04-2026	Test Report No.: RN-250303003S09																
Sample ID: 260331AP14001	Sample Description: Stack Emission																
Challan No./P.O. No.: 3000179897/102	Challan No./P.No. Date: 03-03-2025																
Name and Contact Details of Customer: M/s Tata Steel Limited, Gamaharia Phase-V, Adityapur Industrial Area, Seraikela-Kharsawan, Jharkhand-832108 E-mail Id- kishor.pramanik1@tatasteel.com Kishor Pramanik (9905340012)																	
Type of Industry: Iron & Steel						Condition of Sample: Fit for Test											
Sampling Protocol: IS:11255: 2009						Sampling Date: 27-03-2026 (10:50 am – 11:28 am)											
Protocol: CPCB Guideline (LATS/80/2013-14) & IS Method 11255 Series																	
Sampling Location: Sinter Plant Process																	
Field Meteorological Information			A. Temp. (°C): 30			R.H. (%): 54			W.C.: Sunny			W.D.: SE to NW					
Location of performance of the Laboratory Activity: IEM Laboratory, Ranchi																	
Sample Receiving Date: 31-03-2026						Testing Started: 31-03-2026						Testing Ended: 02-04-2026					

### Information obtained from Customer

Stack Identification	Single	Stack Height from Ground Level (m)	78		
Emission Due to	Sinter Making Process	Port Hole Height from Ground Level (m)	31.2		
Plat Form	Permanent	Inner Dimension of Stack (m)	6.2		
Stack Description	Sinter Plant Process	Type of Fuel Used	BF Gas & Coal, Coke		
Shape of Stack	Circular	Production Capacity	---		
Sampling Port	Yes	Pollution Control Device (if any)	ESP		
Flue Gas Temperature (°C): 125		Flue Gas Velocity (m/s): 6.2		Flue Gas Volumetric Flow Rate (Nm <sup>3</sup> /hr): 485246	

---Test Result---

Sl. NO.	Parameters	Test Methods	Unit	Norms**	Result
1.	Particulates Matter (PM)	IS 11255 (Part-1)	mg/Nm <sup>3</sup>	---	49.9
2.	Sulphur Dioxide (SO <sub>2</sub> )	IS 11255 (Part-2)	mg/Nm <sup>3</sup>	---	70.5
3.	Oxides of Nitrogen (NO <sub>x</sub> )	IS 11255 (Part-7)	mg/Nm <sup>3</sup>	---	144.1
4.	Carbon Dioxide (CO <sub>2</sub> )	IS 13270:1992	% v/v	---	0.3
5.	Carbon Monoxide (CO)	IS 13270:1992	Ppm	---	8
6.	Oxygen (O <sub>2</sub> )	IS 13270:1992	% v/v	---	19.2

Env. Condition of Lab.	Laboratory is maintaining Temperature 27± 2°C and Relative Humidity 65±5 % in all testing area as per IS 196:1966(C).
Abbreviation	MDL: Minimum Detection Limit, BDL: Below Detection Limit
Norms** is Specified	As per the IS Method 11255 Series.
Remark	Sample Comply with prescribed specification.
Opinion & Interpretation	Not Practiced.
Tested by	Anjali Kumari
Sample Drawn by	Rahul Singh & Team
Disclaimers	<ul style="list-style-type: none"> <li>The results relate only to the item tested, calibrated or sampled.</li> <li>Additions to, deviations, or exclusions from the method is not practiced if not mentioned.</li> <li>Results from external providers are not used if not specified.</li> </ul>

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On the basis of Quality Checked and Technical data verified by the Authorized signatory, the report is issued by the Director of the Organization.

Reviewed by	Authorized Signatory
(Akanksha Sourabh)	(Dr. S. C. Jain)
Dy. Technical Manager	Director

---End of Report---



# INSTITUTE FOR ENVIRONMENTAL MANAGEMENT

Corporate office - A-8, Modi Heights, Opp.-All India Radio Station, Ratu Road, Ranchi, Jharkhand - 834001

Laboratory Site - H.No. - A-13, Saket Vihar, Near Sohrai Bhawan, Harmu Housing Colony,

Ranchi-834002, Jharkhand, India

Ph - 8407804253, 8407804251, Email - iem2012@rediffmail.com



TC-16135

## TEST REPORT

ULR No.:	T	C	1	6	1	3	5	2	6	0	0	0	0	0	0	6	3	6		
Discipline: Chemical	Group: Atmospheric Pollution								Sub-Group: Stack Emission											
Report Issue Date: 02-04-2026	Test Report No.: RN-250303003S10								Sample ID: 260331AP16001											
Challan No./P.O. No.: 3000179897/302	Sample Description: Stack Emission								Challan No./P.No. Date: 03-03-2025											
Name and Contact Details of Customer: M/s Tata Steel Limited, Gamaharia Phase-V, Adityapur Industrial Area, Seraikela-Kharsawan, Jharkhand-832108 E-mail Id- kishor.pramanik1@tatasteel.com Kishor Pramanik (9905340012)																				
Type of Industry: Iron & Steel									Condition of Sample: Fit for Test											
Sampling Protocol: IS:11255:2009									Sampling Date: 27-03-2026 (12:33 pm - 01:13 pm)											
Protocol: CPCB Guideline (LATS/80/2013-14) & IS Method 11255 Series																				
Sampling Location: SMS 1& 2																				
Field Meteorological Information						A. Temp. (°C): 30			R.H. (%): 54			W.C.: Sunny			W.D.: SE to NW					
Location of performance of the Laboratory Activity: IEM Laboratory, Ranchi																				
Sample Receiving Date: 31-03-2026						Testing Started: 31-03-2026						Testing Ended: 02-04-2026								

### Information obtained from Customer

Stack Identification	Common	Stack Height from Ground Level (m)	46.1		
Emission Due to	EAF	Port Hole Height from Ground Level (m)	36		
Plat Form	Permanent	Inner Dimension of Stack (m)	5		
Stack Description	SMS 1& 2	Type of Fuel Used	Electricity		
Shape of Stack	Circular	Production Capacity	---		
Sampling Port	Yes	Pollution Control Device (if any)	Fume Extraction System		
Flue Gas Temperature (°C): 65		Flue Gas Velocity (m/s): 5.9		Flue Gas Volumetric Flow Rate (Nm <sup>3</sup> /hr): 357020	

### -----Test Result-----

Sl. NO.	Parameters	Test Methods	Unit	Norms**	Result
1.	Particulates Matter (PM)	IS 11255 (Part-1)	mg/Nm <sup>3</sup>	---	21.8
2.	Sulphur Dioxide (SO <sub>2</sub> )	IS 11255 (Part-2)	mg/Nm <sup>3</sup>	---	54.6
3.	Oxides of Nitrogen (NO <sub>x</sub> )	IS 11255 (Part-7)	mg/Nm <sup>3</sup>	---	128.2
4.	Carbon Dioxide (CO <sub>2</sub> )	IS 13270:1992	% v/v	---	0
5.	Carbon Monoxide (CO)	IS 13270:1992	ppm	---	17
6.	Oxygen (O <sub>2</sub> )	IS 13270:1992	% v/v	---	22.5

Env. Condition of Lab.	Laboratory is maintaining Temperature 27± 2°C and Relative Humidity 65±5 % in all testing area as per IS 196:1966(C).
Abbreviation	MDL: Minimum Detection Limit, BDL: Below Detection Limit
Norms** is Specified	As per the IS Method 11255 Series.
Remark	Sample Comply with prescribed specification.
Opinion & Interpretation	Not Practiced.
Tested by	Anjali Kumari
Sample Drawn by	Rahul Singh & Team
Disclaimers	<ul style="list-style-type: none"> <li>The results relate only to the item tested, calibrated or sampled.</li> <li>Additions to, deviations, or exclusions from the method is not practiced if not mentioned.</li> <li>Results from external providers are not used if not specified.</li> </ul>

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On the basis of Quality Checked and Technical data verified by the Authorized signatory, the report is issued by the Director of the Organization.

Reviewed by	Authorized Signatory
(Akanksha Sourabh)	(Dr. S. C. Jain)
Dy. Technical Manager	Director

-----End of Report-----



# INSTITUTE FOR ENVIRONMENTAL MANAGEMENT

Corporate office - A-8, Modi Heights, Opp.-All India Radio Station, Ratu Road, Ranchi, Jharkhand - 834001

Laboratory Site - H.No. - A-13, Saket Vihar, Near Sohrai Bhawan, Harmu Housing Colony,

Ranchi-834002, Jharkhand, India

Ph - 8407804253, 8407804251, Email - iem2012@rediffmail.com



TC-18135

## TEST REPORT

ULR No.:	T	C	1	6	1	3	5	2	6	0	0	0	0	0	0	6	5	7
Discipline: Chemical	Group: Atmospheric Pollution							Sub-Group: Stack Emission										
Report Issue Date: 02-04-2026	Test Report No.: RN-250303003S11																	
Sample ID: 260331AP17001	Sample Description: Stack Emission																	
Challan No./P.O. No.: 3000179897/J02	Challan No./P.No. Date: 03-03-2025																	
Name and Contact Details of Customer: M/s Tata Steel Limited, Gamaharia Phase-V, Adityapur Industrial Area, Seraikela-Kharsawan, Jharkhand-832108 E-mail Id- kishor.pramanik1@tatasteel.com Kishor Pramanik (9905340012)																		
Type of Industry: Iron & Steel									Condition of Sample: Fit for Test									
Sampling Protocol: IS:11255; 2009									Sampling Date: 30-03-2026 (02:40 pm - 03:14 pm)									
Protocol: CPCB Guideline (LATS/80/2013-14) & IS Method 11255 Series																		
Sampling Location: MBF-1 STOCK HOUSE																		
Field Meteorological Information			A. Temp. (°C): 29				R.H. (%): 52			W.C.: Sunny				W.D.: NW to SE				
Location of performance of the Laboratory Activity: IEM Laboratory, Ranchi																		
Sample Receiving Date: 31-03-2026						Testing Started: 31-03-2026						Testing Ended: 02-04-2026						

### Information obtained from Customer

Stack Identification	Single	Stack Height from Ground Level (m)	30		
Emission Due to	Raw material Circuit	Port Hole Height from Ground Level (m)	27		
Plat Form	Permanent	Inner Dimension of Stack (m)	1.2		
Stack Description	MBF-1 STOCK HOUSE	Type of Fuel Used	---		
Shape of Stack	Circular	Production Capacity	---		
Sampling Port	Yes	Pollution Control Device (if any)	Bag Filter		
Flue Gas Temperature (°C): 52		Flue Gas Velocity (m/s): 6.8		Flue Gas Volumetric Flow Rate (Nm <sup>3</sup> /hr): 24678	

-----Test Result-----

Sl. NO.	Parameters	Test Methods	Unit	Norms**	Result
1.	Particulates Matter (PM)	IS 11255 (Part-1)	mg/Nm <sup>3</sup>	---	17.4

Env. Condition of Lab.	Laboratory is maintaining Temperature 27± 2°C and Relative Humidity 65±5 % in all testing area as per IS 196:1966(C).
Abbreviation	MDL: Minimum Detection Limit, BDL: Below Detection Limit
Norms** is Specified	As per the IS Method 11255 Series.
Remark	Sample Comply with prescribed specification.
Opinion & Interpretation	Not Practiced.
Tested by	Anjali Kumari
Sample Drawn by	Rahul Singh & Team
Disclaimers	<ul style="list-style-type: none"> <li>The results relate only to the item tested, calibrated or sampled.</li> <li>Additions to, deviations, or exclusions from the method is not practiced if not mentioned.</li> <li>Results from external providers are not used if not specified.</li> </ul>

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On the basis of Quality Checked and Technical data verified by the Authorized signatory, the report is issued by the Director of the Organization.

Reviewed by	Authorized Signatory
	
(Akanksha Sourabh)	(Dr. S. C. Jain)
Dy. Technical Manager	Director

-----End of Report-----



# INSTITUTE FOR ENVIRONMENTAL MANAGEMENT

Corporate office - A-8, Modi Heights, Opp.-All India Radio Station, Ratu Road, Ranchi, Jharkhand - 834001

Laboratory Site - H.No. - A-13, Saket Vihar, Near Sohrai Bhawan, Harmu Housing Colony,

Ranchi-834002, Jharkhand, India

Ph - 8407804253, 8407804251, Email - iem2012@rediffmail.com



TC-10100

## TEST REPORT

ULR No.:	T	C	1	6	1	3	5	2	6	0	0	0	0	0	0	6	5	8				
Discipline: Chemical	Group: Atmospheric Pollution							Sub-Group: Stack Emission														
Report Issue Date: 02-04-2026	Test Report No.: RN-250303003S12							Sample Description: Stack Emission														
Sample ID: 260331AP18001	Challan No./P.O. No.: 3000179897/302							Challan No./P.No. Date: 03-03-2025														
Name and Contact Details of Customer: M/s Tata Steel Limited, Gamaharia Phase-V, Adityapur Industrial Area, Seraikela-Kharsawan, Jharkhand-832108 E-mail Id- kishor.pramanik1@tatasteel.com Kishor Pramanik (9905340012)																						
Type of Industry: Iron & Steel							Condition of Sample: Fit for Test															
Sampling Protocol: IS:11255; 2009							Sampling Date: 30-03-2026 (10:30 am - 11:47 am)															
Protocol: CPCB Guideline (LATS/80/2013-14) & IS Method 11255 Series																						
Sampling Location: MBF-1 Cast House																						
Field Meteorological Information					A. Temp. (°C): 29				R.H. (%): 52				W.C.: Sunny				W.D.: NW to SE					
Location of performance of the Laboratory Activity: IEM Laboratory, Ranchi																						
Sample Receiving Date: 31-03-2026					Testing Started: 31-03-2026					Testing Ended: 02-04-2026												

### Information obtained from Customer

Stack Identification	Single	Stack Height from Ground Level (m)	30		
Emission Due to	Blast Furnace Process	Port Hole Height from Ground Level (m)	25		
Plat Form	Permanent	Inner Dimension of Stack (m)	2		
Stack Description	MBF-1 Cast House	Type of Fuel Used	Coke,PCI		
Shape of Stack	Circular	Production Capacity	---		
Sampling Port	Yes	Pollution Control Device (if any)	Bag Filter		
Flue Gas Temperature (°C): 45		Flue Gas Velocity (m/s): 5.0		Flue Gas Volumetric Flow Rate (Nm <sup>3</sup> /hr): 51652	

### ----Test Result----

Sl. NO.	Parameters	Test Methods	Unit	Norms**	Result
1.	Particulates Matter (PM)	IS 11255 (Part-1)	mg/Nm <sup>3</sup>	---	19.4
2.	Sulphur Dioxide (SO <sub>2</sub> )	IS 11255 (Part-2)	mg/Nm <sup>3</sup>	---	45.8
3.	Oxides of Nitrogen (NO <sub>x</sub> )	IS 11255 (Part-7)	mg/Nm <sup>3</sup>	---	51.4
4.	Carbon Dioxide (CO <sub>2</sub> )	IS 13270:1992	% v/v	---	0
5.	Carbon Monoxide (CO)	IS 13270:1992	ppm	---	19
6.	Oxygen (O <sub>2</sub> )	IS 13270:1992	% v/v	---	22.5

Env. Condition of Lab.	Laboratory is maintaining Temperature 27± 2°C and Relative Humidity 65±5 % in all testing area as per IS 196:1966(C).
Abbreviation	MDL: Minimum Detection Limit, BDL: Below Detection Limit
Norms** is Specified	As per the IS Method 11255 Series.
Remark	Sample Comply with prescribed specification.
Opinion & Interpretation	Not Practiced.
Tested by	Anjali Kumari
Sample Drawn by	Rahul Singh & Team
Disclaimers	<ul style="list-style-type: none"> <li>The results relate only to the item tested, calibrated or sampled.</li> <li>Additions to, deviations, or exclusions from the method is not practiced if not mentioned.</li> <li>Results from external providers are not used if not specified.</li> </ul>

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Reviewed by	Authorized Signatory
	
(Akanksha Sourabh)	(Dr. S. C. Jain)
Dy. Technical Manager	Director

---End of Report---



# INSTITUTE FOR ENVIRONMENTAL MANAGEMENT

Corporate office - A-B, Modi Heights, Opp.-All India Radio Station, Ratu Road, Ranchi, Jharkhand - 834001  
 Laboratory Site - H.No. - A-13, Saket Vihar, Near Sohrai Bhawan, Harmu Housing Colony,  
 Ranchi-834002, Jharkhand, India  
 Ph - 8407804253, 8407804251, Email - iem2012@rediffmail.com



## TEST REPORT

ULR No.:	T	C	1	6	1	3	5	2	6	0	0	0	0	0	0	6	5	9
Discipline: Chemical	Group: Atmospheric Pollution							Sub-Group: Stack Emission										
Report Issue Date: 02-04-2026	Test Report No.: RN-250303003S13																	
Sample ID: 260331AP18002	Sample Description: Stack Emission																	
Challan No./P.O. No.: 3000179897/J02	Challan No./P.No. Date: 03-03-2025																	
Name and Contact Details of Customer: M/s Tata Steel Limited, Gamaharia Phase-V, Adityapur Industrial Area, Seraikela-Kharsawan, Jharkhand-832108 E-mail Id- kishor.pramanik1@tatasteel.com Kishor Pramanik (9905340012)																		
Type of Industry: Iron & Steel	Condition of Sample: Fit for Test																	
Sampling Protocol: IS:11255: 2009	Sampling Date: 30-03-2026 (12:50 pm - 01:28pm)																	
Protocol: CPCB Guideline (LATS/80/2013-14) & IS Method 11255 Series																		
Sampling Location: MBF-1 Ground Hopper																		
Field Meteorological Information	A. Temp. (°C): 29			R.H. (%): 52			W.C.: Sunny			W.D.: NW to SE								
Location of performance of the Laboratory Activity: IEM Laboratory, Ranchi																		
Sample Receiving Date: 31-03-2026	Testing Started: 31-03-2026							Testing Ended: 02-04-2026										

### Information obtained from Customer

Stack Identification	Single	Stack Height from Ground Level (m)	30
Emission Due to	Crushing	Port Hole Height from Ground Level (m)	22
Plat Form	Permanent	Inner Dimension of Stack (m)	0.9
Stack Description	MBF-1 Ground Hopper	Type of Fuel Used	RMHS
Shape of Stack	Circular	Production Capacity	---
Sampling Port	Yes	Pollution Control Device (if any)	Bag Filter
Flue Gas Temperature (°C): 45	Flue Gas Velocity (m/s): 13.8	Flue Gas Volumetric Flow Rate (Nm <sup>3</sup> /hr): 28828	

### ----Test Result----

Sl. NO.	Parameters	Test Methods	Unit	Norms**	Result
1.	Particulates Matter (PM)	IS 11255 (Part-1)	mg/Nm <sup>3</sup>	---	18
2.	Sulphur Dioxide (SO <sub>2</sub> )	IS 11255 (Part-2)	mg/Nm <sup>3</sup>	---	21.2
3.	Oxides of Nitrogen (NO <sub>2</sub> )	IS 11255 (Part-7)	mg/Nm <sup>3</sup>	---	32.5
4.	Carbon Dioxide (CO <sub>2</sub> )	IS 13270:1992	% v/v	---	--
5.	Carbon Monoxide (CO)	IS 13270:1992	ppm	---	--
6.	Oxygen (O <sub>2</sub> )	IS 13270:1992	% v/v	---	--

Env. Condition of Lab.	Laboratory is maintaining Temperature 27± 2°C and Relative Humidity 65±5 % in all testing area as per IS 196:1966(C).
Abbreviation	MDL: Minimum Detection Limit, BDL: Below Detection Limit
Norms** is Specified	As per the IS Method 11255 Series.
Remark	Sample Comply with prescribed specification.
Opinion & Interpretation	Not Practiced.
Tested by	Anjali Kumari
Sample Drawn by	Rahul Singh & Team
Disclaimers	<ul style="list-style-type: none"> <li>The results relate only to the item tested, calibrated or sampled.</li> <li>Additions to, deviations, or exclusions from the method is not practiced if not mentioned.</li> <li>Results from external providers are not used if not specified.</li> </ul>

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Reviewed by	Authorized Signatory
(Akanksha Saurabh)	(Dr. S. C. Jain)
Dy. Technical Manager	Director

----End of Report----



# INSTITUTE FOR ENVIRONMENTAL MANAGEMENT

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Ranchi-834002, Jharkhand, India

Ph - 8407804253, 8407804251, Email - iem2012@rediffmail.com



TC-16135

## TEST REPORT

ULR No.:	T	C	1	6	1	3	5	2	6	0	0	0	0	0	0	6	6	0		
Discipline: Chemical	Group: Atmospheric Pollution									Sub-Group: Stack Emission										
Report Issue Date: 02-04-2026	Test Report No.: RN-250303003S14									Sample Description: Stack Emission										
Sample ID: 260331AP20001	Challan No./P.O. No.: 3000179897/J02									Challan No./P.No. Date: 03-03-2025										
Name and Contact Details of Customer: M/s Tata Steel Limited, Gamaharia Phase-V, Adityapur Industrial Area, Seraikela-Kharsawan, Jharkhand-832108 E-mail Id- kishor.pramanik1@tatasteel.com Kishor Pramanik (9905340012)																				
Type of Industry: Iron & Steel									Condition of Sample: Fit for Test											
Sampling Protocol: IS:11255; 2009									Sampling Date: 31-03-2026 (11:00 am - 11:49 am)											
Protocol: CPCB Guideline (LATS/80/2013-14) & IS Method 11255 Series																				
Sampling Location: Wire Rod Mill (RHF)																				
Field Meteorological Information						A. Temp. (°C): 28			R.H. (%): 54			W.C.: Sunny			W.D.: SE to NW					
Location of performance of the Laboratory Activity: IEM Laboratory, Ranchi																				
Sample Receiving Date: 31-03-2026						Testing Started: 31-03-2026						Testing Ended: 02-04-2026								

### Information obtained from Customer

Stack Identification	Single	Stack Height from Ground Level (m)	55
Emission Due to	Reheating	Port Hole Height from Ground Level (m)	30
Plat Form	Permanent	Inner Dimension of Stack (m)	1.5
Stack Description	Wire Rod Mill (RHF)	Type of Fuel Used	BF Gas & LDO
Shape of Stack	Circular	Production Capacity	---
Sampling Port	Yes	Pollution Control Device (if any)	None
Flue Gas Temperature (°C): 405	Flue Gas Velocity (m/s): 10.6	Flue Gas Volumetric Flow Rate (Nm <sup>3</sup> /hr): 28829	

### ----Test Result----

Sl. NO.	Parameters	Test Methods	Unit	Norms**	Result
1.	Particulates Matter (PM)	IS 11255 (Part-1)	mg/Nm <sup>3</sup>	---	22.2
2.	Sulphur Dioxide (SO <sub>2</sub> )	IS 11255 (Part-2)	mg/Nm <sup>3</sup>	---	72.1
3.	Oxides of Nitrogen (NO <sub>x</sub> )	IS 11255 (Part-7)	mg/Nm <sup>3</sup>	---	155.2
4.	Carbon Dioxide (CO <sub>2</sub> )	IS 13270:1992	% v/v	---	--
5.	Carbon Monoxide (CO)	IS 13270:1992	ppm	---	--
6.	Oxygen (O <sub>2</sub> )	IS 13270:1992	% v/v	---	--

Env. Condition of Lab.	Laboratory is maintaining Temperature 27± 2°C and Relative Humidity 65±5 % in all testing area as per IS 196:1966(C).
Abbreviation	MDL: Minimum Detection Limit, BDL: Below Detection Limit
Norms** is Specified	As per the IS Method 11255 Series.
Remark	Sample Comply with prescribed specification.
Opinion & Interpretation	Not Practiced.
Tested by	Anjali Kumari
Sample Drawn by	Rahul Singh & Team
Disclaimers	<ul style="list-style-type: none"> <li>The results relate only to the item tested, calibrated or sampled.</li> <li>Additions to, deviations, or exclusions from the method is not practiced if not mentioned.</li> <li>Results from external providers are not used if not specified.</li> </ul>

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On the basis of Quality Checked and Technical data verified by the Authorized signatory, the report is issued by the Director of the Organization.

Reviewed by	Authorized Signatory
(Akanksha Sourabh)	(Dr. S. C. Jain)
Dy. Technical Manager	Director

---End of Report---



# INSTITUTE FOR ENVIRONMENTAL MANAGEMENT

Corporate office - A-8, Modi Heights, Opp.-All India Radio Station, Ratu Road, Ranchi, Jharkhand - 834001  
 Laboratory Site - H.No. - A-13, Saket Vihar, Near Sohral Bhawan, Harmu Housing Colony,  
 Ranchi-834002, Jharkhand, India  
 Ph - 8407804253, 8407804251. Email - iem2012@rediffmail.com



TC-16135

## TEST REPORT

ULR No.:	T	C	1	6	1	3	5	2	6	0	0	0	0	0	6	6	1
Discipline: Chemical	Group: Atmospheric Pollution						SubGroup: Stack Emission										
Report Issue Date: 02-04-2026	Test Report No.: RN-250303003S15																
Sample ID: 260331AP20002	Sample Description: Stack Emission																
Challan No./P.O. No.: 3000179897/J02	Challan No./P.No. Date: 03-03-2025																
Name and Contact Details of Customer: M/s Tata Steel Limited, Gamaharia Phase-V, Adityapur Industrial Area, Seraikela-Kharsawan, Jharkhand-832108 E-mail Id- kishor.pramanik1@tatasteel.com Kishor Pramanik (9905340012)																	
Type of Industry: Iron & Steel	Condition of Sample: Fit for Test																
Sampling Protocol: IS:11255; 2009	Sampling Date: 31-03-2026 (12:30 pm - 01:08 pm)																
Protocol: CPCB Guideline (LATS/80/2013-14) & IS Method 11255 Series																	
Sampling Location: MBF-2 Stove																	
Field Meteorological Information	A. Temp. (°C): 28			R.H. (%): 54			W.C.: Sunny			W.D.: SE to NW							
Location of performance of the Laboratory Activity: IEM Laboratory, Ranchi																	
Sample Receiving Date: 31-03-2026				Testing Started: 31-03-2026				Testing Ended: 02-04-2026									

### Information obtained from Customer

Stack Identification	Single	Stack Height from Ground Level (m)	50
Emission Due to	Blast Furnace Process	Port Hole Height from Ground Level (m)	30
Plat Form	Permanent	Inner Dimension of Stack (m)	2.3
Stack Description	MBF-2 Stove	Type of Fuel Used	Coke, PCI
Shape of Stack	Circular	Production Capacity	---
Sampling Port	Yes	Pollution Control Device (if any)	Dry GCP
Flue Gas Temperature (°C): 165	Flue Gas Velocity (m/s): 6.2	Flue Gas Volumetric Flow Rate (Nm <sup>3</sup> /hr): 61237	

### ----Test Result----

Sl. NO.	Parameters	Test Methods	Unit	Norms**	Result
1.	Particulates Matter (PM)	IS 11255 (Part-1)	mg/Nm <sup>3</sup>	---	15.2
2.	Sulphur Dioxide (SO <sub>2</sub> )	IS 11255 (Part-2)	mg/Nm <sup>3</sup>	---	65.8
3.	Oxides of Nitrogen (NO <sub>x</sub> )	IS 11255 (Part-7)	mg/Nm <sup>3</sup>	---	95.1
4.	Carbon Dioxide (CO <sub>2</sub> )	IS 13270:1992	% v/v	---	6.7
5.	Carbon Monoxide (CO)	IS 13270:1992	ppm	---	166
6.	Oxygen (O <sub>2</sub> )	IS 13270:1992	% v/v	---	9.1

Env. Condition of Lab.	Laboratory is maintaining Temperature 27± 2°C and Relative Humidity 65±5 % in all testing area as per IS 196:1966(C).
Abbreviation	MDL: Minimum Detection Limit, BDL: Below Detection Limit
Norms** is Specified	As per the IS Method 11255 Series.
Remark	Sample Comply with prescribed specification.
Opinion & Interpretation	Not Practiced.
Tested by	Anjali Kumari
Sample Drawn by	Rahul Singh & Team
Disclaimers	<ul style="list-style-type: none"> <li>The results relate only to the item tested, calibrated or sampled.</li> <li>Additions to, deviations, or exclusions from the method is not practiced if not mentioned.</li> <li>Results from external providers are not used if not specified.</li> </ul>

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Reviewed by	Authorized Signatory
	
(Akanksha Sourabh)	(Dr. S. C. Jain)
Dy. Technical Manager	Director

---End of Report---

**Amibent Air Quality Monitoring**

S.No	Sampling location	Report No.	Sampling on	SO2 (µg/m3)	NO2 (µg/m3)	PM10 (µg/m3)	PM2.5 (µg/m3)	CO (µg/m3)	Ozone (µg/m3)	Lead (µg/m3)	Ammonia (µg/m3)	Benzene (µg/m3)	Benzo(a)pyrene (ng/m3)	Arsenic (ng/m3)	Nickel (ng/m3)
1	Plant North Side Boundary	RN-250303003A03	09.10.2025	19.3	34.7	69.7	32.1	BDL(MDL 0.1)	17.1	0.5	30.4	BDL (MDL- 0.5)	BDL (MDL- 0.01)	BDL (MDL- 2)	BDL (MDL- 4)
2	Plant West Side Boundary	RN-250303003A04	09.10.2025	19.2	34.6	81.7	37.6	BDL(MDL 0.1)	24.8	0.4	46.7	BDL (MDL- 0.5)	BDL (MDL- 0.01)	BDL (MDL- 2)	BDL (MDL- 4)
3	Plant East Side Boundary	RN-250303003A05	10.10.2025	22.0	39.6	69.1	31.8	BDL(MDL 0.1)	21.1	0.5	37.8	BDL (MDL- 0.5)	BDL (MDL- 0.01)	BDL (MDL- 2)	BDL (MDL- 4)
4	Plant South Side Boundary	RN-250303003A06	10.10.2025	23.2	41.8	91.8	42.2	BDL(MDL 0.1)	24.9	0.4	32.9	BDL (MDL- 0.5)	BDL (MDL- 0.01)	BDL (MDL- 2)	BDL (MDL- 4)
5	Plant North Side Boundary	RN-250303003A03	19.12.2025	21.8	39.2	70.5	33.1	BDL(MDL 0.1)	19.9	0.3	30.4	BDL (MDL- 0.5)	BDL (MDL- 0.01)	BDL (MDL- 2)	BDL (MDL- 4)
6	Plant West Side Boundary	RN-250303003A04	19.12.2025	24.5	44.1	82.6	38.8	BDL(MDL 0.1)	22.7	0.4	45.1	BDL (MDL- 0.5)	BDL (MDL- 0.01)	BDL (MDL- 2)	BDL (MDL- 4)
7	Plant East Side Boundary	RN-250303003A05	20.12.2025	25.1	45.2	71.8	33.7	BDL(MDL 0.1)	23.4	0.3	38.1	BDL (MDL- 0.5)	BDL (MDL- 0.01)	BDL (MDL- 2)	BDL (MDL- 4)
8	Plant South Side Boundary	RN-250303003A06	20.12.2025	23.7	42.6	88.7	41.8	BDL(MDL 0.1)	24.7	0.4	35.1	BDL (MDL- 0.5)	BDL (MDL- 0.01)	BDL (MDL- 2)	BDL (MDL- 4)
9	Plant North Side Boundary	RN-250303003A03	06.02.2026	22.4	40.1	73.2	34.5	BDL(MDL 0.1)	18.6	0.4	30.9	BDL (MDL- 0.5)	BDL (MDL- 0.01)	BDL (MDL- 2)	BDL (MDL- 4)
10	Plant West Side Boundary	RN-250303003A04	06.02.2026	25.8	42.4	81.5	40.1	BDL(MDL 0.1)	21.3	0.4	43.8	BDL (MDL- 0.5)	BDL (MDL- 0.01)	BDL (MDL- 2)	BDL (MDL- 4)
11	Plant East Side Boundary	RN-250303003A01	04.02.2026	24.5	44.4	72.7	31.9	BDL(MDL 0.1)	22.2	0.3	36.0	BDL (MDL- 0.5)	BDL (MDL- 0.01)	BDL (MDL- 2)	BDL (MDL- 4)
12	Plant South Side Boundary	RN-250303003A02	04.02.2026	23.3	40.6	85.4	42.8	BDL(MDL 0.1)	24.1	0.4	34.9	BDL (MDL- 0.5)	BDL (MDL- 0.01)	BDL (MDL- 2)	BDL (MDL- 4)
13	Plant North Side Boundary	RN-250303003A01	23.03.2026	20.5	36.9	70.4	33.8	BDL(MDL 0.1)	17.7	0.3	28.1	BDL (MDL- 0.5)	BDL (MDL- 0.01)	BDL (MDL- 2)	BDL (MDL- 4)
14	Plant West Side Boundary	RN-250303003A02	23.03.2026	24.1	43.4	77.6	37.2	BDL(MDL 0.1)	19.9	0.3	40.6	BDL (MDL- 0.5)	BDL (MDL- 0.01)	BDL (MDL- 2)	BDL (MDL- 4)
15	Plant East Side Boundary	RN-250303003A03	24.03.2026	22.6	40.7	69.9	33.6	BDL(MDL 0.1)	21.3	0.2	33.2	BDL (MDL- 0.5)	BDL (MDL- 0.01)	BDL (MDL- 2)	BDL (MDL- 4)
16	Plant South Side Boundary	RN-250303003A04	24.03.2026	21.6	38.9	81.5	39.1	BDL(MDL 0.1)	22.7	0.3	31.7	BDL (MDL- 0.5)	BDL (MDL- 0.01)	BDL (MDL- 2)	BDL (MDL- 4)

Remark: BDL - Below Detection Limit, MDL : Minimum Detection Limit

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 Ranchi-834002, Jharkhand, India  
 Ph - 8407804253, 8407804251, Email - iem2012@rediffmail.com



## TEST REPORT

ULR No.:	T	C	1	6	1	3	5	2	6	0	0	0	0	0	6	3	9
Discipline: Chemical			Group: Atmospheric Pollution						Sub-Group: Ambient Air								
Report Issue Date: 02-04-2026			Test Report No.: RN-250303003A01														
Sample ID: 260331AP06001			Sample Description: Ambient Air														
Challan No./P.O. No.: 3000179897/J02			Challan No./ P.No. Date: 03-03-2025														
Name and Contact Details of Customer: M/s Tata Steel Limited, Gamaharia Phase-V, Adityapur Industrial Area, Seraikela-Kharsawan, Jharkhand-832108 E-mail Id- kishor.pramanik1@tatasteel.com Kishor Pramanik (9905340012)																	
Information obtained from customer (if any): N/A																	
Type of Industry: Iron & Steel						Condition of Sample: Fit for Test											
Sampling Protocol: I.S 5182						Sampling Date: 23-03-2026 to 24-03-2026											
Protocol: CPCB Guideline (NAAQMS/36/2012-13) & IS Method 5182 Series																	
Sampling Location: STATION-1 PLANT NORTH SIDE BOUNDARY																	
Field Meteorological Information			A. Temp. (°C): 29			R.H. (%): 51			W.C.: Sunny			W.D.: NW to SE					
Location of performance of the Laboratory Activity: IEM Laboratory, Ranchi																	
Sample Receiving Date: 31-03-2026						Testing Started: 31-03-2026						Testing Ended: 02-04-2026					

### ----Test Results----

Sl.No.	Parameters	Test Method No.	Unit	Norms**	Results
1.	Particulate Matter (PM <sub>10</sub> )	IS 5182 Part 23:2006	µg/m <sup>3</sup>	100	70.4
2.	Particulate Matter (PM <sub>2.5</sub> )	IS 5182 Part 24:2019	µg/m <sup>3</sup>	60	33.8
3.	Sulphur Dioxide (SO <sub>2</sub> )	IS 5182 Part-02	µg/m <sup>3</sup>	80	20.5
4.	Nitrogen Dioxide (NO <sub>2</sub> )	IS 5182 Part-06	µg/m <sup>3</sup>	80	36.9
5.	Ammonia (NH <sub>3</sub> )	IS 5182 Part 25	µg/m <sup>3</sup>	400	28.1
6.	Ozone (O <sub>3</sub> )	IS 5182 Part 09	µg/m <sup>3</sup>	180	17.7
7.	Arsenic (as As)	USEPA I.O. 3.2	ng/m <sup>3</sup>	---	BDL (MDL-2)
8.	Lead (as Pb)	IS 5182 Part 22	µg/m <sup>3</sup>	1.0	0.3
9.	Nickel (Ni)	IS 5182 Part 26	ng/m <sup>3</sup>	---	BDL (MDL-4)

Env. Condition of Lab.	Laboratory is maintaining Temperature 27± 2°C and Relative Humidity 65±5 % in all testing area as per IS 196:1966(C).
Abbreviation	MDL: Minimum Detection Limit, BDL: Below Detection Limit
Norms** is Specified	National Ambient Air Quality Standards (NAAQS), 2009.
Remark	Sample Comply with prescribed specification.
Opinion & Interpretation	Not Practiced.
Tested by	Anjali Kumari
Sample Drawn by	Rahul Singh & Team
Disclaimers	<ul style="list-style-type: none"> <li>The results relate only to the item tested, calibrated or sampled.</li> <li>Additions to, deviations, or exclusions from the method is not practiced if not mentioned.</li> <li>Results from external providers are not used if not specified.</li> </ul>

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Reviewed by	Authorized Signatory
 (Akanksha Sourabh)	 (Dr. S. C. Jain)
Dy. Technical Manager	Director

----End of Report----

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 Ranchi-834002, Jharkhand, India  
 Ph - 8407804253, 8407804251, Email - iem2012@rediffmail.com

## TEST REPORT

<b>Discipline:</b> Chemical		<b>Group:</b> Atmospheric Pollution		<b>Sub-Group:</b> Ambient Air	
<b>Report Issue Date:</b> 02-04-2026			<b>Test Report No.:</b> RN-250303003A01		
<b>Sample ID:</b> 260331AP06A01			<b>Sample Description:</b> Ambient Air		
<b>Challan No./P.O. No.:</b> 3000179897/302			<b>Challan No./ P.No. Date:</b> 03-03-2025		
<b>Name and Contact Details of Customer:</b> M/s Tata Steel Limited, Gamaharia Phase-V, Adityapur Industrial Area, Seraikela-Kharsawan, Jharkhand-832108 E-mail Id- kishor.pramanik1@tatasteel.com Kishor Pramanik (9905340012)					
<b>Information obtained from customer (if any):</b> N/A					
<b>Type of Industry:</b> Iron & Steel			<b>Condition of Sample:</b> Fit for Test		
<b>Sampling Protocol:</b> IS 5182			<b>Sampling Date:</b> 23-03-2026 to 24-03-2026		
<b>Protocol:</b> CPCB Guideline (NAAQMS/36/2012-13) & IS Method 5182 Series					
<b>Sampling Location:</b> STATION-1 PLANT NORTH SIDE BOUNDARY					
<b>Field Meteorological Information</b>		<b>A. Temp. (°C):</b> 29	<b>R.H. (%):</b> 51	<b>W.C.:</b> Sunny	<b>W.D.:</b> NW to SE
<b>Location of performance of the Laboratory Activity:</b> IEM Laboratory, Ranchi					
<b>Sample Receiving Date:</b> 31-03-2026		<b>Testing Started:</b> 31-03-2026		<b>Testing Ended:</b> 02-04-2026	

### ----Test Results----

Sl. No.	Parameters	Test Method	Unit	Limits	Result
10.	Benzene (C <sub>6</sub> H <sub>6</sub> )	IS 5182 Part 11: 2006	µg/m <sup>3</sup>	--	BDL (MDL- 0.5)
11.	Benzo (a) Pyrene (Bap) Particulate Phase Only	IS 5182 Part 12: 2004	ng/m <sup>3</sup>	--	BDL (MDL0.01)
12.	Carbon Monoxide	IEM/SOP/Air-01:2022	mg/m <sup>3</sup>	--	BDL (MDL 0.1)

<b>Env. Condition of Lab.</b>	Laboratory is maintaining Temperature 27± 2°C and Relative Humidity 65±5 % in all testing area as per IS 196:1966(C).
<b>Abbreviation</b>	MDL: Minimum Detection Limit, BDL: Below Detection Limit
<b>Norms** is Specified</b>	National Ambient Air Quality Standards (NAAQS), 2009.
<b>Remark</b>	Sample Comply with prescribed specification.
<b>Opinion &amp; Interpretation</b>	Not Practiced.
<b>Tested by</b>	Anjali Kumari
<b>Sample Drawn by</b>	Rahul Singh & Team
<b>Disclaimers</b>	<ul style="list-style-type: none"> <li>The results relate only to the item tested, calibrated or sampled.</li> <li>Additions to, deviations, or exclusions from the method is not practiced if not mentioned.</li> <li>Results from external providers are not used if not specified.</li> </ul>

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	(Dr. S. C. Jain) Director
On the basis of Quality Checked and Technical data verified by the Authorized signatory, the report is issued by the Director of the Organization.	

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Ph - 8407804253, 8407804251, Email - iem2012@rediffmail.com



TC-18135

## TEST REPORT

ULR No.:	T	C	1	6	1	3	5	2	6	0	0	0	0	0	6	4	0
Discipline: Chemical	Group: Atmospheric Pollution								Sub-Group: Ambient Air								
Report Issue Date: 02-04-2026	Test Report No.: RN-250303003A02																
Sample ID: 260331AP06002	Sample Description: Ambient Air																
Challan No./P.O. No.: 3000179897/302	Challan No./ P.No. Date: 03-03-2025																
Name and Contact Details of Customer: M/s Tata Steel Limited, Gamaharia Phase-V, Adityapur Industrial Area, Seraikela-Kharsawan, Jharkhand-832108 E-mail Id- kishor.pramanik1@tatasteel.com Kishor Pramanik (9905340012)																	
Information obtained from customer (if any): N/A																	
Type of Industry: Iron & Steel	Condition of Sample: Fit for Test																
Sampling Protocol: IS 5182	Sampling Date: 23-03-2026 to 24-03-2026																
Protocol: CPCB Guideline (NAAQMS/36/2012-13) & IS Method 5182 Series																	
Sampling Location: STATION-2 PLANT WEST SIDE BOUNDARY																	
Field Meteorological Information	A. Temp. (°C): 29				R.H. (%): 51				W.C.: Sunny				W.D.: NW to SE				
Location of performance of the Laboratory Activity: IEM Laboratory, Ranchi																	
Sample Receiving Date: 31-03-2026					Testing Started: 31-03-2026					Testing Ended: 02-04-2026							

### ---Test Results---

Sl.No.	Parameters	Test Method No.	Unit	Norms**	Results
1.	Particulate Matter (PM <sub>10</sub> )	IS 5182 Part 23:2006	µg/m <sup>3</sup>	100	77.6
2.	Particulate Matter (PM <sub>2.5</sub> )	IS 5182 Part 24:2019	µg/m <sup>3</sup>	60	37.2
3.	Sulphur Dioxide (SO <sub>2</sub> )	IS 5182 Part-02	µg/m <sup>3</sup>	80	24.1
4.	Nitrogen Dioxide (NO <sub>2</sub> )	IS 5182 Part-06	µg/m <sup>3</sup>	80	43.4
5.	Ammonia (NH <sub>3</sub> )	IS 5182 Part 25	µg/m <sup>3</sup>	400	40.6
6.	Ozone (O <sub>3</sub> )	IS 5182 Part 09	µg/m <sup>3</sup>	180	19.9
7.	Arsenic (as As)	USEPA I.O. 3.2	ng/m <sup>3</sup>	---	BDL (MDL-2)
8.	Lead (as Pb)	IS 5182 Part 22	µg/m <sup>3</sup>	1.0	0.3
9.	Nickel (Ni)	IS 5182 Part 26	ng/m <sup>3</sup>	---	BDL (MDL-4)

Env. Condition of Lab.	Laboratory is maintaining Temperature 27± 2°C and Relative Humidity 65±5 % in all testing area as per IS 196:1966(C).
Abbreviation	MDL: Minimum Detection Limit, BDL: Below Detection Limit
Norms** is Specified	National Ambient Air Quality Standards (NAAQS), 2009.
Remark	Sample Comply with prescribed specification.
Opinion & Interpretation	Not Practiced.
Tested by	Anjali Kumari
Sample Drawn by	Rahul Singh & Team
Disclaimers	<ul style="list-style-type: none"> <li>The results relate only to the item tested, calibrated or sampled.</li> <li>Additions to, deviations, or exclusions from the method is not practiced if not mentioned.</li> <li>Results from external providers are not used if not specified.</li> </ul>

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On the basis of Quality Checked and Technical data verified by the Authorized signatory, the report is issued by the Director of the Organization.

Reviewed by	Authorized Signatory
 (Akanksha Sourabh)	 (Dr. S. C. Jain)
Dy. Technical Manager	Director

---End of Report---

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Ph - 8407804253, 8407804251, Email - iem2012@rediffmail.com

## TEST REPORT

<b>Discipline:</b> Chemical	<b>Group:</b> Atmospheric Pollution	<b>Sub-Group:</b> Ambient Air
<b>Report Issue Date:</b> 02-04-2026	<b>Test Report No.:</b> RN-250303003A02	
<b>Sample ID:</b> 260331AP06002	<b>Sample Description:</b> Ambient Air	
<b>Challan No./P.O. No.:</b> 3000179897/J02	<b>Challan No./ P.No. Date:</b> 03-03-2025	
<b>Name and Contact Details of Customer:</b> M/s Tata Steel Limited, Gamaharia Phase-V, Adityapur Industrial Area, Seraikela-Kharsawan, Jharkhand-832108 E-mail Id- kishor.pramanik1@tatasteel.com Kishor Pramanik (9905340012)		
<b>Information obtained from customer (if any):</b> N/A		
<b>Type of Industry:</b> Iron & Steel	<b>Condition of Sample:</b> Fit for Test	
<b>Sampling Protocol:</b> IS 5182	<b>Sampling Date:</b> 23-03-2026 to 24-03-2026	
<b>Protocol:</b> CPCB Guideline (NAAQMS/36/2012-13) & IS Method 5182 Series		
<b>Sampling Location:</b> STATION-2 PLANT WEST SIDE BOUNDARY		
<b>Field Meteorological Information</b>	<b>A. Temp. (°C):</b> 29	<b>R.H. (%):</b> 51
	<b>W.C.:</b> Sunny	<b>W.D.:</b> NW to SE
<b>Location of performance of the Laboratory Activity:</b> IEM Laboratory, Ranchi		
<b>Sample Receiving Date:</b> 31-03-2026	<b>Testing Started:</b> 31-03-2026	<b>Testing Ended:</b> 02-04-2026

### ----Test Results----

Sl. No.	Parameters	Test Method	Unit	Limits	Result
10.	Benzene (C <sub>6</sub> H <sub>6</sub> )	IS 5182 Part 11: 2006	µg/m <sup>3</sup>	--	BDL (MDL- 0.5)
11.	Benzo (a) Pyrene (Bap) Particulate Phase Only	IS 5182 Part 12: 2004	ng/m <sup>3</sup>	--	BDL (MDL0.01)
12.	Carbon Monoxide	IEM/SOP/Air-01:2022	mg/m <sup>3</sup>	--	BDL (MDL 0.1)

<b>Env. Condition of Lab.</b>	Laboratory is maintaining Temperature 27± 2°C and Relative Humidity 65±5 % in all testing area as per IS 196:1966(C).
<b>Abbreviation</b>	MDL: Minimum Detection Limit, BDL: Below Detection Limit
<b>Norms** is Specified</b>	National Ambient Air Quality Standards (NAAQS), 2009.
<b>Remark</b>	Sample Comply with prescribed specification.
<b>Opinion &amp; Interpretation</b>	Not Practiced.
<b>Tested by</b>	Anjali Kumari
<b>Sample Drawn by</b>	Rahul Singh & Team
<b>Disclaimers:</b>	<ul style="list-style-type: none"><li>The results relate only to the item tested, calibrated or sampled.</li><li>Additions to, deviations, or exclusions from the method is not practiced if not mentioned.</li><li>Results from external providers are not used if not specified.</li></ul>

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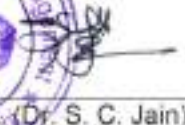
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On the basis of Quality Checked and Technical data verified by the Authorized signatory, the report is issued by the Director of the Organization.

Reviewed by

Authorized Signatory

  
(Akanksha Sourabh)

  
(Dr. S. C. Jain)

Dy. Technical Manager

Director

---End of Report---

# INSTITUTE FOR ENVIRONMENTAL MANAGEMENT

Corporate office - A-8, Modi Heights, Opp.-All India Radio Station, Ratu Road, Ranchi, Jharkhand - 834001  
Laboratory Site - H.No. - A-13, Saket Vihar, Near Sohrai Bhawan, Harmu Housing Colony,

Ranchi-834002, Jharkhand, India

Ph - 8407804253, 8407804251, Email - iem2012@rediffmail.com



## TEST REPORT

ULR No.:	T	C	1	6	1	3	5	2	6	0	0	0	0	0	6	4	1
Discipline: Chemical	Group: Atmospheric Pollution								Sub-Group: Ambient Air								
Report Issue Date: 02-04-2026	Test Report No.: RN-250303003A03								Sample Description: Ambient Air								
Sample ID: 260331AP09001	Challan No./ P.No. Date: 03-03-2025								Name and Contact Details of Customer: M/s Tata Steel Limited, Gamaharia Phase-V, Adityapur Industrial Area, Seraikela-Kharsawan, Jharkhand-832108 E-mail Id- kishor.pramanik1@tatasteel.com Kishor Pramanik (9905340012)								
Information obtained from customer (if any): N/A																	
Type of Industry: Iron & Steel									Condition of Sample: Fit for Test								
Sampling Protocol: IS 5182									Sampling Date: 24-03-2026 to 25-03-2026								
Protocol: CPCB Guideline (NAAQMS/36/2012-13) & IS Method 5182 Series																	
Sampling Location: STATION-3 PLANT EAST SIDE BOUNDARY																	
Field Meteorological Information			A. Temp. (°C): 30			R.H. (%): 50			W.C.: Sunny			W.D.: SW to NE					
Location of performance of the Laboratory Activity: IEM Laboratory, Ranchi																	
Sample Receiving Date: 31-03-2026						Testing Started: 31-03-2026						Testing Ended: 02-04-2026					

### ----Test Results----

Sl.No.	Parameters	Test Method No.	Unit	Norms**	Results
1.	Particulate Matter (PM <sub>10</sub> )	IS 5182 Part 23:2006	µg/m <sup>3</sup>	100	69.9
2.	Particulate Matter (PM <sub>2.5</sub> )	IS 5182 Part 24:2019	µg/m <sup>3</sup>	60	33.6
3.	Sulphur Dioxide (SO <sub>2</sub> )	IS 5182 Part-02	µg/m <sup>3</sup>	80	22.6
4.	Nitrogen Dioxide (NO <sub>2</sub> )	IS 5182 Part-06	µg/m <sup>3</sup>	80	40.7
5.	Ammonia (NH <sub>3</sub> )	IS 5182 Part 25	µg/m <sup>3</sup>	400	33.2
6.	Ozone (O <sub>3</sub> )	IS 5182 Part 09	µg/m <sup>3</sup>	180	21.3
7.	Arsenic (as As)	USEPA I.O. 3.2	ng/m <sup>3</sup>	----	BDL (MDL-2)
8.	Lead (as Pb)	IS 5182 Part 22	µg/m <sup>3</sup>	1.0	0.2
9.	Nickel (Ni)	IS 5182 Part 26	ng/m <sup>3</sup>	----	BDL (MDL-4)

Env. Condition of Lab.	Laboratory is maintaining Temperature 27± 2°C and Relative Humidity 65±5 % in all testing area as per IS 196:1966(C).
Abbreviation	MDL: Minimum Detection Limit, BDL: Below Detection Limit
Norms** is Specified	National Ambient Air Quality Standards (NAAQS), 2009.
Remark	Sample Comply with prescribed specification.
Opinion & Interpretation	Not Practiced.
Tested by	Anjali Kumari
Sample Drawn by	Rahul Singh & Team
Disclaimers	<ul style="list-style-type: none"> <li>The results relate only to the item tested, calibrated or sampled.</li> <li>Additions to, deviations, or exclusions from the method is not practiced if not mentioned.</li> <li>Results from external providers are not used if not specified.</li> </ul>

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On the basis of Quality Checked and Technical data verified by the Authorized signatory, the report is issued by the Director of the Organization.

Reviewed by	Authorized Signatory
 (Akanksha Sourabh)	 (Dr. S. C. Jain)
Dy. Technical Manager	Director

----End of Report----

# INSTITUTE FOR ENVIRONMENTAL MANAGEMENT

Corporate office - A-8, Modi Heights, Opp.-All India Radio Station, Ratu Road, Ranchi, Jharkhand - 834001

Laboratory Site - H.No. - A-13, Saket Vihar, Near Sohrai Bhawan, Harmu Housing Colony,

Ranchi-834002, Jharkhand, India

Ph - 8407804253, 8407804251, Email - iem2012@rediffmail.com

## TEST REPORT

<b>Discipline:</b> Chemical		<b>Group:</b> Atmospheric Pollution		<b>Sub-Group:</b> Ambient Air	
<b>Report Issue Date:</b> 02-04-2026			<b>Test Report No.:</b> RN-250303003A03		
<b>Sample ID:</b> 260331AP09001			<b>Sample Description:</b> Ambient Air		
<b>Challan No./P.O. No.:</b> 3000179897/J02			<b>Challan No./ P.No. Date:</b> 03-03-2025		
<b>Name and Contact Details of Customer:</b> M/s Tata Steel Limited, Gamaharia Phase-V, Adityapur Industrial Area, Seraikela-Kharsawan, Jharkhand-832108 E-mail Id- kishor.pramanik1@tatasteel.com Kishor Pramanik (9905340012)					
<b>Information obtained from customer (if any):</b> N/A					
<b>Type of Industry:</b> Iron & Steel			<b>Condition of Sample:</b> Fit for Test		
<b>Sampling Protocol:</b> IS 5182			<b>Sampling Date:</b> 24-03-2026 to 25-03-2026		
<b>Protocol:</b> CPCB Guideline (NAAQMS/36/2012-13) & IS Method 5182 Series					
<b>Sampling Location:</b> STATION-3 PLANT EAST SIDE BOUNDARY					
<b>Field Meteorological Information</b>		<b>A. Temp. (°C):</b> 30	<b>R.H. (%):</b> 50	<b>W.C.:</b> Sunny	<b>W.D.:</b> SW to NE
<b>Location of performance of the Laboratory Activity:</b> IEM Laboratory, Ranchi					
<b>Sample Receiving Date:</b> 31-03-2026		<b>Testing Started:</b> 31-03-2026		<b>Testing Ended:</b> 02-04-2026	

### ----Test Results----

Sl. No.	Parameters	Test Method	Unit	Limits	Result
10.	Benzene (C <sub>6</sub> H <sub>6</sub> )	IS 5182 Part 11: 2006	µg/m <sup>3</sup>	--	BDL (MDL- 0.5)
11.	Benzo (a) Pyrene (Bap) Particulate Phase Only	IS 5182 Part 12: 2004	ng/m <sup>3</sup>	--	BDL (MDL0.01)
12.	Carbon Monoxide	IEM/SOP/Air-01:2022	mg/m <sup>3</sup>	--	BDL (MDL 0.1)

<b>Env. Condition of Lab.</b>	Laboratory is maintaining Temperature 27± 2°C and Relative Humidity 65±5 % in all testing area as per IS 196:1966(C).
<b>Abbreviation</b>	MDL: Minimum Detection Limit, BDL: Below Detection Limit
<b>Norms** is Specified</b>	National Ambient Air Quality Standards (NAAQS), 2009.
<b>Remark</b>	Sample Comply with prescribed specification.
<b>Opinion &amp; Interpretation</b>	Not Practiced.
<b>Tested by</b>	Anjali Kumari
<b>Sample Drawn by</b>	Rahul Singh & Team
<b>Disclaimers</b>	<ul style="list-style-type: none"> <li>The results relate only to the item tested, calibrated or sampled.</li> <li>Additions to, deviations, or exclusions from the method is not practiced if not mentioned.</li> <li>Results from external providers are not used if not specified.</li> </ul>

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On the basis of Quality Checked and Technical data verified by the Authorized signatory, the report is issued by the Director of the Organization.

Reviewed by	Authorized Signatory
 (Akanksha Sourabh)	 Dr. S. C. Jain
Dy. Technical Manager	Director

---End of Report---

# INSTITUTE FOR ENVIRONMENTAL MANAGEMENT

Corporate office - A-8, Modi Heights, Opp.-All India Radio Station, Ratu Road, Ranchi, Jharkhand - 834001

Laboratory Site - H.No. - A-13, Saket Vihar, Near Sohrai Bhawan, Harmu Housing Colony,

Ranchi-834002, Jharkhand, India

Ph - 8407804253, 8407804251, Email - iem2012@rediffmail.com



TC-16135

## TEST REPORT

ULR No.:	T	C	1	6	1	3	5	2	6	0	0	0	0	0	6	4	2
Discipline: Chemical	Group: Atmospheric Pollution							Sub-Group: Ambient Air									
Report Issue Date: 02-04-2026	Test Report No.: RN-250303003A04																
Sample ID: 260331AP09002	Sample Description: Ambient Air																
Challan No./P.O. No.: 3000179897/J02	Challan No./ P.No. Date: 03-03-2025																
Name and Contact Details of Customer: M/s Tata Steel Limited, Gamaharia Phase-V, Adityapur Industrial Area, Seraikela-Kharsawan, Jharkhand-832108 E-mail Id- kishor.pramanik1@tatasteel.com Kishor Pramanik (9905340012)																	
Information obtained from customer (if any): N/A																	
Type of Industry: Iron & Steel									Condition of Sample: Fit for Test								
Sampling Protocol: I.S 5182									Sampling Date: 24-03-2026 to 25-03-2026								
Protocol: CPCB Guideline (NAAQMS/36/2012-13) & IS Method 5182 Series																	
Sampling Location: STATION-4 PLANT SOUTH SIDE BOUNDARY																	
Field Meteorological Information			A. Temp. (°C): 30			R.H. (%): 50			W.C.: Sunny			W.D.: SW to NE					
Location of performance of the Laboratory Activity: IEM Laboratory, Ranchi																	
Sample Receiving Date: 31-03-2026						Testing Started: 31-03-2026						Testing Ended: 02-04-2026					

### ---Test Results---

Sl.No.	Parameters	Test Method No.	Unit	Norms**	Results
1.	Particulate Matter (PM <sub>10</sub> )	IS 5182 Part 23:2006	µg/m <sup>3</sup>	100	81.5
2.	Particulate Matter (PM <sub>2.5</sub> )	IS 5182 Part 24:2019	µg/m <sup>3</sup>	60	39.1
3.	Sulphur Dioxide (SO <sub>2</sub> )	IS 5182 Part-02	µg/m <sup>3</sup>	80	21.6
4.	Nitrogen Dioxide (NO <sub>2</sub> )	IS 5182 Part-06	µg/m <sup>3</sup>	80	38.9
5.	Ammonia (NH <sub>3</sub> )	IS 5182 Part 25	µg/m <sup>3</sup>	400	31.7
6.	Ozone (O <sub>3</sub> )	IS 5182 Part 09	µg/m <sup>3</sup>	180	22.7
7.	Arsenic (as As)	USEPA I.O. 3.2	ng/m <sup>3</sup>	----	BDL (MDL-2)
8.	Lead (as Pb)	IS 5182 Part 22	µg/m <sup>3</sup>	1.0	0.3
9.	Nickel (Ni)	IS 5182 Part 26	ng/m <sup>3</sup>	----	BDL (MDL-4)

Env. Condition of Lab.	Laboratory is maintaining Temperature 27± 2°C and Relative Humidity 65±5 % in all testing area as per IS 196:1966(C).
Abbreviation	MDL: Minimum Detection Limit, BDL: Below Detection Limit
Norms** is Specified	National Ambient Air Quality Standards (NAAQS), 2009.
Remark	Sample Comply with prescribed specification.
Opinion & Interpretation	Not Practiced.
Tested by	Anjali Kumari
Sample Drawn by	Rahul Singh & Team
Disclaimers	<ul style="list-style-type: none"> <li>The results relate only to the item tested, calibrated or sampled.</li> <li>Additions to, deviations, or exclusions from the method is not practiced if not mentioned.</li> <li>Results from external providers are not used if not specified.</li> </ul>

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On the basis of Quality Checked and Technical data verified by the Authorized signatory, the report is issued by the Director of the Organization.

Reviewed by \_\_\_\_\_ Authorized Signatory \_\_\_\_\_

(Akanksha Sourabh)
(Dr. S. C. Jain)

Dy. Technical Manager \_\_\_\_\_ Director \_\_\_\_\_

---End of Report---

# INSTITUTE FOR ENVIRONMENTAL MANAGEMENT

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Laboratory Site - H.No. - A-13, Saket Vihar, Near Sohrai Bhawan, Harmu Housing Colony,

Ranchi-834002, Jharkhand, India

Ph - 8407804253, 8407804251, Email - iem2012@rediffmail.com

## TEST REPORT

<b>Discipline:</b> Chemical	<b>Group:</b> Atmospheric Pollution	<b>Sub-Group:</b> Ambient Air
<b>Report Issue Date:</b> 02-04-2026	<b>Test Report No.:</b> RN-250303003A04	
<b>Sample ID:</b> 260331AP00002	<b>Sample Description:</b> Ambient Air	
<b>Challan No./P.O. No.:</b> 3000179897/102	<b>Challan No./ P.No. Date:</b> 03-03-2025	
<b>Name and Contact Details of Customer:</b> M/s Tata Steel Limited, Gamaharia Phase-V, Adityapur Industrial Area, Seraikela-Kharsawan, Jharkhand-832108 E-mail Id- kishor.pramanik1@tatasteel.com Kishor Pramanik (9905340012)		
<b>Information obtained from customer (if any):</b> N/A		
<b>Type of Industry:</b> Iron & Steel	<b>Condition of Sample:</b> Fit for Test	
<b>Sampling Protocol:</b> IS 5182	<b>Sampling Date:</b> 24-03-2026 to 25-03-2026	
<b>Protocol:</b> CPCB Guideline (NAAQMS/36/2012-13) & IS Method 5182 Series		
<b>Sampling Location:</b> STATION-4 PLANT SOUTH SIDE BOUNDARY		
<b>Field Meteorological Information</b>	<b>A. Temp. (°C):</b> 30	<b>R.H. (%):</b> 50
	<b>W.C.:</b> Sunny	<b>W.D.:</b> SW to NE
<b>Location of performance of the Laboratory Activity:</b> IEM Laboratory, Ranchi		
<b>Sample Receiving Date:</b> 31-03-2026	<b>Testing Started:</b> 31-03-2026	<b>Testing Ended:</b> 02-04-2026

### ----Test Results----

Sl. No.	Parameters	Test Method	Unit	Limits	Result
10.	Benzene (C <sub>6</sub> H <sub>6</sub> )	IS 5182 Part 11: 2006	µg/m <sup>3</sup>	--	BDL (MDL- 0.5)
11.	Benzo (a) Pyrene (Bap) Particulate Phase Only	IS 5182 Part 12: 2004	ng/m <sup>3</sup>	--	BDL (MDL0.01)
12.	Carbon Monoxide	IEM/SOP/Air-01:2022	mg/m <sup>3</sup>	--	BDL (MDL 0.1)

<b>Env. Condition of Lab.</b>	Laboratory is maintaining Temperature 27± 2°C and Relative Humidity 65±5 % in all testing area as per IS 196:1966(C).
<b>Abbreviation</b>	MDL: Minimum Detection Limit, BDL: Below Detection Limit
<b>Norms** is Specified</b>	National Ambient Air Quality Standards (NAAQS), 2009.
<b>Remark</b>	Sample Comply with prescribed specification.
<b>Opinion &amp; Interpretation</b>	Not Practiced.
<b>Tested by</b>	Anjali Kumari
<b>Sample Drawn by</b>	Rahul Singh & Team
<b>Disclaimers</b>	<ul style="list-style-type: none"><li>The results relate only to the item tested, calibrated or sampled.</li><li>Additions to, deviations, or exclusions from the method is not practiced if not mentioned.</li><li>Results from external providers are not used if not specified.</li></ul>

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	(Akanksha Sourabh)	(Dr. S. C. Jain)
On the basis of Quality Checked and Technical data verified by the Authorized signatory, the report is issued by the Director of the Organization.	Dy. Technical Manager	Director

---End of Report---

**List of Major Air Pollution Control (APC) Systems installed.**

SN	Unit	Stack attached to	APC
1	CPP	DRI based WHRB-1	ESP
2		DRI based WHRB-2	ESP
3		DRI based WHRB-3	ESP
4		DRI based WHRB-4	ESP
5		DRI based WHRB-5	ESP
6		25 MW_CPP	ESP
7		30 MW_CPP	ESP
8		40 TPH_CPP	ESP
9	Sinter Plant	Sinter Process	ESP
10		Sinter Dedusting	ESP
11		Flux Crusher	Bag-Filter
12		Flux Screen	Bag-Filter
13		Sinter Product House	Bag-Filter
14	Pellet Plant	Pellet Process	ESP
15		PCI	BAG-FILTER
16		Dryer	BAG-FILTER
17		TG Building	BAG-FILTER
18	Coke Oven	Coke Route	Bag-Filter
19	SMS	SMS-1&2 _FES	Bag-Filter
20		LRF-1 & 3	Bag-Filter
21		SMS-3 _FES	Bag-Filter
22		RMHS-2 _SMS-2	Bag-Filter
23		RMHS-3 _SMS-3	Bag-Filter
25	MBF	MBF-1_Cast House	Bag-Filter
26		MBF-1_Stock House	Bag-Filter
27		MBF-1_Ground Hopper	Bag-Filter
28		MBF-2_Cast House	Bag-Filter
29		MBF-2_Stock House	Bag-Filter
30		MBF-2_PCI	Bag-Filter
31		MBF-2_RMHS	Bag-Filter
32		MBF-2_Dry Gcp	Bag-Filter
33		MBF-2_RMHS-1	Bag-Filter
34		DRI	DE-1_DRI-1 Product Circuit
35	DE-1A_DRI-1,2,3 Product Circuit		Bag-Filter
36	DE-2_DRI-1,2,3 PSB		Bag-Filter
37	DE-2A_DRI-1,2,3 PSB		Bag-Filter
38	DE-3_DRI-4 & 5 Product Circuit		Bag-Filter
39	DE-4 _DRI-4 & 5 PSB		Bag-Filter
40	DE-5 _DRI-3 Product Circuit		Bag-Filter
41	DE-6 _DRI-2 Product Circuit		Bag-Filter
39	DE-7_ Intermediate Bin DRI-1,2,3		Bag-Filter
40	DE-8 _DRI-1,2,3 PSB		Bag-Filter

## Photographs of APCE



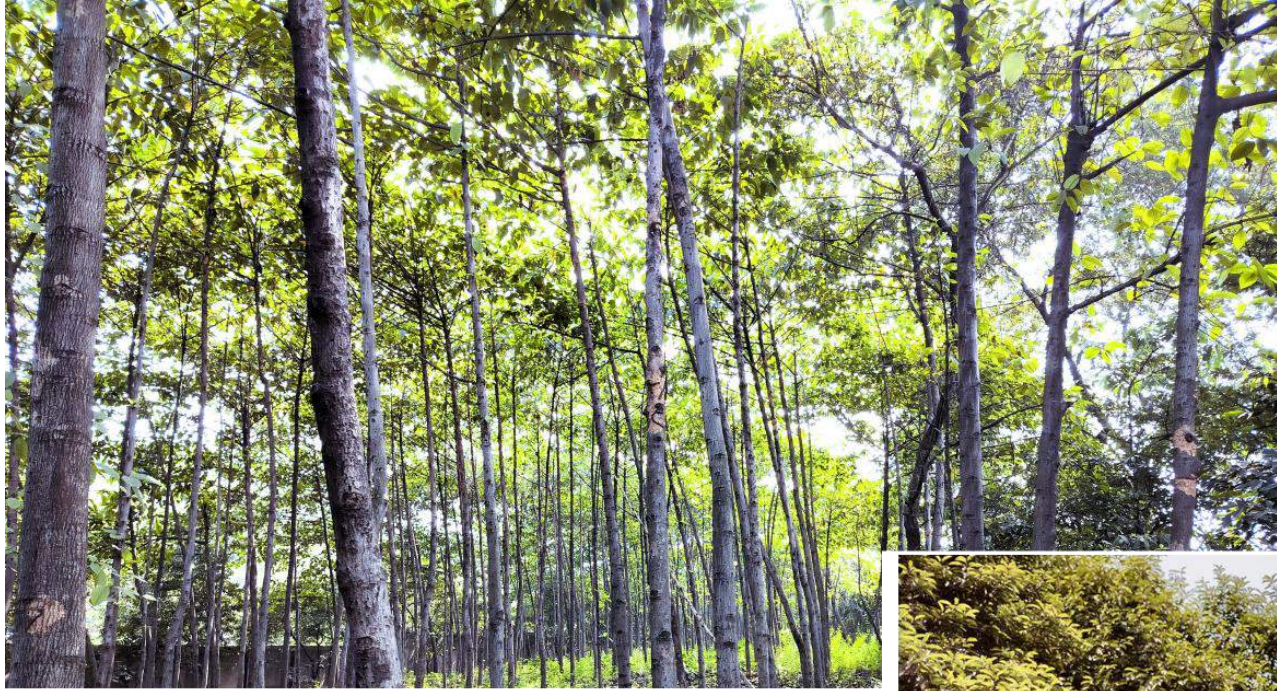
## Effluent Treatment Plant with 7200 m3/day





**Green Belt developed inside the Plant**







Reservoir

# INSTITUTE FOR ENVIRONMENTAL MANAGEMENT

Corporate office - A-8, Modi Heights, Opp.-All India Radio Station, Ratu Road, Ranchi, Jharkhand - 834001

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Ranchi-834002, Jharkhand, India

Ph - 8407804253, 8407804251, Email - iem2012@rediffmail.com

## TEST REPORT

<b>Discipline:</b> Chemical		<b>Group:</b> Atmospheric Pollution		<b>Sub-Group:</b> Work Environment & Indoor Air	
<b>Report Issue Date:</b> 02-04-2026			<b>Test Report No.:</b> RN-250303003FE01		
<b>Sample ID:</b> 260331AP12001			<b>Sample Description:</b> Work Zone Air		
<b>Challan No./P.O. No.:</b> 3000179897/102			<b>Challan No./ P.No. Date:</b> 03-03-2025		
<b>Name and Contact Details of Customer:</b> M/s Tata Steel Limited, (Formerly Tata Steel Long Products Limited), Gamaharia Phase-V, Adityapur Industrial Area, Seraikela-Kharsawan, Jharkhand-832108 E-mail Id- kishor.pramanik1@tatasteel.com Kishor Pramanik (9905340012)					
<b>Information obtained from customer (if any):</b> N/A					
<b>Type of Industry:</b> Iron & Steel			<b>Condition of Sample:</b> Fit for Test		
<b>Sampling Protocol:</b> IS Method 5182			<b>Sampling Date:</b> 25-03-2026		
<b>Protocol:</b> CPCB Guideline (NAAQMS/36/2012-13) & IS Method 5182 Series					
<b>Sampling Location:</b> COKE OVEN NEAR DISPATCH AREA					
<b>Field Meteorological Information</b>		<b>A. Temp. (°C):</b> 28	<b>R.H. (%):</b> 53	<b>W.C.:</b> Sunny	<b>W.D.:</b> North to South
<b>Location of performance of the Laboratory Activity:</b> IEM Laboratory, Ranchi					
<b>Sample Receiving Date:</b> 31-03-2026		<b>Testing Started:</b> 31-03-2026		<b>Testing Ended:</b> 02-04-2026	

### ---Test Results---

Sl. No.	Parameters	Test Method	Unit	Norms**	Result
1.	Suspended Particulate Matter (SPM)	IS 5182 Part 04	µg/m <sup>3</sup>	---	1773.2
2.	Sulphure Dioxide (SO <sub>2</sub> )	IS 5182 Part-02: 2001 RA 2017	µg/m <sup>3</sup>	---	35.5
3.	Nitrogen Dioxide (NO <sub>2</sub> )	IS 5182 Part-06: 2006 RA 2017	µg/m <sup>3</sup>	---	63.9
4.	Carbon Monoxide (CO)	IEM/SOP/2022/01	mg/m <sup>3</sup>	---	BDL(MDL-1.8)

<b>Env. Condition of Lab.</b>	Laboratory is maintaining Temperature 27± 2°C and Relative Humidity 65±5 % in all testing area as per IS 196:1966(C).
<b>Abbreviation</b>	MDL: Minimum Detection Limit, BDL: Below Detection Limit
<b>Norms** is Specified</b>	As per the Environmental (Protection) Rule - 1986.
<b>Remark</b>	Sample Comply with prescribed specification.
<b>Opinion &amp; Interpretation</b>	Not Practiced.
<b>Tested by</b>	Anjali Kumari
<b>Sample Drawn by</b>	Rahul Singh & Team
<b>Disclaimers</b>	<ul style="list-style-type: none"> <li>The results relate only to the item tested, calibrated or sampled.</li> <li>Additions to, deviations, or exclusions from the method is not practiced if not mentioned.</li> <li>Results from external providers are not used if not specified.</li> </ul>

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On the basis of Quality Checked and Technical data verified by the Authorized signatory, the report is issued by the Director of the Organization.

Reviewed by \_\_\_\_\_ Authorized Signatory \_\_\_\_\_

(Akanksha Sourabh) (Dr. S. C. Jain)

Dy. Technical Manager

Director

---End of Report---

# INSTITUTE FOR ENVIRONMENTAL MANAGEMENT

Corporate office - A-8, Modi Heights, Opp.-All India Radio Station, Ratu Road, Ranchi, Jharkhand - 834001

Laboratory Site - H.No. – A-13, Saket Vihar, Near Sohrai Bhawan, Harmu Housing Colony,

Ranchi-834002, Jharkhand, India

Ph - 8407804253, 8407804251, Email - iem2012@rediffmail.com

## TEST REPORT

<b>Discipline:</b> Chemical		<b>Group:</b> Atmospheric Pollution		<b>Sub-Group:</b> Work Environment & Indoor Air	
<b>Report Issue Date:</b> 02-04-2026			<b>Test Report No.:</b> RN-250303003F102		
<b>Sample ID:</b> 260331AP12002			<b>Sample Description:</b> Work Zone Air		
<b>Challan No./P.O. No.:</b> 3000179897/102			<b>Challan No./ P.No. Date:</b> 03-03-2025		
<b>Name and Contact Details of Customer:</b> M/s Tata Steel Limited, (Formerly Tata Steel Long Products Limited), Gamaharia Phase-V, Adityapur Industrial Area, Seraikela-Kharsawan, Jharkhand-832108 E-mail Id- kishor.pramanik1@tatasteel.com Kishor Pramanik (9905340012)					
<b>Information obtained from customer (if any):</b> N/A					
<b>Type of Industry:</b> Iron & Steel			<b>Condition of Sample:</b> Fit for Test		
<b>Sampling Protocol:</b> IS Method 5182			<b>Sampling Date:</b> 25-03-2026		
<b>Protocol:</b> CPCB Guideline (NAAQMS/36/2012-13) & IS Method 5182 Series					
<b>Sampling Location:</b> COKE OVEN NEAR OFFICE					
<b>Field Meteorological Information</b>		<b>A. Temp. (°C):</b> 28	<b>R.H. (%):</b> 53	<b>W.C.:</b> Sunny	<b>W.D.:</b> North to South
<b>Location of performance of the Laboratory Activity:</b> IEM Laboratory, Ranchi					
<b>Sample Receiving Date:</b> 31-03-2026		<b>Testing Started:</b> 31-03-2026		<b>Testing Ended:</b> 02-04-2026	

### ---Test Results---

Sl. No.	Parameters	Test Method	Unit	Norms**	Result
1.	Suspended Particulate Matter (SPM)	IS 5182 Part 04	µg/m <sup>3</sup>	---	1573.1
2.	Sulphure Dioxide (SO <sub>2</sub> )	IS 5182 Part-02: 2001 RA 2017	µg/m <sup>3</sup>	---	37.7
3.	Nitrogen Dioxide (NO <sub>2</sub> )	IS 5182 Part-06: 2006 RA 2017	µg/m <sup>3</sup>	---	67.9
4.	Carbon Monoxide (CO)	IEM/SOP/2022/01	mg/m <sup>3</sup>	---	BDL(MDL-0.1)

<b>Env. Condition of Lab.</b>	Laboratory is maintaining Temperature 27± 2°C and Relative Humidity 65±5 % in all testing area as per IS 196-1966(C).
<b>Abbreviation</b>	MDL: Minimum Detection Limit, BDL: Below Detection Limit
<b>Norms** is Specified</b>	As per the Environmental (Protection) Rule – 1986.
<b>Remark</b>	Sample Comply with prescribed specification.
<b>Opinion &amp; Interpretation</b>	Not Practiced.
<b>Tested by</b>	Anjali Kumari
<b>Sample Drawn by</b>	Rahul Singh & Team
<b>Disclaimers</b>	<ul style="list-style-type: none"> <li>The results relate only to the item tested, calibrated or sampled.</li> <li>Additions to, deviations, or exclusions from the method is not practiced if not mentioned.</li> <li>Results from external providers are not used if not specified.</li> </ul>

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On the basis of Quality Checked and Technical data verified by the Authorized signatory, the report is issued by the Director of the Organization.

Reviewed by \_\_\_\_\_ Authorized Signatory




(Akanksha Sourabh) \* (Dr. S. C. Jain)

Dy. Technical Manager

Director

---End of Report---

# INSTITUTE FOR ENVIRONMENTAL MANAGEMENT

Corporate office - A-8, Modi Heights, Opp.-All India Radio Station, Ratu Road, Ranchi, Jharkhand - 834001

Laboratory Site - H.No. - A-13, Saket Vihar, Near Sohrai Bhawan, Harmu Housing Colony,

Ranchi-834002, Jharkhand, India

Ph - 8407804253, 8407804251, Email - iem2012@rediffmail.com

## TEST REPORT

<b>Discipline:</b> Chemical		<b>Group:</b> Atmospheric Pollution		<b>Sub-Group:</b> Work Environment & Indoor Air	
<b>Report Issue Date:</b> 02-04-2026			<b>Test Report No.:</b> RN-250303003FE03		
<b>Sample ID:</b> 260331/AP15001260331/AP15001			<b>Sample Description:</b> Work Zone Air		
<b>Challan No./P.O. No.:</b> 3000179897/302			<b>Challan No./ P.No. Date:</b> 03-03-2025		
<b>Name and Contact Details of Customer:</b> M/s Tata Steel Limited, (Formerly Tata Steel Long Products Limited), Gamaharia Phase-V, Adityapur Industrial Area, Seraikela-Kharsawan, Jharkhand-832108 E-mail Id- kishor.pramanik1@tatasteel.com Kishor Pramanik (9905340012)					
<b>Information obtained from customer (if any):</b> N/A					
<b>Type of Industry:</b> Iron & Steel			<b>Condition of Sample:</b> Fit for Test		
<b>Sampling Protocol:</b> IS Method 5182			<b>Sampling Date:</b> 27-03-2026		
<b>Protocol:</b> CPCB Guideline (NAAQMS/36/2012-13) & IS Method 5182 Series					
<b>Sampling Location:</b> Sinter Plant Near Linear Cooler Area					
<b>Field Meteorological Information</b>		<b>A. Temp. (°C):</b> 30	<b>R.H. (%):</b> 54	<b>W.C.:</b> Sunny	<b>W.D.:</b> SE to NW
<b>Location of performance of the Laboratory Activity:</b> IEM Laboratory, Ranchi					
<b>Sample Receiving Date:</b> 31-03-2026		<b>Testing Started:</b> 31-03-2026		<b>Testing Ended:</b> 02-04-2026	

### ---Test Results---

Sl. No.	Parameters	Test Method	Unit	Norms**	Result
1.	Suspended Particulate Matter (SPM)	IS 5182 Part 04	µg/m <sup>3</sup>	---	1696
2.	Sulphure Dioxide (SO <sub>2</sub> )	IS 5182 Part-02: 2001 RA 2017	µg/m <sup>3</sup>	---	36.2
3.	Nitrogen Dioxide (NO <sub>2</sub> )	IS 5182 Part-06: 2006 RA 2017	µg/m <sup>3</sup>	---	65.2
4.	Carbon Monoxide (CO)	IEM/SOP/2022/01	mg/m <sup>3</sup>	---	BDL(MDL-0.1)

<b>Env. Condition of Lab.</b>	Laboratory is maintaining Temperature 27± 2°C and Relative Humidity 65±5 % in all testing area as per IS 196:1966(C).
<b>Abbreviation</b>	MDL: Minimum Detection Limit, BDL: Below Detection Limit
<b>Norms** is Specified</b>	As per the Environmental (Protection) Rule - 1986.
<b>Remark</b>	Sample Comply with prescribed specification.
<b>Opinion &amp; Interpretation</b>	Not Practiced.
<b>Tested by</b>	Anjali Kumari
<b>Sample Drawn by</b>	Rahul Singh & Team
<b>Disclaimers</b>	<ul style="list-style-type: none"> <li>The results relate only to the item tested, calibrated or sampled.</li> <li>Additions to, deviations, or exclusions from the method is not practiced if not mentioned.</li> <li>Results from external providers are not used if not specified.</li> </ul>

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On the basis of Quality Checked and Technical data verified by the Authorized signatory, the report is issued by the Director of the Organization.

Reviewed by \_\_\_\_\_ Authorized Signatory

	
(Akanksha Sourabh)	(Dr. S. C. Jain)
Dy. Technical Manager	Director

---End of Report---

# INSTITUTE FOR ENVIRONMENTAL MANAGEMENT

Corporate office - A-8, Modi Heights, Opp.-All India Radio Station, Ratu Road, Ranchi, Jharkhand - 834001  
 Laboratory Site - H.No. - A-13, Saket Vihar, Near Sohrai Bhawan, Harmu Housing Colony,  
 Ranchi-834002, Jharkhand, India  
 Ph - 8407804253, 8407804251, Email - iem2012@rediffmail.com



## TEST REPORT

<b>Discipline:</b> Chemical		<b>Group:</b> Atmospheric Pollution		<b>Sub-Group:</b> Work Environment & Indoor Air	
<b>Report Issue Date:</b> 02-04-2026			<b>Test Report No.:</b> RN-250303003FE04		
<b>Sample ID:</b> 260331AP15002			<b>Sample Description:</b> Work Zone Air		
<b>Challan No./P.O. No.:</b> 3000179897/02			<b>Challan No./ P.No. Date:</b> 03-03-2025		
<b>Name and Contact Details of Customer:</b> M/s Tata Steel Limited, (Formerly Tata Steel Long Products Limited), Gamaharia Phase-V, Adityapur Industrial Area, Seraikela-Kharsawan, Jharkhand-832108 E-mail Id- kishor.pramanik1@tatasteel.com Kishor Pramanik (9905340012)					
<b>Information obtained from customer (if any):</b> N/A					
<b>Type of Industry:</b> Iron & Steel			<b>Condition of Sample:</b> Fit for Test		
<b>Sampling Protocol:</b> IS Method 5182			<b>Sampling Date:</b> 27-03-2026		
<b>Protocol:</b> CPCB Guideline (NAAQMS/36/2012-13) & IS Method 5182 Series					
<b>Sampling Location:</b> Sinter Plant Near Crusher Area					
<b>Field Meteorological Information</b>		<b>A. Temp. (°C):</b> 30	<b>R.H. (%):</b> 54	<b>W.C.:</b> Sunny	<b>W.D.:</b> SE to NW
<b>Location of performance of the Laboratory Activity:</b> IEM Laboratory, Ranchi					
<b>Sample Receiving Date:</b> 31-03-2026		<b>Testing Started:</b> 31-03-2026		<b>Testing Ended:</b> 02-04-2026	

---Test Results---

Sl. No.	Parameters	Test Method	Unit	Norms**	Result
1.	Suspended Particulate Matter (SPM)	IS 5182 Part 04	µg/m <sup>3</sup>	---	1893.9
2.	Sulphure Dioxide (SO <sub>2</sub> )	IS 5182 Part-02: 2001 RA 2017	µg/m <sup>3</sup>	---	42.2
3.	Nitrogen Dioxide (NO <sub>2</sub> )	IS 5182 Part-06: 2006 RA 2017	µg/m <sup>3</sup>	---	76.0
4.	Carbon Monoxide (CO)	IEM/SOP/2022/01	mg/m <sup>3</sup>	---	BDL(MDL-0.1)

<b>Env. Condition of Lab.</b>	Laboratory is maintaining Temperature 27± 2°C and Relative Humidity 65±5 % in all testing area as per IS 196:1966(C).
<b>Abbreviation</b>	MDL: Minimum Detection Limit. BDL: Below Detection Limit
<b>Norms** is Specified</b>	As per the Environmental (Protection) Rule - 1986.
<b>Remark</b>	Sample Comply with prescribed specification.
<b>Opinion &amp; Interpretation</b>	Not Practiced.
<b>Tested by</b>	Anjali Kumari
<b>Sample Drawn by</b>	Rahul Singh & Team
<b>Disclaimers</b>	<ul style="list-style-type: none"> <li>The results relate only to the item tested, calibrated or sampled.</li> <li>Additions to, deviations, or exclusions from the method is not practiced if not mentioned.</li> <li>Results from external providers are not used if not specified.</li> </ul>

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On the basis of Quality Checked and Technical data verified by the Authorized signatory, the report is issued by the Director of the Organization.

Reviewed by	Authorized Signatory
 (Akanksha Sourabh)	 (Dr. S. C. Jain)
Dy. Technical Manager	Director

---End of Report---

# INSTITUTE FOR ENVIRONMENTAL MANAGEMENT

Corporate office - A-8, Modi Heights, Opp.-All India Radio Station, Ratu Road, Ranchi, Jharkhand - 834001

Laboratory Site - H.No. - A-13, Saket Vihar, Near Sohrai Bhawan, Harmu Housing Colony,

Ranchi-834002, Jharkhand, India

Ph - 8407804253, 8407804251, Email - iem2012@rediffmail.com

## TEST REPORT

<b>Discipline:</b> Chemical		<b>Group:</b> Atmospheric Pollution		<b>Sub-Group:</b> Work Environment & Indoor Air	
<b>Report Issue Date:</b> 02-04-2026			<b>Test Report No.:</b> RN-250303003FE05		
<b>Sample ID:</b> 260331AP19001			<b>Sample Description:</b> Work Zone Air		
<b>Challan No./P.O. No.:</b> 3000179897/102			<b>Challan No./ P.No. Date:</b> 03-03-2025		
<b>Name and Contact Details of Customer:</b> M/s Tata Steel Limited, (Formerly Tata Steel Long Products Limited), Gamaharia Phase-V, Adityapur Industrial Area, Seraikela-Kharsawan, Jharkhand-832108 E-mail Id- kishor.pramanik1@tatasteel.com Kishor Pramanik (9905340012)					
<b>Information obtained from customer (if any):</b> N/A					
<b>Type of Industry:</b> Iron & Steel			<b>Condition of Sample:</b> Fit for Test		
<b>Sampling Protocol:</b> IS Method 5182			<b>Sampling Date:</b> 30-03-2026		
<b>Protocol:</b> CPCB Guideline (NAAQMS/36/2012-13) & IS Method 5182 Series					
<b>Sampling Location:</b> MBF-1 NEAR RMHS					
<b>Field Meteorological Information</b>		<b>A. Temp. (°C):</b> 29	<b>R.H. (%):</b> 52	<b>W.C.:</b> Sunny	<b>W.D.:</b> NW to SE
<b>Location of performance of the Laboratory Activity:</b> IEM Laboratory, Ranchi					
<b>Sample Receiving Date:</b> 31-03-2026		<b>Testing Started:</b> 31-03-2026		<b>Testing Ended:</b> 02-04-2026	

### ---Test Results---

Sl. No.	Parameters	Test Method	Unit	Norms**	Result
1.	Particulate Matter (PM <sub>10</sub> )	IS 5182 Part 23:2006 RA 2017	µg/m <sup>3</sup>	---	1665.6
2.	Sulphure Dioxide (SO <sub>2</sub> )	IS 5182 Part-02: 2001 RA 2017	µg/m <sup>3</sup>	---	40.0
3.	Nitrogen Dioxide (NO <sub>2</sub> )	IS 5182 Part-06: 2006 RA 2017	µg/m <sup>3</sup>	---	72.0
4.	Lead (Pb)	IS 5182 Part-22	µg/m <sup>3</sup>	---	0.10
5.	Carbon Monoxide (CO)	IEM/SOP/2022/01	mg/m <sup>3</sup>	---	BDL (MDL- 0.1)

<b>Env. Condition of Lab.</b>	Laboratory is maintaining Temperature 27± 2°C and Relative Humidity 65±5 % in all testing area as per IS 196:1966(C).
<b>Abbreviation</b>	MDL: Minimum Detection Limit, BDL: Below Detection Limit
<b>Norms** is Specified</b>	As per the Environmental (Protection) Rule – 1986.
<b>Remark</b>	Sample Comply with prescribed specification.
<b>Opinion &amp; Interpretation</b>	Not Practiced.
<b>Tested by</b>	Anjali Kumari
<b>Sample Drawn by</b>	Rahul Singh & Team
<b>Disclaimers</b>	<ul style="list-style-type: none"> <li>The results relate only to the item tested, calibrated or sampled.</li> <li>Additions to, deviations, or exclusions from the method is not practiced if not mentioned.</li> <li>Results from external providers are not used if not specified.</li> </ul>

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	 (Dr. S. C. Jain) Director
On the basis of Quality Checked and Technical data verified by the Authorized signatory, the report is issued by the Director of the Organization.	
Dy. Technical Manager	Director

---End of Report---

# INSTITUTE FOR ENVIRONMENTAL MANAGEMENT

Corporate office - A-8, Modi Heights, Opp.-All India Radio Station, Ratu Road, Ranchi, Jharkhand - 834001

Laboratory Site - H.No. - A-13, Saket Vihar, Near Sohrai Bhawan, Harmu Housing Colony,

Ranchi-834002, Jharkhand, India

Ph - 8407804253, 8407804251, Email - lem2012@rediffmail.com



## TEST REPORT

<b>Discipline:</b> Chemical		<b>Group:</b> Atmospheric Pollution		<b>Sub-Group:</b> Work Environment & Indoor Air	
<b>Report Issue Date:</b> 02-04-2026			<b>Test Report No.:</b> RN-250303003FE06		
<b>Sample ID:</b> 260331AP19002			<b>Sample Description:</b> Work Zone Air		
<b>Challan No./P.O. No.:</b> 3000179897/J02			<b>Challan No./ P.No. Date:</b> 03-03-2025		
<b>Name and Contact Details of Customer:</b> M/s Tata Steel Limited, (Formerly Tata Steel Long Products Limited), Gamaharia Phase-V, Adityapur Industrial Area, Seraikela-Kharsawan, Jharkhand-832108 E-mail Id- kishor.pramanik1@tatasteel.com Kishor Pramanik (9905340012)					
<b>Information obtained from customer (if any):</b> N/A					
<b>Type of Industry:</b> Iron & Steel			<b>Condition of Sample:</b> Fit for Test		
<b>Sampling Protocol:</b> IS Method 5182			<b>Sampling Date:</b> 30-03-2026		
<b>Protocol:</b> CPCB Guideline (NAAQMS/36/2012-13) & IS Method 5182 Series					
<b>Sampling Location:</b> MBF-1 NEAR CAST HOUSE PLATFORM					
<b>Field Meteorological Information</b>		<b>A. Temp. (°C):</b> 29	<b>R.H. (%):</b> 52	<b>W.C.:</b> Sunny	<b>W.D.:</b> NW to SE
<b>Location of performance of the Laboratory Activity:</b> IEM Laboratory, Ranchi					
<b>Sample Receiving Date:</b> 31-03-2026		<b>Testing Started:</b> 31-03-2026		<b>Testing Ended:</b> 02-04-2026	

### ---Test Results---

Sl. No.	Parameters	Test Method	Unit	Norms**	Result
1.	Particulate Matter (PM <sub>10</sub> )	IS 5182 Part 23:2006 RA 2017	µg/m <sup>3</sup>	---	1148.9
2.	Sulphure Dioxide (SO <sub>2</sub> )	IS 5182 Part-02: 2001 RA 2017	µg/m <sup>3</sup>	---	35.9
3.	Nitrogen Dioxide (NO <sub>2</sub> )	IS 5182 Part-06: 2006 RA 2017	µg/m <sup>3</sup>	---	64.6
4.	Lead (Pb)	IS 5182 Part-22	µg/m <sup>3</sup>	---	0.10
5.	Carbon Monoxide (CO)	IEM/SOP/2022/01	mg/m <sup>3</sup>	---	BDL(MDL-0.1)

<b>Env. Condition of Lab.</b>	Laboratory is maintaining Temperature 27± 2°C and Relative Humidity 65±5 % in all testing area as per IS 196:1966(C).
<b>Abbreviation</b>	MDL: Minimum Detection Limit, BDL: Below Detection Limit
<b>Norms** is Specified</b>	As per the Environmental (Protection) Rufe - 1986.
<b>Remark</b>	Sample Comply with prescribed specification.
<b>Opinion &amp; Interpretation</b>	Not Practiced.
<b>Tested by</b>	Anjali Kumari
<b>Sample Drawn by</b>	Rahul Singh & Team
<b>Disclaimers</b>	<ul style="list-style-type: none"> <li>The results relate only to the item tested, calibrated or sampled.</li> <li>Additions to, deviations, or exclusions from the method is not practiced if not mentioned.</li> <li>Results from external providers are not used if not specified.</li> </ul>

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	 (Dr. S. C. Jain) Director
On the basis of Quality Checked and Technical data verified by the Authorized signatory, the report is issued by the Director of the Organization.	

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# INSTITUTE FOR ENVIRONMENTAL MANAGEMENT

Corporate office - A-8, Modi Heights, Opp.-All India Radio Station, Ratu Road, Ranchi, Jharkhand - 834001

Laboratory Site - H.No. - A-13, Saket Vihar, Near Sohrai Bhawan, Harmu Housing Colony,

Ranchi-834002, Jharkhand, India

Ph - 8407804253, 8407804251. Email - iem2012@rediffmail.com

## TEST REPORT

<b>Discipline:</b> Chemical		<b>Group:</b> Atmospheric Pollution		<b>Sub-Group:</b> Work Environment & Indoor Air	
<b>Report Issue Date:</b> 02-04-2026			<b>Test Report No.:</b> RN-250303003FE07		
<b>Sample ID:</b> 260331AP21001			<b>Sample Description:</b> Work Zone Air		
<b>Challan No./P.O. No.:</b> 3000179897/302			<b>Challan No./ P.No. Date:</b> 03-03-2025		
<b>Name and Contact Details of Customer:</b> M/s Tata Steel Limited, (Formerly Tata Steel Long Products Limited), Gamaharia Phase-V, Adityapur Industrial Area, Seraikela-Kharsawan, Jharkhand-832108 E-mail Id- kishor.pramanik1@tatasteel.com Kishor Pramanik (9905340012)					
<b>Information obtained from customer (if any):</b> N/A					
<b>Type of Industry:</b> Iron & Steel			<b>Condition of Sample:</b> Fit for Test		
<b>Sampling Protocol:</b> IS Method 5182			<b>Sampling Date:</b> 31-03-2026		
<b>Protocol:</b> CPCB Guideline (NAAQMS/36/2012-13) & IS Method 5182 Series					
<b>Sampling Location:</b> MBF-2 NEAR CAST HOUSE PLATFORM					
<b>Field Meteorological Information</b>		<b>A. Temp. (°C):</b> 28	<b>R.H. (%):</b> 54	<b>W.C.:</b> Sunny	<b>W.D.:</b> SE to NW
<b>Location of performance of the Laboratory Activity:</b> IEM Laboratory, Ranchi					
<b>Sample Receiving Date:</b> 31-03-2026		<b>Testing Started:</b> 31-03-2026		<b>Testing Ended:</b> 02-04-2026	

### ---Test Results---

Sl. No.	Parameters	Test Method	Unit	Norms**	Result
1.	Particulate Matter (PM <sub>10</sub> )	IS 5182 Part 23:2006 RA 2017	µg/m <sup>3</sup>	---	1137
2.	Sulphure Dioxide (SO <sub>2</sub> )	IS 5182 Part-02: 2001 RA 2017	µg/m <sup>3</sup>	---	36.0
3.	Nitrogen Dioxide (NO <sub>2</sub> )	IS 5182 Part-06: 2006 RA 2017	µg/m <sup>3</sup>	---	64.8
4.	Lead (Pb)	IS 5182 Part-22	µg/m <sup>3</sup>	---	0.10
5.	Carbon Monoxide (CO)	IEM/SOP/2022/01	mg/m <sup>3</sup>	---	BDL(MDL-0.1)

<b>Env. Condition of Lab.</b>	Laboratory is maintaining Temperature 27± 2°C and Relative Humidity 65±5 % in all testing area as per IS 196:1966(C).
<b>Abbreviation</b>	MDL: Minimum Detection Limit, BDL: Below Detection Limit
<b>Norms** is Specified</b>	As per the Environmental (Protection) Rule - 1986.
<b>Remark</b>	Sample Comply with prescribed specification.
<b>Opinion &amp; Interpretation</b>	Not Practiced.
<b>Tested by</b>	Anjali Kumari
<b>Sample Drawn by</b>	Rahul Singh & Team
<b>Disclaimers:</b>	<ul style="list-style-type: none"> <li>The results relate only to the item tested, calibrated or sampled.</li> <li>Additions to, deviations, or exclusions from the method is not practiced if not mentioned.</li> <li>Results from external providers are not used if not specified.</li> </ul>

#### Specific Contractual Notes :-

1. The laboratory accepts responsibility for content of this report.
2. This report shall not be reproduced except in full, without approval of the MD.
3. This report is intended for only guidance and not for legal purpose or for advertisement.
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5. Total liability of Institute for Environmental Management will be limited to invoiced amount only.
6. In case of feedback/ complaints, please send an email at [sn.eneco@gmail.com](mailto:sn.eneco@gmail.com)

On the basis of Quality Checked and Technical data verified by the Authorized signatory, the report is issued by the Director of the Organization.

Reviewed by \_\_\_\_\_ Authorized Signatory

  
 (Akanksha Sourabh)

  
 Dr. S. C. Jain  
 Director

---End of Report---



Form No. - TSJ/EMDLAB/F/090  
Effective Date: 10-01-2022



ULR NO. : TC83632600000002F

### TEST REPORT

**Report No** : TSJ/EMDLAB/WWWQMTR/2026/0002  
**Date of Report** : 06-01-2026  
**Customer Name** : Tata Steel Gamharia  
**Discipline of Monitoring & Testing** : 1.1.28. Water  
**Sub Discipline** : Ground Water/Surface Water  
**Sample Description** : Ground Water  
**Sampling Location** : BAGANPARA VILLAGE  
**Sample Collection Date** : 19-12-2025  
**Sample Collected By** : DEPARTMENT  
**Sampling Procedure** : Grab Sample  
**Sample Registration Date** : 19-12-2025  
**Sample Receipt Condition** : Plastic Bottle, 1 Litre  
**Sample Analysis Start Date** : 19-12-2025  
**Sample Analysis End Date** : 30-12-2025  
**Subcontract Test** : N/A  
**Registration Number** : TSJ/EMDLAB/WWWQM/25-26/09-611  
**Report Issued by** : J. Nagarjuna Reddy, Sr. Mgr. Env. Monitoring & Analysis  
**Environmental Conditions Maintained** : ¥ as per IS:196-1966

S.No.	Parameters	Method of Analysis#	Units	Norms*	Result
1	pH	APHA 24th Edition 4500 H+ B: 2023	-	6.5-8.5	6.97
2	Electrical Conductivity	APHA 24th Edition 2510 B: 2023	(µs/cm)	-	1942
3	Total Dissolved Solids	APHA 24th Edition 2540 C: 2023	mg/L	< 500	952
4	Nitrogen (Ammonia) as N	APHA 24th Edition 4500 NH3- B, D: 2023	mg/L	-	< 1.0
5	Turbidity	APHA 24th Edition 2130 B: 2023	NTU	-	2.13
6	Total Suspended Solids	APHA 24th Edition 2540 D: 2023	mg/L	-	< 10
7	Phenolic Compounds as Phenols	APHA 24th Edition 5530 B, D: 2023	mg/L	< 0.001	< 0.10
8	Chlorides as Cl-	APHA 24th Edition 4500 Cl- B: 2023	mg/L	< 250	330
9	Total Alkalinity as CaCO3	APHA 24th Edition 2320 B: 2023	mg/L	< 200	274
10	Nitrite Nitrogen (NO2-N)	APHA 24th Edition 4500 NO2- B: 2023	mg/L	-	< 0.02
11	Nitrite (NO2)	APHA 24th Edition 4500 NO2- B: 2023	mg/L	-	< 0.07
12	Phosphates as P	APHA 24th Edition 4500 P D: 2023	mg/L	-	< 0.07
13	Sulphates as SO4 2-	APHA 24th Edition 4500 SO4 2- D: 2023	mg/L	< 200	199
14	Sulphide (as H2S)	APHA 24th Edition 4500 S2- D: 2023	mg/L	< 0.05	< 0.10
15	Hexavalent Chromium as Cr+6	APHA 24th Edition 3500 Cr B: 2023	mg/L	< 0.05	< 0.05
16	Iron as Fe	APHA 24th Edition 3120 B: 2023	mg/L	< 0.3	0.08

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2ND FLOOR, FMD BUILDING, JAMSHEDPUR, EAST SINGHBHUM, JHARKHAND, INDIA



ULR NO. : TC83632600000002F

S.No.	Parameters	Method of Analysis#	Units	Norms*	Result
17	Zinc as Zn	APHA 24th Edition 3120 B: 2023	mg/L	< 5	0.01
18	Total Chromium	APHA 24th Edition 3120 B: 2023	mg/L	< 0.05	< 0.01
19	Manganese as Mn	APHA 24th Edition 3120 B: 2023	mg/L	-	0.01
20	Nickel as Ni	APHA 24th Edition 3120 B: 2023	mg/L	< 0.02	0.01
21	Lead as Pb	APHA 24th Edition 3120 B: 2023	mg/L	< 0.01	0.01
22	Cadmium as Cd	APHA 24th Edition 3120 B: 2023	mg/L	< 0.005	< 0.005
23	Copper as Cu	APHA 24th Edition 3120 B: 2023	mg/L	< 0.05	< 0.01
24	Aluminium as Al	APHA 24th Edition 3120 B: 2023	mg/L	< 0.03	< 0.01
25	Cyanide	APHA 24th Edition 4500 CN- C, F: 2023	mg/L	-	< 0.1

**Opinion and interpretation: Nil**

**Note:**

\*Norms applicable as per IS 2296:1982 Surface Water Quality Standards.

# Standard Methods for The Examination of Water and Wastewater, 24th Edition, 2023, American Public Health association, American Water Works Association, Water Environment Federation.

¥ Indian Standard for Atmospheric Conditions for testing.

. ULR - Unique Laboratory Report (ULR) No

. **Disclaimer: The test results relate only to the items tested.**

-: End of the report: -



Authorized Signatory  
Designation: Sr. Manager  
Name: Janga Nagarjuna Reddy

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ULR NO. : TC83632600000004F

### TEST REPORT

**Report No** : TSJ/EMDLAB/WWWQMTR/2026/0004  
**Date of Report** : 06-01-2026  
**Customer Name** : Tata Steel Gamharia  
**Discipline of Monitoring & Testing** : 1.1.28. Water  
**Sub Discipline** : Ground Water/Surface Water  
**Sample Description** : Ground Water  
**Sampling Location** : JHAR GOVINDPUR VILLAGE  
**Sample Collection Date** : 19-12-2025  
**Sample Collected By** : DEPARTMENT  
**Sampling Procedure** : Grab Sample  
**Sample Registration Date** : 19-12-2025  
**Sample Receipt Condition** : Plastic Bottle, 1 Litre  
**Sample Analysis Start Date** : 19-12-2025  
**Sample Analysis End Date** : 30-12-2025  
**Subcontract Test** : N/A  
**Registration Number** : TSJ/EMDLAB/WWWQM/25-26/09-613  
**Report Issued by** : J. Nagarjuna Reddy, Sr. Mgr. Env. Monitoring & Analysis  
**Environmental Conditions Maintained** : ¥ as per IS:196-1966

S.No.	Parameters	Method of Analysis#	Units	Norms*	Result
1	pH	APHA 24th Edition 4500 H+ B: 2023	-	6.5-8.5	6.91
2	Electrical Conductivity	APHA 24th Edition 2510 B: 2023	(µs/cm)	-	982
3	Total Dissolved Solids	APHA 24th Edition 2540 C: 2023	mg/L	< 500	481
4	Nitrogen (Ammonia) as N	APHA 24th Edition 4500 NH3- B, D: 2023	mg/L	-	< 1.0
5	Turbidity	APHA 24th Edition 2130 B: 2023	NTU	-	2.55
6	Total Suspended Solids	APHA 24th Edition 2540 D: 2023	mg/L	-	< 10
7	Phenolic Compounds as Phenols	APHA 24th Edition 5530 B, D: 2023	mg/L	< 0.001	< 0.10
8	Chlorides as Cl-	APHA 24th Edition 4500 Cl- B: 2023	mg/L	< 250	110
9	Total Alkalinity as CaCO3	APHA 24th Edition 2320 B: 2023	mg/L	< 200	207
10	Nitrite Nitrogen (NO2-N)	APHA 24th Edition 4500 NO2- B: 2023	mg/L	-	< 0.02
11	Nitrite (NO2)	APHA 24th Edition 4500 NO2- B: 2023	mg/L	-	< 0.07
12	Phosphates as P	APHA 24th Edition 4500 P D: 2023	mg/L	-	< 0.07
13	Sulphates as SO4 2-	APHA 24th Edition 4500 SO4 2- D: 2023	mg/L	< 200	140
14	Sulphide (as H2S)	APHA 24th Edition 4500 S2- D: 2023	mg/L	< 0.05	< 0.10
15	Hexavalent Chromium as Cr+6	APHA 24th Edition 3500 Cr B: 2023	mg/L	< 0.05	< 0.05
16	Iron as Fe	APHA 24th Edition 3120 B: 2023	mg/L	< 0.3	0.07

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ULR NO. : TC83632600000004F

S.No.	Parameters	Method of Analysis#	Units	Norms*	Result
17	Zinc as Zn	APHA 24th Edition 3120 B: 2023	mg/L	< 5	0.13
18	Total Chromium	APHA 24th Edition 3120 B: 2023	mg/L	< 0.05	< 0.01
19	Manganese as Mn	APHA 24th Edition 3120 B: 2023	mg/L	-	0.04
20	Nickel as Ni	APHA 24th Edition 3120 B: 2023	mg/L	< 0.02	< 0.01
21	Lead as Pb	APHA 24th Edition 3120 B: 2023	mg/L	< 0.01	0.03
22	Cadmium as Cd	APHA 24th Edition 3120 B: 2023	mg/L	< 0.005	< 0.005
23	Copper as Cu	APHA 24th Edition 3120 B: 2023	mg/L	< 0.05	< 0.01
24	Aluminium as Al	APHA 24th Edition 3120 B: 2023	mg/L	< 0.03	< 0.01
25	Cyanide	APHA 24th Edition 4500 CN- C, F: 2023	mg/L	-	< 0.1

**Opinion and interpretation: Nil**

**Note:**

\*Norms applicable as per IS 2296:1982 Surface Water Quality Standards.

# Standard Methods for The Examination of Water and Wastewater, 24th Edition, 2023, American Public Health association, American Water Works Association, Water Environment Federation.

¥ Indian Standard for Atmospheric Conditions for testing.

. ULR - Unique Laboratory Report (ULR) No

. **Disclaimer: The test results relate only to the items tested.**

—: End of the report: —



Authorized Signatory  
Designation: Sr. Manager  
Name: Janga Nagarjuna Reddy

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ULR NO. : TC83632600000003F

### TEST REPORT

**Report No** : TSJ/EMDLAB/WWWQMTR/2026/0003  
**Date of Report** : 06-01-2026  
**Customer Name** : Tata Steel Gamharia  
**Discipline of Monitoring & Testing** : 1.1.28. Water  
**Sub Discipline** : Ground Water/Surface Water  
**Sample Description** : Ground Water  
**Sampling Location** : JHARKULI VILLAGE  
**Sample Collection Date** : 19-12-2025  
**Sample Collected By** : DEPARTMENT  
**Sampling Procedure** : Grab Sample  
**Sample Registration Date** : 19-12-2025  
**Sample Receipt Condition** : Plastic Bottle, 1 Litre  
**Sample Analysis Start Date** : 19-12-2025  
**Sample Analysis End Date** : 30-12-2025  
**Subcontract Test** : N/A  
**Registration Number** : TSJ/EMDLAB/WWWQM/25-26/09-612  
**Report Issued by** : J. Nagarjuna Reddy, Sr. Mgr. Env. Monitoring & Analysis  
**Environmental Conditions Maintained** : ¥ as per IS:196-1966

S.No.	Parameters	Method of Analysis#	Units	Norms*	Result
1	pH	APHA 24th Edition 4500 H+ B: 2023	-	6.5-8.5	6.99
2	Electrical Conductivity	APHA 24th Edition 2510 B: 2023	(µs/cm)	-	329
3	Total Dissolved Solids	APHA 24th Edition 2540 C: 2023	mg/L	< 500	161
4	Nitrogen (Ammonia) as N	APHA 24th Edition 4500 NH3- B, D: 2023	mg/L	-	< 1.0
5	Turbidity	APHA 24th Edition 2130 B: 2023	NTU	-	6.45
6	Total Suspended Solids	APHA 24th Edition 2540 D: 2023	mg/L	-	< 10
7	Phenolic Compounds as Phenols	APHA 24th Edition 5530 B, D: 2023	mg/L	< 0.001	< 0.10
8	Chlorides as Cl-	APHA 24th Edition 4500 Cl- B: 2023	mg/L	< 250	21
9	Total Alkalinity as CaCO3	APHA 24th Edition 2320 B: 2023	mg/L	< 200	81
10	Nitrite Nitrogen (NO2-N)	APHA 24th Edition 4500 NO2- B: 2023	mg/L	-	< 0.02
11	Nitrite (NO2)	APHA 24th Edition 4500 NO2- B: 2023	mg/L	-	< 0.07
12	Phosphates as P	APHA 24th Edition 4500 P D: 2023	mg/L	-	< 0.07
13	Sulphates as SO4 2-	APHA 24th Edition 4500 SO4 2- D: 2023	mg/L	< 200	48
14	Sulphide (as H2S)	APHA 24th Edition 4500 S2- D: 2023	mg/L	< 0.05	< 0.10
15	Hexavalent Chromium as Cr+6	APHA 24th Edition 3500 Cr B: 2023	mg/L	< 0.05	< 0.05
16	Iron as Fe	APHA 24th Edition 3120 B: 2023	mg/L	< 0.3	0.22

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ULR NO. : TC83632600000003F

S.No.	Parameters	Method of Analysis#	Units	Norms*	Result
17	Zinc as Zn	APHA 24th Edition 3120 B: 2023	mg/L	< 5	0.01
18	Total Chromium	APHA 24th Edition 3120 B: 2023	mg/L	< 0.05	< 0.01
19	Manganese as Mn	APHA 24th Edition 3120 B: 2023	mg/L	-	0.05
20	Nickel as Ni	APHA 24th Edition 3120 B: 2023	mg/L	< 0.02	< 0.01
21	Lead as Pb	APHA 24th Edition 3120 B: 2023	mg/L	< 0.01	0.03
22	Cadmium as Cd	APHA 24th Edition 3120 B: 2023	mg/L	< 0.005	< 0.005
23	Copper as Cu	APHA 24th Edition 3120 B: 2023	mg/L	< 0.05	< 0.01
24	Aluminium as Al	APHA 24th Edition 3120 B: 2023	mg/L	< 0.03	< 0.01
25	Cyanide	APHA 24th Edition 4500 CN- C, F: 2023	mg/L	-	< 0.1

**Opinion and interpretation: Nil**

**Note:**

\*Norms applicable as per IS 2296:1982 Surface Water Quality Standards.

# Standard Methods for The Examination of Water and Wastewater, 24th Edition, 2023, American Public Health association, American Water Works Association, Water Environment Federation.

¥ Indian Standard for Atmospheric Conditions for testing.

. ULR - Unique Laboratory Report (ULR) No

. **Disclaimer: The test results relate only to the items tested.**

-: End of the report: -



Authorized Signatory  
Designation: Sr. Manager  
Name: Janga Nagarjuna Reddy

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2ND FLOOR, FMD BUILDING, JAMSHEDPUR, EAST SINGHBHUM, JHARKHAND, INDIA



ULR NO. : TC83632600000005F

### TEST REPORT

**Report No** : TSJ/EMDLAB/WWWQMTR/2026/0005  
**Date of Report** : 06-01-2026  
**Customer Name** : Tata Steel Gamharia  
**Discipline of Monitoring & Testing** : 1.1.28. Water  
**Sub Discipline** : Ground Water/Surface Water  
**Sample Description** : Ground Water  
**Sampling Location** : NIMPARA VILLAGE  
**Sample Collection Date** : 19-12-2025  
**Sample Collected By** : DEPARTMENT  
**Sampling Procedure** : Grab Sample  
**Sample Registration Date** : 19-12-2025  
**Sample Receipt Condition** : Plastic Bottle, 1 Litre  
**Sample Analysis Start Date** : 19-12-2025  
**Sample Analysis End Date** : 30-12-2025  
**Subcontract Test** : N/A  
**Registration Number** : TSJ/EMDLAB/WWWQM/25-26/09-614  
**Report Issued by** : J. Nagarjuna Reddy, Sr. Mgr. Env. Monitoring & Analysis  
**Environmental Conditions Maintained** : ¥ as per IS:196-1966

S.No.	Parameters	Method of Analysis#	Units	Norms*	Result
1	pH	APHA 24th Edition 4500 H+ B: 2023	-	6.5-8.5	7.15
2	Electrical Conductivity	APHA 24th Edition 2510 B: 2023	(µs/cm)	-	396
3	Total Dissolved Solids	APHA 24th Edition 2540 C: 2023	mg/L	< 500	194
4	Nitrogen (Ammonia) as N	APHA 24th Edition 4500 NH3- B, D: 2023	mg/L	-	< 1.0
5	Turbidity	APHA 24th Edition 2130 B: 2023	NTU	-	1.45
6	Total Suspended Solids	APHA 24th Edition 2540 D: 2023	mg/L	-	< 10
7	Phenolic Compounds as Phenols	APHA 24th Edition 5530 B, D: 2023	mg/L	< 0.001	< 0.10
8	Chlorides as Cl-	APHA 24th Edition 4500 Cl- B: 2023	mg/L	< 250	13
9	Total Alkalinity as CaCO3	APHA 24th Edition 2320 B: 2023	mg/L	< 200	187
10	Nitrite Nitrogen (NO2-N)	APHA 24th Edition 4500 NO2- B: 2023	mg/L	-	< 0.02
11	Nitrite (NO2)	APHA 24th Edition 4500 NO2- B: 2023	mg/L	-	< 0.07
12	Phosphates as P	APHA 24th Edition 4500 P D: 2023	mg/L	-	< 0.07
13	Sulphates as SO4 2-	APHA 24th Edition 4500 SO4 2- D: 2023	mg/L	< 200	7.9
14	Sulphide (as H2S)	APHA 24th Edition 4500 S2- D: 2023	mg/L	< 0.05	< 0.10
15	Hexavalent Chromium as Cr+6	APHA 24th Edition 3500 Cr B: 2023	mg/L	< 0.05	< 0.05
16	Iron as Fe	APHA 24th Edition 3120 B: 2023	mg/L	< 0.3	0.02

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ULR NO. : TC83632600000005F

S.No.	Parameters	Method of Analysis#	Units	Norms*	Result
17	Zinc as Zn	APHA 24th Edition 3120 B: 2023	mg/L	< 5	0.01
18	Total Chromium	APHA 24th Edition 3120 B: 2023	mg/L	< 0.05	< 0.01
19	Manganese as Mn	APHA 24th Edition 3120 B: 2023	mg/L	-	< 0.01
20	Nickel as Ni	APHA 24th Edition 3120 B: 2023	mg/L	< 0.02	< 0.01
21	Lead as Pb	APHA 24th Edition 3120 B: 2023	mg/L	< 0.01	< 0.01
22	Cadmium as Cd	APHA 24th Edition 3120 B: 2023	mg/L	< 0.005	< 0.005
23	Copper as Cu	APHA 24th Edition 3120 B: 2023	mg/L	< 0.05	< 0.01
24	Aluminium as Al	APHA 24th Edition 3120 B: 2023	mg/L	< 0.03	< 0.01
25	Cyanide	APHA 24th Edition 4500 CN- C, F: 2023	mg/L	-	< 1.0

**Opinion and interpretation: Nil**

**Note:**

\*Norms applicable as per IS 2296:1982 Surface Water Quality Standards.

# Standard Methods for The Examination of Water and Wastewater, 24th Edition, 2023, American Public Health association, American Water Works Association, Water Environment Federation.

¥ Indian Standard for Atmospheric Conditions for testing.

. ULR - Unique Laboratory Report (ULR) No

. **Disclaimer: The test results relate only to the items tested.**

-: End of the report: -



Authorized Signatory  
Designation: Sr. Manager  
Name: Janga Nagarjuna Reddy

**TATA STEEL LIMITED**  
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2ND FLOOR, FMD BUILDING, JAMSHEDPUR, EAST SINGHBHUM, JHARKHAND, INDIA



ULR NO. : TC83632600000006F

### TEST REPORT

**Report No** : TSJ/EMDLAB/WWWQMTR/2026/0006  
**Date of Report** : 06-01-2026  
**Customer Name** : Tata Steel Gamharia  
**Discipline of Monitoring & Testing** : 1.1.28. Water  
**Sub Discipline** : Ground Water/Surface Water  
**Sample Description** : Ground Water  
**Sampling Location** : ETP OUTLET  
**Sample Collection Date** : 19-12-2025  
**Sample Collected By** : DEPARTMENT  
**Sampling Procedure** : Grab Sample  
**Sample Registration Date** : 19-12-2025  
**Sample Receipt Condition** : Plastic Bottle, 1 Litre  
**Sample Analysis Start Date** : 19-12-2025  
**Sample Analysis End Date** : 30-12-2025  
**Subcontract Test** : N/A  
**Registration Number** : TSJ/EMDLAB/WWWQM/25-26/09-615  
**Report Issued by** : J. Nagarjuna Reddy, Sr. Mgr. Env. Monitoring & Analysis  
**Environmental Conditions Maintained** : ¥ as per IS:196-1966

S.No.	Parameters	Method of Analysis#	Units	Norms*	Result
1	pH	APHA 24th Edition 4500 H+ B: 2023	-	6.5-8.5	9.3
2	Electrical Conductivity	APHA 24th Edition 2510 B: 2023	(µs/cm)	-	561
3	Total Dissolved Solids	APHA 24th Edition 2540 C: 2023	mg/L	< 500	275
4	Nitrogen (Ammonia) as N	APHA 24th Edition 4500 NH3- B, D: 2023	mg/L	-	< 1.0
5	Turbidity	APHA 24th Edition 2130 B: 2023	NTU	-	12.23
6	Total Suspended Solids	APHA 24th Edition 2540 D: 2023	mg/L	-	< 10
7	Phenolic Compounds as Phenols	APHA 24th Edition 5530 B, D: 2023	mg/L	< 0.001	0.1
8	Chlorides as Cl-	APHA 24th Edition 4500 Cl- B: 2023	mg/L	< 250	48
9	Total Alkalinity as CaCO3	APHA 24th Edition 2320 B: 2023	mg/L	< 200	108
10	Nitrite Nitrogen (NO2-N)	APHA 24th Edition 4500 NO2- B: 2023	mg/L	-	0.26
11	Nitrite (NO2)	APHA 24th Edition 4500 NO2- B: 2023	mg/L	-	0.85
12	Phosphates as P	APHA 24th Edition 4500 P D: 2023	mg/L	-	< 0.07
13	Sulphates as SO4 2-	APHA 24th Edition 4500 SO4 2- D: 2023	mg/L	< 200	122
14	Sulphide (as H2S)	APHA 24th Edition 4500 S2- D: 2023	mg/L	< 0.05	< 0.10
15	Hexavalent Chromium as Cr+6	APHA 24th Edition 3500 Cr B: 2023	mg/L	< 0.05	< 0.05
16	Iron as Fe	APHA 24th Edition 3120 B: 2023	mg/L	< 0.3	0.11

**TATA STEEL LIMITED**  
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ENVIRONMENT MANAGEMENT DEPARTMENT LABORATORY

2ND FLOOR, FMD BUILDING, JAMSHEDPUR, EAST SINGHBHUM, JHARKHAND, INDIA



ULR NO. : TC83632600000006F

S.No.	Parameters	Method of Analysis#	Units	Norms*	Result
17	Zinc as Zn	APHA 24th Edition 3120 B: 2023	mg/L	< 5	0.03
18	Total Chromium	APHA 24th Edition 3120 B: 2023	mg/L	< 0.05	< 0.01
19	Manganese as Mn	APHA 24th Edition 3120 B: 2023	mg/L	-	< 0.01
20	Nickel as Ni	APHA 24th Edition 3120 B: 2023	mg/L	< 0.02	< 0.01
21	Lead as Pb	APHA 24th Edition 3120 B: 2023	mg/L	< 0.01	0.03
22	Cadmium as Cd	APHA 24th Edition 3120 B: 2023	mg/L	< 0.005	< 0.005
23	Copper as Cu	APHA 24th Edition 3120 B: 2023	mg/L	< 0.05	< 0.01
24	Aluminium as Al	APHA 24th Edition 3120 B: 2023	mg/L	< 0.03	0.35
25	Cyanide	APHA 24th Edition 4500 CN- C, F: 2023	mg/L	-	< 0.1
26	Biological Oxygen Demand 3 Days @ 27°C	IS 3025 (Part 44): 2023	mg/L	-	10
27	Chemical Oxygen Demand	APHA 24th Edition 5220 D: 2023	mg/L	-	17
28	Oil & Grease	APHA 24th Edition 5520 B: 2023	mg/L	-	1.8

**Opinion and interpretation: Nil**

**Note:**

\*Norms applicable as per IS 2296:1982 Surface Water Quality Standards.

# Standard Methods for The Examination of Water and Wastewater, 24th Edition, 2023, American Public Health association, American Water Works Association, Water Environment Federation.

¥ Indian Standard for Atmospheric Conditions for testing.

. ULR - Unique Laboratory Report (ULR) No

. **Disclaimer: The test results relate only to the items tested.**

-: End of the report: -



Authorized Signatory  
Designation: Sr. Manager  
Name: Janga Nagarjuna Reddy

**TATA STEEL LIMITED**  
**JAMSHEDPUR WORKS**

ENVIRONMENT MANAGEMENT DEPARTMENT LABORATORY

2ND FLOOR, FMD BUILDING, JAMSHEDPUR, EAST SINGHBHUM, JHARKHAND, INDIA

<b><u>Ambient Noise Monitoring Report</u></b>								
<b>Sampling on</b>	<b>Plant North Side Boundary</b>		<b>Plant South Side Boundary</b>		<b>Plant East Side Boundary</b>		<b>Plant West Side Boundary</b>	
	<b>Day Time</b>	<b>Night Time</b>	<b>Day Time</b>	<b>Night Time</b>	<b>Day Time</b>	<b>Night Time</b>	<b>Day Time</b>	<b>Night Time</b>
08.10.2025	69.1	56.8	66.0	58.9	69.4	56.6	64.4	55.0
19.12.2025	72.4	61.2	66.2	62.7	73.1	60.2	68.6	63.4
04.02.2026	73.6	68.8	67.8	65.7	72.9	61.4	71.5	63.2
23.03.2026	72.7	67.6	66.6	64.8	72.0	60.2	70.3	62.3



# INSTITUTE FOR ENVIRONMENTAL MANAGEMENT

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Ranchi-834002, Jharkhand, India

Ph - 8407804253, 8407804251, Email - iem2012@rediffmail.com



TC-16135

## TEST REPORT

ULR No.:	T	C	1	6	1	3	5	2	6	0	0	0	0	0	0	0	6	4	3					
Discipline: Chemical			Group: Atmospheric Pollution						Sub-Group: Ambient Noise Level (Excluding Vibrations)															
Report Issue Date: 02-04-2026									Test Report No.: RN-250303003N01															
Sample ID: 260331AP07001									Sample Description: Ambient Noise Level															
Challan No./P.O. No.: 3000179897/J02									Challan No./ P.No. Date: 03-03-2025															
Name and Contact Details of Customer: M/s Tata Steel Limited, Gamaharia Phase-V, Adityapur Industrial Area, Seraikela-Kharsawan, Jharkhand-832108 E-mail Id- kishor.pramanik1@tatasteel.com Kishor Pramanik (9905340012)																								
Information obtained from customer (if any): N/A																								
Type of Industry: Iron & Steel										Condition of Sample: Fit for Test														
Sampling Protocol: I.S 5182										Sampling Date: 23-03-2026 to 24-03-2026														
Protocol: CPCB Guideline & IS Method 9989:1981																								
Sampling Location: STATION-1 PLANT NORTH SIDE BOUNDARY																								
Field Meteorological Information					A. Temp. (°C): 29					R.H. (%): 51					W.C.: Sunny					W.D.: NW to SE				
Location of performance of the Laboratory Activity: IEM Laboratory, Ranchi																								
Sample Receiving Date: 31-03-2026						Testing Started: 31-03-2026						Testing Ended: 02-04-2026												

### ----Test Results----

Sl. No.	Parameters	Test Method No.	Unit	Results		Norms**
				Day Time	Night Time	
1.	Equivalent Sound Level (Leq)	IS 9989:1981	dB(A)	72.7	67.6	Day - 75 Night - 70

Note: -

1. Day time shall mean from 6.00 a.m. to 10.00 p.m.
2. Night time shall mean from 10.00 p.m. to 6.00 a.m.
3. Mixed categories of areas may be declared as one of the four above mentioned categories by the competent authority.
4. dB(A) Leq denotes the time weighted average of the level of sound in decibels on scale A which is relatable to human hearing.
5. A "decibel" is a unit in which noise is measured. "A", in dB(A) Leq, denotes the frequency weighting in the measurement of noise and corresponds to frequency response characteristics of the human ear.
6. Leq: It is an energy mean of the noise level, over a specified period.

Env. Condition of Lab.	Laboratory is maintaining Temperature 27± 2°C and Relative Humidity 65±5 % in all testing area as per IS 196:1966(C).
Abbreviation	MDL: Minimum Detection Limit, BDL: Below Detection Limit
Norms** is Specified	National Ambient Air Quality Standards (NAAQS), 2009.
Remark	Sample Comply with prescribed specification.
Opinion & Interpretation	Not Practiced.
Tested by	Anjali Kumari
Sample Drawn by	Rahul Singh & Team
Disclaimers	<ul style="list-style-type: none"> <li>• The results relate only to the item tested, calibrated or sampled.</li> <li>• Additions to, deviations, or exclusions from the method is not practiced if not mentioned.</li> <li>• Results from external providers are not used if not specified.</li> </ul>

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6. In case of feedback/ complaints, please send an email at [sm.iemeco@gmail.com](mailto:sm.iemeco@gmail.com)

On the basis of Quality Checked and Technical data verified by the Authorized signatory, the report is issued by the Director of the Organization.

Reviewed by

Authorized Signatory

*(Signature)*  
(Akanksha Sourabh)

*(Signature)*  
(Dr. S. C. Jain)

Dy. Technical Manager

Director

----End of Report----



# INSTITUTE FOR ENVIRONMENTAL MANAGEMENT

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Ranchi-834002, Jharkhand, India

Ph - 8407804253, 8407804251, Email - iem2012@rediffmail.com



TC-16135

## TEST REPORT

<b>ULR No.:</b>	T	C	1	6	1	3	3	2	6	0	0	0	0	0	0	0	6	4	4					
<b>Discipline:</b> Chemical	<b>Group:</b> Atmospheric Pollution								<b>Sub-Group:</b> Ambient Noise Level (Excluding Vibrations)															
<b>Report Issue Date:</b> 02-04-2026									<b>Test Report No.:</b> RN-250303003N2															
<b>Sample ID:</b> 260331AP07002									<b>Sample Description:</b> Ambient Noise Level															
<b>Challan No./P.O. No.:</b> 3000179897/J02									<b>Challan No./ P.No. Date:</b> 03-03-2025															
<b>Name and Contact Details of Customer:</b> M/s Tata Steel Limited, Gamaharia Phase-V, Adityapur Industrial Area, Seraikela-Kharsawan, Jharkhand-832108 E-mail Id- kishor.pramanik1@tatasteel.com Kishor Pramanik (9905340012)																								
<b>Information obtained from customer (if any):</b> N/A																								
<b>Type of Industry:</b> Iron & Steel										<b>Condition of Sample:</b> Fit for Test														
<b>Sampling Protocol:</b> I.S 5182										<b>Sampling Date:</b> 23-03-2026 to 24-03-2026														
<b>Protocol:</b> CPCB Guideline & IS Method 9989:1981																								
<b>Sampling Location:</b> STATION-2 PLANT WEST SIDE BOUNDARY																								
<b>Field Meteorological Information</b>					<b>A. Temp. (°C):</b> 29					<b>R.H. (%):</b> 51					<b>W.C.:</b> Sunny					<b>W.D.:</b> NW to SE				
<b>Location of performance of the Laboratory Activity:</b> IEM Laboratory, Ranchi																								
<b>Sample Receiving Date:</b> 31-03-2026						<b>Testing Started:</b> 31-03-2026						<b>Testing Ended:</b> 02-04-2026												

### ----Test Results----

Sl. No.	Parameters	Test Method No.	Unit	Results		Norms**
				Day Time	Night Time	
1.	Equivalent Sound Level (Leq)	IS 9989:1981	dB(A)	70.3	62.3	Day - 75 Night - 70

Note: -

1. Day time shall mean from 6.00 a.m. to 10.00 p.m.
2. Night time shall mean from 10.00 p.m. to 6.00 a.m.
3. Mixed categories of areas may be declared as one of the four above mentioned categories by the competent authority.
4. dB(A) Leq denotes the time weighted average of the level of sound in decibels on scale A which is relatable to human hearing.
5. A "decibel" is a unit in which noise is measured. "A", in dB(A) Leq, denotes the frequency weighting in the measurement of noise and corresponds to frequency response characteristics of the human ear.
6. Leq: It is an energy mean of the noise level, over a specified period.

<b>Env. Condition of Lab.</b>	Laboratory is maintaining Temperature 27± 2°C and Relative Humidity 65±5 % in all testing area as per IS 196:1966(C).
<b>Abbreviation</b>	MDL: Minimum Detection Limit, BDL: Below Detection Limit
<b>Norms** is Specified</b>	National Ambient Air Quality Standards (NAAQS), 2009.
<b>Remark</b>	Sample Comply with prescribed specification.
<b>Opinion &amp; Interpretation</b>	Not Practiced.
<b>Tested by</b>	Anjali Kumari
<b>Sample Drawn by</b>	Rahul Singh & Team
<b>Disclaimers</b>	<ul style="list-style-type: none"> <li>• The results relate only to the item tested, calibrated or sampled.</li> <li>• Additions to, deviations, or exclusions from the method is not practiced if not mentioned.</li> <li>• Results from external providers are not used if not specified.</li> </ul>

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On the basis of Quality Checked and Technical data verified by the Authorized signatory, the report is issued by the Director of the Organization.

Reviewed by	Authorized Signatory
(Akanksha Sourabh)	(Dr. S. C. Jain)
Dy. Technical Manager	Director

----End of Report----



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Ph - 8407804253, 8407804251, Email - iem2012@rediffmail.com



TC-16135

## TEST REPORT

ULR No.:	T	C	1	6	1	3	5	2	6	0	0	0	0	0	0	6	4	5
Discipline: Chemical	Group: Atmospheric Pollution								Sub-Group: Ambient Noise Level (Excluding Vibrations)									
Report Issue Date: 02-04-2026									Test Report No.: RN-250303003N3									
Sample ID: 260331AP10001									Sample Description: Ambient Noise Level									
Challan No./P.O. No.: 3000179897/J02									Challan No./ P.No. Date: 03-03-2025									
Name and Contact Details of Customer: M/s Tata Steel Limited, Gamaharia Phase-V, Adityapur Industrial Area, Seraikela-Kharsawan, Jharkhand-832108 E-mail Id- kishor.pramanik1@tatasteel.com Kishor Pramanik (9905340012)																		
Information obtained from customer (if any): N/A																		
Type of Industry: Iron & Steel								Condition of Sample: Fit for Test										
Sampling Protocol: I.S 5182								Sampling Date: 24-03-2026 to 25-03-2026										
Protocol: CPCB Guideline & IS Method 9989:1981																		
Sampling Location: STATION-3 PLANT EAST SIDE BOUNDARY																		
Field Meteorological Information			A. Temp. (°C): 30				R.H. (%): 50			W.C.: Sunny				W.D.: SW to NE				
Location of performance of the Laboratory Activity: IEM Laboratory, Ranchi																		
Sample Receiving Date: 31-03-2026						Testing Started: 31-03-2026						Testing Ended: 02-04-2026						

### ----Test Results----

Sl. No.	Parameters	Test Method No.	Unit	Results		Norms**
				Day Time	Night Time	
1.	Equivalent Sound Level (Leq)	IS 9989:1981	dB(A)	72.0	60.2	Day - 75 Night - 70

#### Note: -

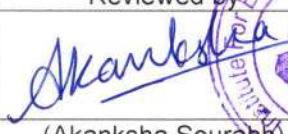
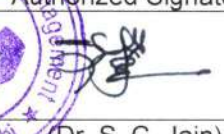
1. Day time shall mean from 6.00 a.m. to 10.00 p.m.
2. Night time shall mean from 10.00 p.m. to 6.00 a.m.
3. Mixed categories of areas may be declared as one of the four above mentioned categories by the competent authority.
4. dB(A) Leq denotes the time weighted average of the level of sound in decibels on scale A which is relatable to human hearing.
5. A "decibel" is a unit in which noise is measured. "A", in dB(A) Leq, denotes the frequency weighting in the measurement of noise and corresponds to frequency response characteristics of the human ear.
6. Leq: It is an energy mean of the noise level, over a specified period.

Env. Condition of Lab.	Laboratory is maintaining Temperature 27± 2°C and Relative Humidity 65±5 % in all testing area as per IS 196:1966(C).
Abbreviation	MDL: Minimum Detection Limit, BDL: Below Detection Limit
Norms** is Specified	National Ambient Air Quality Standards (NAAQS), 2009.
Remark	Sample Comply with prescribed specification.
Opinion & Interpretation	Not Practiced.
Tested by	Anjali Kumari
Sample Drawn by	Rahul Singh & Team
Disclaimers	<ul style="list-style-type: none"> <li>• The results relate only to the item tested, calibrated or sampled.</li> <li>• Additions to, deviations, or exclusions from the method is not practiced if not mentioned.</li> <li>• Results from external providers are not used if not specified.</li> </ul>

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On the basis of Quality Checked and Technical data verified by the Authorized signatory, the report is issued by the Director of the Organization.

Reviewed by	Authorized Signatory
	
(Akanksha Sourabh)	(Dr. S. C. Jain)
Dy. Technical Manager	Director

----End of Report----



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Ph - 8407804253, 8407804251, Email - iem2012@rediffmail.com



TC-16135

## TEST REPORT

ULR No.:	T	C	1	6	1	3	5	2	6	0	0	0	0	0	0	6	4	6	
Discipline:	Chemical		Group: Atmospheric Pollution						Sub-Group: Ambient Noise Level (Excluding Vibrations)										
Report Issue Date:	02-04-2026								Test Report No.: RN-250303003N4										
Sample ID:	260331AP10002								Sample Description: Ambient Noise Level										
Challan No./P.O. No.:	3000179897/J02								Challan No./ P.No. Date: 03-03-2025										
Name Name and Contact Details of Customer: M/s Tata Steel Limited, Gamaharia Phase-V, Adityapur Industrial Area, Seraikela-Kharsawan, Jharkhand-832108 E-mail Id- kishor.pramanik1@tatasteel.com Kishor Pramanik (9905340012)																			
Information obtained from customer (if any): N/A																			
Type of Industry: Iron & Steel									Condition of Sample: Fit for Test										
Sampling Protocol: I.S 5182									Sampling Date: 24-03-2026 to 25-03-2026										
Protocol: CPCB Guideline & IS Method 9989:1981																			
Sampling Location: STATION-4 PLANT SOUTH SIDE BOUNDARY																			
Field Meteorological Information			A. Temp. (°C): 30			R.H. (%): 50			W.C.: Sunny			W.D.: SW to NE							
Location of performance of the Laboratory Activity: IEM Laboratory, Ranchi																			
Sample Receiving Date: 31-03-2026						Testing Started: 31-03-2026						Testing Ended: 02-04-2026							

### ----Test Results----

Sl. No.	Parameters	Test Method No.	Unit	Results		Norms**
				Day Time	Night Time	
1.	Equivalent Sound Level (Leq)	IS 9989:1981	dB(A)	66.6	64.8	Day - 75 Night - 70

Note: -

1. Day time shall mean from 6.00 a.m. to 10.00 p.m.
2. Night time shall mean from 10.00 p.m. to 6.00 a.m.
3. Mixed categories of areas may be declared as one of the four above mentioned categories by the competent authority.
4. dB(A) Leq denotes the time weighted average of the level of sound in decibels on scale A which is relatable to human hearing.
5. A "decibel" is a unit in which noise is measured. "A", in dB(A) Leq, denotes the frequency weighting in the measurement of noise and corresponds to frequency response characteristics of the human ear.
6. Leq: It is an energy mean of the noise level, over a specified period.

Env. Condition of Lab.	Laboratory is maintaining Temperature 27± 2°C and Relative Humidity 65±5 % in all testing area as per IS 196:1966(C).
Abbreviation	MDL: Minimum Detection Limit, BDL: Below Detection Limit
Norms** is Specified	As per Noise Pollution (Regulation and Control) Rules - 2000
Remark	Sample Comply with prescribed specification.
Opinion & Interpretation	Not Practiced.
Tested by	Anjali Kumari
Sample Drawn by	Rahul Singh & Team
Disclaimers	<ul style="list-style-type: none"> <li>• The results relate only to the item tested, calibrated or sampled.</li> <li>• Additions to, deviations, or exclusions from the method is not practiced if not mentioned.</li> <li>• Results from external providers are not used if not specified.</li> </ul>

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Reviewed by	Authorized Signatory
	
(Akanksha Sourabh)	(Dr. S. C. Jain)
Dy. Technical Manager	Director

----End of Report----

# Half Yearly (H2) update of key sensitive locations

TSL Gamharia



## Education : Functional Digital Literacy Convocation



Functional Digital Literacy Convocation was organized at Sarna Ummul, Gamharia. In this programme, around 350 women participants received their certificates after successfully completing the Functional Digital Literacy course. The programme was graced by the presence of Abhinav Prakash, SDO of Saraikela, Sharad Sharma, General Manager, Tata Growth Shop; Pramod Kumar, Head Employee Services, TSG/TGS; and Ravinandan Thakur, Head CSI, Pellet Plant. The event was also attended by the Mukhiya of Rapcha, Burudih, and Chota Gamharia Panchayats. During his address, Abhinav Prakash shared his personal journey and inspired the participants. He mentioned that his parents were not highly educated, but they always believed in the importance of education and supported him to pursue higher studies in Delhi. With dedication and hard work, he became the first IAS officer from his city. He encouraged the women to continue learning and use digital knowledge to improve their lives and support their families. Many women participants came on stage for the first time and confidently performed cultural dances, a skit, and shared their experiences from the programme. Overall, the programme was vibrant and inspiring, celebrating the confidence and achievements of the women participants.



## Convocation ceremony for the first batch of the IT and Spoken English Programme



On 13th March 2026, the convocation ceremony for the first batch of the IT and Spoken English Programme was organized at Sarna Ummul, Gamharia. In this programme, 50 students were awarded certificates for successfully completing the course. The Chief Guest of the event was Mr. Rituraj, District Education Officer of Seraikela. Other distinguished guests included Mr. Ranjan Kumar Singh, Chief of TSG; Mr. Sanjeev Poddar, CFO; and Mr. Sudhir Singh, CHRO. The programme was organized in collaboration with NIIT Foundation. During the event, some students shared their learning experiences from the programme, and a few parents also expressed their views and appreciation. Overall, the programme was successful and well appreciated by the participants and guests.



Digital Literacy Program initiative addresses the growing need to build digital capacities among rural and marginalized women. Implemented by the Gender & Community Enterprise (G&CE) vertical, the program enables women to access a wide range of digital services and entitlements, thereby bridging the digital divide and enhancing participation in governance and welfare mechanisms. In Gamharia this training started, in FY26 total 1288 female get benefited from digital literacy session in different village of gamharia block. programme enhanced their basic computer knowledge, digital awareness, online safety understanding, and confidence in accessing government schemes and digital financial services independently



38 farmers (18 men, 20 women) from Gamarhia villages attended an exposure visit to agriculture project sites of Noamundi ecosystem. They observed modern techniques like drip irrigation and integrated farming, discussed TSF interventions, and gained motivation for income generation and self-reliant farming practices. All share their experiences and learn from their expertise in agriculture.



A nine-day cataract screening and operation camp was organized in Gamharia in collaboration with Sankara Nethralaya. During the camp, a total of **558 people** were screened, out of which **131 were selected**, and **113 successful surgeries** were conducted.

This programme was the result of an intensive **one-month mobilization drive**, which included a variety of outreach activities such as **nukkad natak, miking, door-to-door mobilization**, and calling individuals who had been screened and identified in the previous year. These combined efforts helped in reaching a wider community and ensuring maximum participation.

The camp also received supportive visits from the **Drishti team of Tata Steel Foundation** and **ophthalmology students from Arka Jain University**, who attended along with their professor for an exposure visit.

The event was inaugurated by **Mr. Ranjan Singh (Chief, TSG)**, and the formal ceremony was led by **Mr. Pancham, GM, TGS**. Their presence added motivation and encouragement to the entire initiative. Overall, the camp was a significant success, providing essential eye-care services and contributing to better vision health for the community.



## Silver in National Game

13-year-old Baha Besra, talented archer from the Grassroot Archery Training Centre, Pindrabera (Gamharia), run by the Tata Steel Foundation, Baha Besra delivered an outstanding performance at National level competition, **NTPC Cherukuri Lenin Volga Memorial Under-13 National Archery Championship in the girls' category. She won Two Silver medal, (a silver medal in the ranking round and another silver medal in the elimination round)**

The tournament was held from 26th March to 28th March 2026 in Guntur, Andhra Pradesh, where young archers from across the country showcased their talent.



**Compliance status report for the conditions prescribed in the  
Corporate Responsibility for Environmental Protection (CREP) of TSG**

SN.	Condition	Compliance status/Action taken
1	<p><b>Coke Oven Plant:</b> To meet the parameters PLD (% leaking doors), PLL (% leaking lids), PLO (% leaking off take) of the notified standards under EPA. To rebuild at least 40% of the coke oven batteries* in next 10 years by December 2012.</p>	<p>Our Coke Oven Plant is non-recovery type coke oven and this requirement is not applicable.</p>
2	<p><b>Steel Melting Shop:</b> Steel Melting Shop Fugitive Emission Status To reduce 30% by March 2004 and 100% by March 2008 (including installation of secondary de-dusting facilities).</p>	<p>Dedicated secondary Fume Extractive System are installed in EAF &amp; LRF and fugitive emissions are significantly reduced. To measure the stack emission dedicated online dust Monitors are installed in the respective stacks and it's data uploading to JSPCB &amp; CPCB Server on real time basis.</p>
3	<p><b>Blast Furnace</b> - Direct inject of reducing agents in blast furnace</p>	<p>Pulverized Coal injection (PCI) system installed and commissioned along with bag filter as an air pollution control measures (bag filter with stack) to reduce fugitive emission during direct injection.</p>
4	<p><b>Solid Waste / Hazardous Waste Management:</b> Utilization of Steel Melting Shop (SMS) / Blast Furnace (BF) slag as per the following.</p> <ul style="list-style-type: none"> <li>• By 2004 – 70%</li> <li>• By 2006 – 80% and</li> <li>• By 2007 – 100%</li> </ul> <p><b>Hazardous Waste:</b> - Charge of tar sludge / ETP sludge to coke oven by June 2003. - Inventorization of Hazardous waste as per Hazardous waste (M &amp; H) Rules, 1989 as amended in 2000 and implementation of the rules by December 2003. (Tar sludge, acid sludge, waste lubricating oil and type fuel fall in the category of HZ).</p>	<p>Solid waste generated within the plant are segregated and most of the waste are recycled back in process.</p> <ul style="list-style-type: none"> <li>(i) Rolling mill scrap is partially recycled as steel scrap in SMS and partially sold as scrap to outside vendor.</li> <li>(ii) Mill scale is used in sinter making process at Sinter Plant.</li> <li>(iii) FES Dust from SMS is being used in sinter plant.</li> <li>(iv) Flue Dust from blast furnace, Bag Filter Dust and wet GCP dust is also used in Sinter plant.</li> <li>(v) 100% Blast furnace slag is sold to open market. (Used by major cement industry).</li> <li>(vi) Metal is recovered from slag of arc furnace and recycled.</li> <li>(vii) Used Oil / Waste Oil / Spent oil is collected and stored in designated place and sold to authorized recycler.</li> </ul>

**Compliance status report for the conditions prescribed in the  
Corporate Responsibility for Environmental Protection (CREP) of TSG**

		Hazardous Waste: Our coke oven plant is non-recovery type and hence Tar sludge & ETP sludge is not applicable. The waste oil and other hazardous wastes generated is being disposed to authorized vendors as per the Hazardous Waste Management Rule 2016.
5	<b>Water Conservation / Water Pollution</b> - To reduce specific water consumption to 5 m <sup>3</sup> / t for long products and 8 m <sup>3</sup> / t for flat products by December 2005.	We maintained Zero Effluent Discharge. There are only evaporation losses. We are presently manufacturing only long products and our specific water consumption is well within the prescribed limit
6	Installation of continuous stack monitoring	Stack monitoring facilities are provided at all major stacks. 7 online gas analysers and 23 online dust monitors are installed covering all major stacks for monitoring of emission from the stacks as per CTO condition and the real time data of PM, SO <sub>2</sub> & NO <sub>x</sub> are transmitted to JSPCB / CPCB servers. Apart from the above, manual monitoring is being conducted by a NABL accredited external laboratory on monthly basis. The monitoring results are well within the permissible limits.
7	To operate the existing pollution control equipment efficiently and to keep proper record of run hours, failure time and efficiency with immediate effect. Compliance report in this regard be submitted to CPCB / SPCB every three months.	The pollution control equipments are being operated efficiently and proper records are maintained for running hours, failure time and efficiency. Any failure leads to APC is resulted exceedance alarm from CPCB server and justification along with corrective action reports are being submitted to RTDMS Portal.
8	To implement the recommendations of Life Cycle Assessment (LCA) study sponsored by MoEF by December 2003.	Being Complied

**Compliance status report for the conditions prescribed in the  
Corporate Responsibility for Environmental Protection (CREP) of TSG**

<p>9</p>	<p>The industry will initiate the steps to adopt the following clean technologies measures to improve the performance of industry towards production, energy and environment.</p> <ul style="list-style-type: none"> <li>• Energy recovery of top Blast Furnace (BF) gas.</li> <li>• Use of Tar- free runner linings.</li> <li>• De- dusting of Cast house at tap holes, runners, skimmers ladle and charging points.</li> <li>• Suppression of fugitive emissions using nitrogen gas or other inert gas</li> <li>• To study the possibility of slag and fly ash transportation back to the abandoned mines, to the abandoned mines, to fill up the cavities through empty railway wagons while they return back to the mines and its implementation.</li> <li>• Processing of the waste containing flux &amp; ferrous wastes through waste recycling plant.</li> <li>• To implement rainwater harvesting</li> <li>• Reduction Green House Gases by:             <ol style="list-style-type: none"> <li>1. Reduction in power consumption</li> <li>2. Use of by –products gases for power generation</li> <li>3. Promotion of Energy Optimisation technology including energy/ audit</li> </ol> </li> <li>• To set targets for Resource Conservation such as Raw material, energy and water consumption to match International Standards.</li> <li>• Up-gradation in the monitoring and analysis facilities for air and water pollution. Also, to impart elaborate training to the manpower so that realistic data is obtained in the environmental monitoring laboratories.</li> </ul>	<ul style="list-style-type: none"> <li>• Our BF gas pressure (plant capacity is 0.65 MTPA only) is not adequate to install TRT.</li> <li>• Our coke oven plant is non-recovery type and hence not applicable.</li> <li>• The de-dusting system commissioned at MBF-I &amp; II cast house covering tap holes, runners, skimmers ladles and charging points.</li> <li>• Water sprinkling system, Dry &amp; Wet fog systems and the compressed air are used for suppression of fugitive emissions at RMHs area.</li> <li>• Since we are purchasing raw materials from outside sources, it is not applicable.</li> <li>• The waste containing flux &amp; ferrous waste is utilized to the maximum extent possible in the Pellet &amp; Sinter plant. 100 % of waste containing flux and ferrous is utilized in the pellet &amp; Sinter plant.</li> <li>• Rainwater harvesting structures are created within the premises to harvest rainwater. Open reservoirs within the plant also act as sink for rainwater during rainy season the water of which is used in the plant.</li> <li>• Various initiatives and measures are being taken to reduce the GHG emissions and present level of GHG emission is 4.44 tCO<sub>2</sub>e/tcs. Major focus are being given to maximise the waste heat utilisation, Reduction of Coal / Coke rate in BF &amp; DRI Process, Maximum utilization of Char, resource conservation. To reduce the power consumption VFDs are being installed wherever possible. LED lights are installed to replace the sodium vapor lamps and many Kaizens are implemented to conserve power. By product BF gas is being used as fuel in Power Plant, Mills, Sinter Production Process.</li> </ul>
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**Compliance status report for the conditions prescribed in the Corporate Responsibility for Environmental Protection (CREP) of TSG**

	<ul style="list-style-type: none"><li>• To Improve overall housekeeping.</li></ul>	<ul style="list-style-type: none"><li>• A separate Environment cell is already available and need based training is being imparted to the monitoring personnels as and when required.</li><li>• Mechanized housekeeping is introduced to done within the plant. Fixed and mobile sprinklers are deployed at required locations for suppression of fugitive dust.</li></ul>
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OFFICE OF THE CHIEF CONSERVATOR OF FORESTS-CUM-CHIEF  
WILD LIFE WARDEN, JHARKHAND, RANCHI

Letter no.- 1221

Dated- 26/7/04

From,

Chief Conservator of Forests-cum-  
Chief Wild Life Warden,  
Jharkhand, Ranchi

To,

M/s Usha Martin Limited,  
(Usha Alloys & Steels Divn.)  
Gamharia, Jamshedpur

**Sub:** Aerial Distance between Usha Martin Factory at Gamharia and  
specified points of Dalma Wildlife Sanctuary boundary.

**Ref:** Companies letter no. Nil dated-28.04.2004.

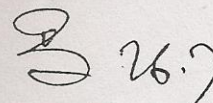
Sir,

In response to your letter under reference, a report was sought from the Divisional Forest Officer, Wild Life Division, Ranchi and Conservator of Forests, Wild Life Circle, Ranchi. On the basis of their reports it is stated that the distances between the three points on the boundary of the Dalma Wildlife Sanctuary and the location of the factory at Gamaharia are as under:

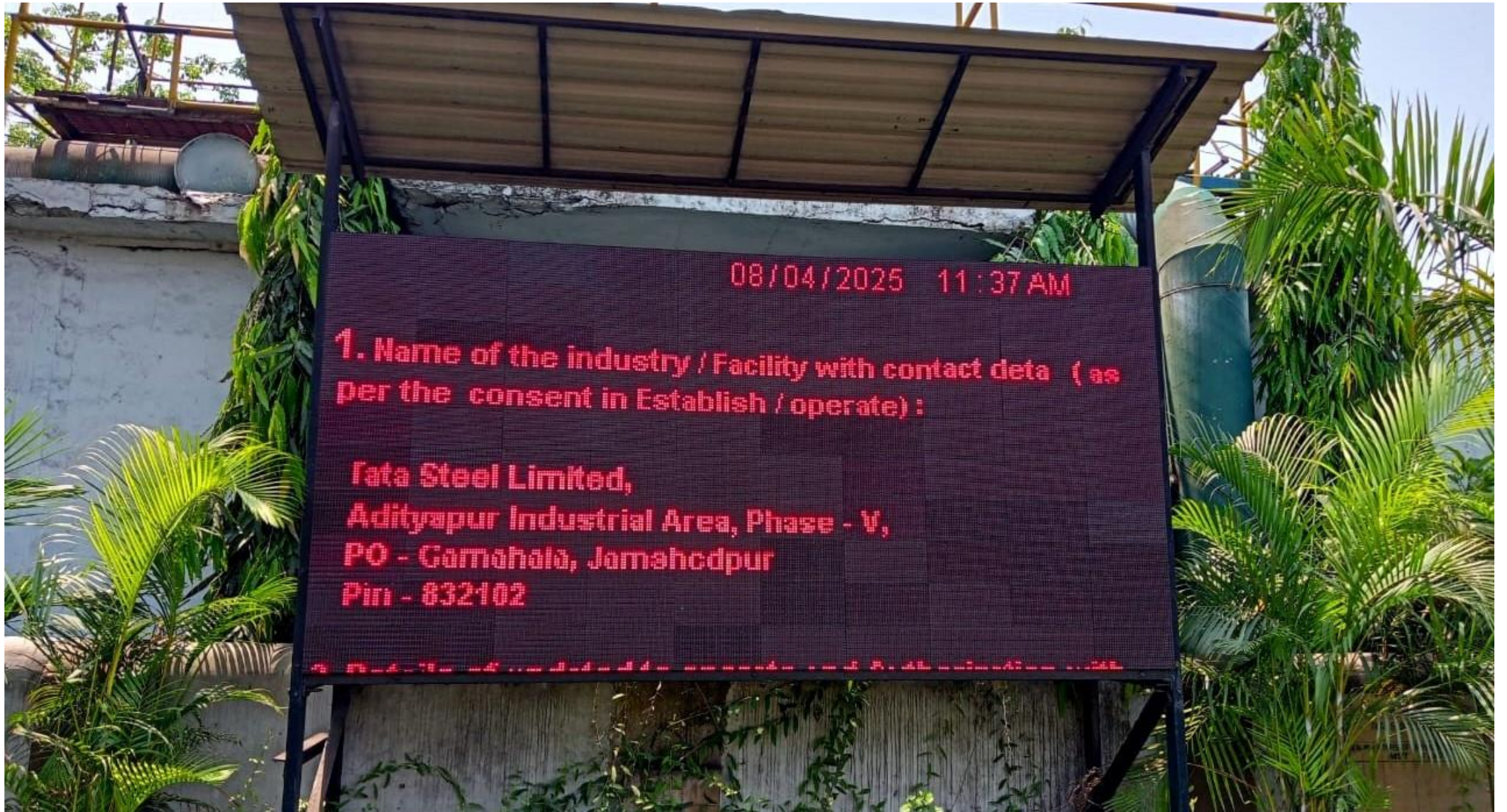
- 1) Dalgaon - the north west corner of the sanctuary - 15.75 Km.
- 2) Machabera - the south east corner of the sanctuary - 33.75 Km. and
- 3) Dimna Jhor - the mid point of the sanctuary - 15.50 Km.

Since the content of the letter from the MOEF is not clear to us, no further comments are being made.

Yours sincerely,



Chief Conservator of Forests-cum-  
Chief Wild Life Warden,  
Jharkhand, Ranchi



**Your (Half Yearly Compliance Report) has been Submitted with following details**

<b>Proposal No</b>	IA/JH/IND/132216/2019
<b>Compliance ID</b>	430995778
<b>Compliance Number(For Tracking)</b>	EC/M/COMPLIANCE/430995778/2025
<b>Reporting Year</b>	2025
<b>Reporting Period</b>	01 Dec(01 Apr - 30 Sep)
<b>Submission Date</b>	19-11-2025
<b>RO/SRO Name</b>	Shri Senthil Kumar Sampath
<b>RO/SRO Email</b>	agmu156@ifs.nic.in
<b>State</b>	JHARKHAND
<b>RO/SRO Office Address</b>	Integrated Regional Offices, Ranchi
<b>Note:-</b> SMS and E-Mail has been sent to Shri Senthil Kumar Sampath, JHARKHAND with Notification to Project Proponent.	

**Environment Audit Statement**  
**FORM – V**  
(See rule 14 of The Environment Protection Act, 1986)  
**Environmental Audit Report for the financial year ending the 31<sup>st</sup> March 2025.**

<b>PART – A</b>		
<b>General Information</b>		
<b>1.</b>	<b>Name &amp; Address of the owner/occupier of the industry, operation or process</b>	TV Narendran CEO & MD Tata Steel Limited, Gamharia (Main Plant-1 & Main Plant-2) Adityapur Industrial Area, Dist: Saraikela- Kharsawan, Jharkhand- 831001
<b>2.</b>	<b>Industry Category Primary (STC Code), Secondary (STC Code)</b>	Red
<b>3.</b>	<b>Production capacity-Units</b>	Installed capacity - Integrated Steel Plant- 1.2 MTPA
<b>4.</b>	<b>Year of establishment</b>	1974 and 2004
<b>5.</b>	<b>Date of last statement</b>	24.09.2024

<b>PART – B</b>		
<b>Water &amp; Raw material Consumption</b>		
<b>B-1 : Total Water Consumption (m<sup>3</sup>/d)</b>		
	<b>Total Water Consumption (m<sup>3</sup>/d)</b>	
<b>Category</b>	<b>During the current financial year</b>	
Process (m <sup>3</sup> /d)	518	
Cooling (m <sup>3</sup> /d)	13883	
Domestic (m <sup>3</sup> /d)	346	
<b>B-2 : Water Consumption per unit of the product (m<sup>3</sup>/MT)</b>		
<b>Name of the Products</b>	<b>Process Water Consumption per unit of product (m<sup>3</sup>/MT)</b>	
	<b>During the previous financial year</b>	<b>During the current financial year</b>
1. Crude Steel	1.193	1.268
2. Hot Metal	0.697	0.801
3. Wire Rod & RCS	0.852	1.085
4. DRI	0.951	0.721
5. Power	4.76 KL/MWH	3.83 KL/MWH
6. Sinter	0.106	0.103
7. Pellet	Majorly treated water from ETP and partially (0.75) fresh water is being used	Majorly treated water from ETP and partially (0.071) fresh water is being used
8. Coke	Nil. (No fresh water. Only treated water from ETP is being used)	Nil. (No fresh water. Only treated water from ETP is being used)
<b>B-3 : Raw Material Consumption</b>		
<b>Name of Raw materials</b>	<b>Name of</b>	<b>Raw material Consumption per unit of</b>

	Products	product (MT/MT)	
		During the previous financial year	During the current financial year
<b>1. MBF</b>	Hot Metal		
Iron Ore (Lump)		0.521	0.367
Sinter		0.929	1.054
Quartzite		0.051	0.038
Coke (Net and Nut coke)		0.476	0.491
PCI Coal		0.116	0.095
Pellet		0.182	0.192
<b>2. SMS</b>	Crude steel		
Hot metal /Pig Iron		0.786	0.770
Sponge Iron		0.356	0.378
<b>3.WRM</b>	Wire Rod		
Billet		1.027	1.026
<b>4. Blooming Mill</b>	Bloom		
Billet/Bloom		1.026	1.040
<b>5. DRI</b>	DRI		
Iron Ore		1.693	1.649
Coal		0.886	0.805
Pellet		Nil	0.015
<b>6. Sinter</b>	Sinter		
Iron Ore Fines		0.885	0.844
Coke Fines		0.081	0.080
Coal		0.006	Nil
Limestone		0.115	0.107
Burnt Lime		0.026	0.029
Crude Dolomite		0.151	0.128
<b>7.Captive Power Plant</b>	Electricity		
Coal		1.071	0.822
<b>8. Pellet Plant</b>	Pellet		
Iron Ore		1.121	1.079
Coal		0.050	0.042
Limestone		0.018	0.020
Bentonite		0.009	0.007
<b>9. Coke Oven Plant</b>	Coke		
Coking Coal		1.454	1.466
PCI		0.002	Nil

PART – C				
Pollution discharged to Environment per unit of Output				
(Parameters as specified in the Consent issued)				
C-1 : Water Pollution				
Pollutant Parameter	Prescribed Standard	Quantity discharge	Concentration discharge (mg/l)	Percentage of variation from prescribed standards with reasons
		(kg/d)		
-	-	Nil	Nil	-

It is to be noted that Zero Effluent Discharge (ZED) is maintained except rainy season. We have achieved Zero Effluent Discharge (ZED) by installing ETP (7200 KLD) / STP (250 KLD) for proper treatment of effluent and complete recycling back to process for reuse.

**C-2 : Air Pollution**

Pollutant Parameter	Stack No. / Name	Quantity discharge	Concentration discharge (mg/Nm <sup>3</sup> )	Percentage (%) of variation from prescribed standards with reasons	
		(kg/day)			
Stack emission (Particulate matter)	WHRB - 1 (DRI-1) & 40 TPH	141	37	-63	The result is negative, it means the measured value is within the prescribed standard.
	WHRB - 2 & 3 (DRI-2&3)	126	36	-64	
	WHRB - 4 & 5 (DRI-4&5)	129	34	-66	
	25 MW CPP	413	65	-35	
	30 MW CPP	140	25	-75	
	Coke Oven WHRB - 1	79	21	-58	
	Coke Oven WHRB - 2	76	22	-56	
	MBF - 1 stove	8	6	-94	
	MBF - 1 Cast House	35	22	-78	
	MBF - 1 Stock House	14	20	-80	
	MBF - 1 Ground Hopper	12	19	-81	
	MBF - 2 stove	33	18	-82	
	MBF - 2 Cast House	94	22	-78	
	MBF - 2 Stock House	65	21	-79	
	MBF - 2 PCI	17	22	-78	
	MBF - 2 RMHS	18	21	-79	
	SMS - 1 & 2	256	25	-75	
	SMS - 3	255	23	-77	
	Pellet Plant	341	24	-52	
	Blooming Mill	31	26	-74	
Wire Rod Mill	20	26	-74		
Sinter Process	675	52	-48		
Sinter De-dusting	204	27	-73		

**PART – D**

**Hazardous Wastes**

**(As specified under The Hazardous Waste Management, Handling & Transboundary Movement Rules, 2016)**

**D-1 : Generation from Process**

Name	Total Quantity (MT/KL)	
	During the previous financial year	During the current financial year
Wastes or residues containing oil (Schedule – I; Cat.: 5.2)	-	28.28 MT
Discarded asbestos (Schedule – I; Cat.: 15.2)	-	Nil
Process wastes, residues and sludges (Discarded Paint) (Schedule – I; Cat.: 21.1)	-	Nil
Spent solvents (Schedule – I; Cat.: 21.2)	-	Nil
Empty barrels/containers/liners contaminated with hazardous chemicals / wastes (Schedule – I; Cat. : 33.1)	480 Nos	15.2 MT

Contaminated cotton rags or other cleaning materials (Schedule – I; Cat.: 33.2)	13.93 MT	26.94 MT
Exhaust Air or Gas cleaning residue (Schedule – I; Cat.: 35.1)	-	15396.8 MT
Chromium sludge from cooling water (Schedule – I; Cat.: 35.5)	-	Nil
Spent ion exchange resin containing toxic metals (Schedule – I; Cat. : 35.2)	-	Nil
Used Glass Wool or insulation Material (Schedule – II; Class: C)	-	21.04 MT
Waste Chemicals (Schedule – II; Class: C)	-	Nil
Insulated copper wire scrap or copper with pvc sheathing (Schedule – II; Class: C)	-	Nil
Used Spent oil (Schedule – I; Cat.: 5.1)	70.16 MT	88.24 MT
Organic residues (Schedule: 1; Category: 1.4)	-	Nil
Tar storage tank residue (Schedule: 1; Category: 13.5)	-	Nil
Chemical sludge from wastewater treatment (Schedule: 1; Category: 35.3)	-	Nil
Chromium sludge from cooling water (Schedule: 1; Category: 35.5)	-	Nil

**D-2 : Generation from Pollution Control Facilities**

Name	Total Quantity	
	During the previous financial year	During the current financial year
-	Nil	Nil

**PART – E**

**Solid Wastes**

**E-1 : Generation from Process**

Name	Total Quantity (MT)	
	During the previous financial year	During the current financial year
1. Granulated BF Slag	257089	214385
2. Mills Scale	6885	6572
3. Electric Arc Furnace Slag	207737	174844
4. Char (DRI)	81797	89133
5. Wet Scrapper Sludge (DRI)	14014	11125
6. Bed Ash	24124	19573
7. Producer Gas Ash	2899	3311

**E-2 : Generation from Pollution Control Facilities**

Name	Total Quantity (MT)	
	During the previous financial year	During the current financial year
1. Air Pollution Control Device dust/residue of SMS	12029	8867
2. Flue Dust from MBF	6246	6530
3. Fly Ash	137389	123082
4. WHRB Ash	133226	122533
5. DRI DE Dust	23210	25095

**E-3: Quantity Recycled / Reutilized /sold**

Name	Total Quantity (MT)	
	During the previous financial year	During the current financial year
1. Air Pollution Control Device dust/residue of SMS	10566	7999
2. Flue Dust from MBF	5899	7147
3. Char DRI	81624	88727
4. Fly Ash	111838	180474
5. Bed Ash	30382	19438
6. DRI DE Dust	23858	22844
7. Electric Arc Furnace Slag	275753	244905
8. Granulated BF Slag	257592	215347
9. Producer Gas Ash	3479	3708
10. Wet Scrapper Sludge (DRI)	15292	9982
11. WHRB - Ash	150817	121719
12. Mill Scale	6885	7806

**Reutilized and reuse, sold and disposal:** Dust from the FES of SMS and the GCP of MBF is utilized in sinter making at the sinter plant. Char is partly sold to an external party and partly used in the power plant. Fly ash and bed ash are primarily used in brick making, cement manufacturing, and land development activities. Mill scale is also partially utilized in the sinter plant. Metallics recovered from SMS slag are recycled within the SMS, while non-metallic slag is used for land development and road construction. Granulated slag generated from the BF is fully utilized in cement manufacturing. PG ash and WHRB ash are used in land development processes.

PART – F		
Please specify the characterizations (in terms of composition in quantum) of hazardous as well as solid wastes and indicate disposal practice adopted for both this categories of wastes		
<b>F-1 : Hazardous Wastes</b>		
Description	Composition	Method of disposal
Wastes or residues containing oil (Schedule – I; Cat.: 5.2)	Polycyclic aromatic hydrocarbon	Recycled or reprocessed through authorized recycler approved by JSPCB.
Used Spent oil (Schedule – I; Cat.: 5.1)		
<b>F-2 : Solid Wastes</b>		
Description	Composition	Method of disposal
Air Pollution Control Device dust/residue of SMS	Fe, SiO <sub>2</sub> , Al <sub>2</sub> O <sub>3</sub> , CaO, MgO	In-house utilization in sinter making
Flue Dust from MBF	FeO, Fe, Cao, SiO <sub>2</sub>	In-house utilization in sinter making
Char DRI	Ash (SiO <sub>2</sub> , Al <sub>2</sub> O <sub>3</sub> , Fe <sub>2</sub> O <sub>3</sub> , CaO, MgO), Volatile Matter, Fixed Carbon	Sold outside, used in captive power plant
Fly Ash	SiO <sub>2</sub> , Al <sub>2</sub> O <sub>3</sub> , Fe <sub>2</sub> O <sub>3</sub> , CaO, MgO	Used in Brick making and cement manufacturing process and low land development
Bed Ash		
WHRB Ash		Filling of lowland area
DRI DE Dust	CaO, SiO <sub>2</sub>	Sold to the outside vendor
Electric Arc Furnace Slag	FeO, Fe, Cao, SiO <sub>2</sub>	Metallics recovered from slag are recycled within the SMS, while non-metallic slag is used for land development and road construction.

Granulated Slag of MBF	CaO, SiO <sub>2</sub> , Al <sub>2</sub> O <sub>3</sub> , MgO	Sold to outside vendor for Cement Making Processes
Producer Gas Ash	Fixed Carbon	Filling of lowland area
Wet Scrapper Sludge (DRI)	Fixed Carbon, Fe	Sold to the outside vendor
Mill Scale of Mills	Mostly Fe (t)	In-house utilization in sinter making

#### PART – G

##### **Impact of pollution control measure taken on conservation of natural resources and cost of production**

1. Pollution control equipment like Bag filters, gas cleaning plants at MBF have been installed to control emissions. Generated Flue dusts are reused at sinter plant for sinter making.
2. Separate Fume extraction system (FES) are provided at SMS 1,2 and 3. Collected FES dusts are reused at sinter plant.
3. Water flow meters have been installed to monitor water consumption.
4. ESP is provided at waste heat recovery boiler of DRI for control of particulate emission.
5. ESP is provided at coal based CPP for control of particulate emission.
6. ESP and bag filters are provided at sinter plant and pellet plant to collect dusts which are reused in the process.
7. Treatment of Industrial wastewater in the effluent treatment plant (ETP) and recycling the treated effluent back into process cooling, slag cooling, dust suppression, green belt development etc.
8. Installation of online CAAQMS, CEMS and EQMS for monitoring of ambient air, stack emission and treated effluent and their Data transmission to statutory bodies on real time basis.

#### PART – H

##### **Additional measures / investment proposal for environmental protection including abatement of pollution, prevention of pollution**

Several projects were undertaken in the last year under the operating / capex budget of departments. The major activities include - Refurbishment of Air pollution control systems, installation of new APCD to control the fugitive emission. The major work undertaken for fugitive emission control include:

1. Installation of 13 Mist Beams at Railway siding.
2. Installation of new bag filters at raw material circuit at MBF-2, Sinter Plant, SMS & Coke Oven Plant
3. Revamping of all the 8 fields of process electrostatic precipitator by installation of advanced controller at Pellet Plant
4. Stabilization of open ash dump yard into Green biodiversity park
5. Plantation of 16000 saplings of varied species
6. Construction of covered shed for coal storage at Coke Oven, DRI, CPP, MBF- 2 area

#### PART – I

##### **Any other particulars undertaken for improving the quality of environment**

Celebration of Tata Sustainable month and different campaign for creating awareness among employees.



05.09.2025  
Ravi Ranjan Prasoon  
Head - Environment

**For Tata Steel Limited, Gamharia**

# पहुंचे यूएसए प्रतिनिधि हुए अमेरिकी



मेधि व अन्य.

फोटो: प्रभात खबर

प्रभावित हुए.

## सदस्यों के साथ बैठक की

कल्याणंद यूनेस्को क्लब के सदस्यों के साथ अमेरिकी प्रतिनिधियों ने होटल एल्कोल में बैठक की. जिसमें ग्रामीण क्षेत्र के भ्रमण पर विस्तृत चर्चा की गयी. बैठक में प्रतिनिधियों ने कहा कि

## याद किये गये सिद्धो-काण्हू

में हूल दिवस काण्हू याद किये द्वारा आयोजित ई सोरेन उपस्थित सच्चे नायक थे.

रामदास हेंब्रम, मोरूडीह चौक सरा के नेतृत्व में संताली अर्किस्ट्रा ए, जिन्हें सफल आदि की अहम



भूमिका रही. करनडीह आदिवासी भवन में केंद्रीय प्रधान महासचिव दिल बहादुर ने कहा कि भ्रष्टाचार खत्म करने के लिए आजसू व जेपीपी 15 नवंबर से आंदोलन शुरू करेंगी. इसमें कृतिवास मंडल, सुनील, राजेश, राजेश घोषाल आदि उपस्थित थे. ज्ञाविमो द्वारा परसुडीह मंडल अध्यक्ष रूद्र मुंडा के नेतृत्व में मोटरसाइकिल रैली निकाली गयी.

## धरोहर को भी देखा



अमेरिकी प्रतिनिधियों की ग्रामीणों द्वारा धान से बनाये गये मुकूट को देखकर आंखे खुली रह गयी. इस दौरान प्रतिनिधियों ने संतालियों के जाहेरथान (पूजा स्थल) समेत अन्य सांस्कृतिक धरोहरों को भी देखा.

अमेरिकी सरकार द्वारा जो-जो सुविधा प्राप्त हो सकती है, उसे अतिशीघ्र प्राप्त करने का प्रयास किया जायेगा.

## छोटा कादल वाटरशेड समिति गठित

गम्हरिया ■ सामाजिक संस्था केजीवीके व आइडब्ल्यूएमपी गोविंदपुर प्रोजेक्ट द्वारा छोटा कादल व रूतडीह में वाटरशेड समिति गठित की गयी. इसमें गोवर्धन मंडल अध्यक्ष, लक्ष्मी धर महतो सचिव व लखन टुडू कोषाध्यक्ष मनोनीत



किया गया. वहीं रूतडीह गांव में माझीराम सरदार अध्यक्ष, जगबंधु महतो सचिव व कालीचरण कोषाध्यक्ष बनाया गया. समिति चयन में आरके त्रिपाठी, राजीव कुमार, गेंदा टुडू, रतन कुमार, मोनिका व विजय पाल आदि उपस्थित थे.

## डॉक्टर्स डे चिकित्सक सम्मानित होंगे आज

आदित्यपुर ■ डॉक्टर्स डे पर रविवार को आइएमए जमशेदपुर की ओर से एमजीएम अस्पताल में रक्तदान शिविर लगाया जायेगा. शाम में डॉ फतेह बहादुर सिंह, डॉ केके अय्यर, डॉ उमेश लुकतुके को सम्मानित किया जायेगा. इस अवसर पर कोल्हान आयुक्त अविनाश कुमार होंगे. इसकी जानकारी सचिव डॉ मृत्युंजय सिंह ने दी.

## उषा मार्टिन लिमिटेड

(उषा एलॉयज एंव स्टील्स डिवीजन)

पॉंचवा चरण, आदित्यपुर औद्योगिक क्षेत्र,  
गम्हरिया, जिला: सरायकेला-खरसावाँ

### आम सूचना

सर्वसाधारण को सूचित किया जाता है कि मेसर्स उषा मार्टिन लिमिटेड (उषा एलॉयज एवं स्टील्स डिवीजन) आदित्यपुर औद्योगिक क्षेत्र, पॉंचवा चरण, गाँव तथा तहशिल गम्हरिया, जिला: सरायकेला खरसावाँ के लौह एवं स्टील इकाई के विस्तार एवं कोक ओवेन प्लांट (0.5 MTPA), आयसन ओर वाशिंग प्लांट (2.7 MTPA) एवं पेलेटाइजेशन प्लांट (1.2 MTPA) को स्थापित करने हेतु, पर्यावरण एवं वन मंत्रालय, भारत सरकार, नई दिल्ली के पत्रांक संख्या-F.No.J-11011/611/2010-IA II(I), दिनांक 25.10.2011 द्वारा पर्यावरणीय स्वीकृति निर्गत किया गया है. जिन्हें भी पर्यावरणीय स्वीकृति संबंधित जानकारी प्राप्त करनी हो इसकी प्रतिलिपि झारखण्ड राज्य प्रदूषण नियंत्रण पथद के क्षेत्रीय कार्यालय एवं पर्यावरण एवं वन मंत्रालय, भारत सरकार के वेबसाईट <http://envfor.nic.in> पर उपलब्ध है।

डॉ० विजय शर्मा  
(संयुक्त कार्यकारी निदेशक)

## एफ इण्डिया लिमिटेड

01 झारखण्ड, इण्डिया

526 दिनांक 30/06/2012

नेविदाई आमंत्रित करता है.

कार्य का नाम

ऑफ मक/डेबरी/स्लैग/स्कल

लॉम एसएमएस - 2

ऑफ मक/डेबरी/स्लैग/स्कल/स्टील



## युनाइटेड बैंक ऑफ इंडिया

11, हेमता बसु सारणी, कोलकाता-700 001, टेलीफोन 233 1396 (सी), 233 1321 (ओ)  
फैक्स 0651 233 1396, झारखंड क्षेत्र, सलूजा बिल्डिंग, पीपी कंपाउंड, रांची-834001

### विक्री सूचना

जबकि युनाइटेड बैंक ऑफ इंडिया के प्राधिकृत अधिकारी ने सिक्योरिटी इंटेरेस्ट (इंफोर्समेंट) नियम 2002 के साथ पठित सिक्योरिटाइजेशन एंड रिकंस्ट्रक्शन ऑफ फायनान्सियल असेट्स एंड इंफोर्समेंट ऑफ सिक्योरिटी इंटेरेस्ट अधिनियम, 2002 के अंतर्गत शक्तियों का प्रयोग करते हुए तथा नीचे उल्लेखित ऋणकर्ताओं / जमानतदारों के सुरक्षित आस्तियों के कब्जे के अनुसार अधोहस्ताक्षरी के द्वारा युनाइटेड बैंक ऑफ इंडिया के सुरक्षित ऋण की वसूली के लिए, नीचे दिये गये विवरण के अनुसार संपत्तियों की खरीद के लिए प्रस्ताव आमंत्रित किये जाते हैं:-

### संपत्तियों का विवरण

क्र.सं.	खाता का नाम / ऋणकर्ता	संपत्तियों का विवरण	सुरक्षित राशि (₹)	पेशगी राशि (₹)	नियत कीमत (₹)
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**JHARKHAND STATE POLLUTION CONTROL BOARD**  
T.A. DIVISION BUILDING (GROUND FLOOR), H.E.C., DHURWA, RANCHI -834004  
Phone.:2400852, 2400851, Fax:0651- 2400850 www.jspcb.org

**FORM 2**  
[See rule 6(2)]

**FORM FOR GRANT OR RENEWAL OF AUTHORIZATION BY STATE POLLUTION CONTROL BOARD TO THE OCCUPIERS, RECYCLERS, REPROCESSORS, REUSERS, USER AND OPERATORS OF DISPOSAL FACILITIES**

1. No. of authorization and date of issue: JSPCB/HO/RNC/HWM-18227614/2025/36 10/05/2025
2. Reference of application(No. and date): 18227614 07/01/2024
3. Tata Steel Limited, Gamharia, Main Plant-1 of T V Narendran is hereby granted an authorisation based on the enclosed signed inspection report for generation, collection, reception, storage, transport, reuse, recycling, recovery, pre-processing, co-processing, utilisation, treatment, disposal or any other use of hazardous or other wastes or both on the premises situated at Main Plant-1, Adityapur Industrial area (Phase-5), Gamharia, Dist - Saraikela-Kharsawan, Jharkhand

**Details of Authorisation**

Sl.No.	Category of Hazardous Waste as per the Schedules I, II and III of these rules	Authorised mode of disposal or recycling or utilisation or co-processing, etc.	Quantity(ton/annum)
1	Schedule I ( Wastes or residues containing oil( Cat 5.2))	Recovery and Reuse Authorized recyclers	35 KL/Annum
2	Schedule I (Discarded asbestos ( Cat 15.2))	Recovery and Reuse Authorized recyclers	5 MT/Annum
3	Schedule I (Process wastes, residues and sludges (Discarded Paint) (Cat 21.1))	Recovery and Reuse Authorized recyclers	10 KI/annum
4	Schedule I (Spent solvents (Cat 21.2))	Recovery and Reuse Authorized recyclers	10 KI/annum
5	Schedule I ("Empty barrels/containers/liners contaminated with hazardous chemicals /wastes" (33.1))	Recovery and Reuse Authorized recyclers	25 MT/annum
6	Schedule I (Contaminated cotton rags or other cleaning materials(Cat 33.2))	Incineration-Captive	45 MT/Annum
7	Schedule I (Exhaust Air or Gas cleaning residue (Cat 35.1))	Recovery and Reuse Authorized recyclers	25000 MT/Annum
8	Schedule I (Chromium sludge from cooling water (Cat 35.5))	Common Landfill-TSDF	20 MT/ Annum
9	Schedule I (Spent ion exchange resin containing toxic metals (35.2))	Common Landfill-TSDF	2 MT/Annum
10	Schedule II (Used Glass Wool or insulation Material (Class C))	Common Landfill-TSDF	10 T/annum
11	Schedule II (Waste Chemicals(Class C))	Incineraton By authorized Agency	01 MT/annum
12	Schedule II (Insulated copper wire scrap or copper with pvc sheathing( S.NO. 7)	Incineraton By authorized Agency	10 MT/ Month
13	Schedule I (Used Spent oil (Cat 5.1))	Recovery and Reuse Authorized recyclers	70 KI /Annum

(1) The authorisation shall be valid for a period of Valid till 30.03.2025 years

(2) The authorisation is subject to the following general and specific conditions (Please specify any conditions that need to be imposed over and above general conditions, if any):

**A General conditions of authorisation:**

1. The authorised person shall comply with the provisions of the Environment (Protection) Act, 1986, and the rules made there under.
2. The authorisation or its renewal shall be produced for inspection at the request of an officer authorised by the State Pollution Control Board.
3. The person authorised shall not rent, lend, sell, transfer or otherwise transport the hazardous and other wastes except what is permitted through this authorisation.
4. Any unauthorised change in personnel, equipment or working conditions as mentioned in the application by the person authorised shall constitute a breach of his authorisation.
5. The person authorised shall implement Emergency Response Procedure (ERP) for which this authorisation is being granted considering all site specific possible scenarios such as spillages, leakages, fire etc. and their possible impacts and also carry out mock drill in this regard at regular interval of time.
6. The person authorised shall comply with the provisions outlined in the Central Pollution Control Board guidelines on “Implementing Liabilities for Environmental Damages due to Handling and Disposal of Hazardous Waste and Penalty”
7. It is the duty of the authorised person to take prior permission of the State Pollution Control Board to close down the facility.
8. The imported hazardous and other wastes shall be fully insured for transit as well as for any accidental occurrence and its clean-up operation.
9. The record of consumption and fate of the imported hazardous and other wastes shall be maintained.
10. The hazardous and other waste which gets generated during recycling or reuse or recovery or pre-processing or utilisation of imported hazardous or other wastes shall be treated and disposed of as per specific conditions of authorisation.
11. The importer or exporter shall bear the cost of import or export and mitigation of damages if any.
12. An application for the renewal of an authorisation shall be made as laid down under these Rules.
13. Any other conditions for compliance as per the Guidelines issued by the Ministry of Environment, Forest and Climate Change or Central Pollution Control Board from time to time.
14. Annual return shall be filed by June 30th for the period ensuring 31st March of the year.

**B Specific conditions:**

- (1) That, the renewal of authorization shall be made as laid down in the rules.
- (2) That, the occupier shall submit annual return in form IV as per the time line mention in the HoWM Rules, 2016 with details of manifest.
- (3) That, the occupier shall ensure the disposal of Hazardous Waste within time line through authorized recycler/ actual users and shall ensure that the Hazardous Waste should be entered in the passbook of recycler/ actual users.
- (4) That, the occupier shall maintain record of Hazardous Waste generated, utilized and disposed as per form - 3 of the Hazardous and other waste (Management & Handling) Rules, 2016 and shall produce to concerned SPCB officers at the time of inspection.
- (5) That, the occupier shall complied all directions given by standard operating procedure.
- (6) That, the occupier shall install and maintain the display board as per the provisions of HoWM Rules, 2016 and shall submit the photographs to ensure the compliance of the order of Hon'ble Supreme Court passed in 2003.

Memo No:JSPCB/HO/RNC/HWM-  
18227614/2025/36  
Date: 10/05/2025

(Rajeev Lochan Bakshi)  
Member Secretary

**Copy To:**

**Chief Inspector of Factory, Ranchi / Director of Mines, Government of Jharkhand, Ranchi/ Director of Industry, Government of Jharkhand, Ranchi/ Secretary, Jharkhand State Electricity Board, Plant Plaza Road, P.O. Dhurwa, Dist- Ranchi /Dy Commissioner, SERAIKELA KHARSAWAN/ D.F.O., SERAIKELA KHARSAWAN/ District Mining Officer, SERAIKELA KHARSAWAN / The Regional Officer, Regional Office-Cum-Laboratory, JSPCB, Jamshedpur for information and necessary action. He is directed to submit the compliance status report of the same.**

(Rajeev Lochan Bakshi)  
Member Secretary



**JHARKHAND STATE POLLUTION CONTROL BOARD**  
T.A. DIVISION BUILDING (GROUND FLOOR), H.E.C., DHURWA, RANCHI -834004  
Phone.:2400852, 2400851, Fax:0651- 2400850 www.jspcb.org

**FORM 2**  
[See rule 6(2)]

**FORM FOR GRANT OR RENEWAL OF AUTHORIZATION BY STATE POLLUTION CONTROL BOARD TO THE OCCUPIERS, RECYCLERS, REPROCESSORS, REUSERS, USER AND OPERATORS OF DISPOSAL FACILITIES**

1. No. of authorization and date of issue: JSPCB/HO/RNC/HWM-18229301/2025/35 10/05/2025
2. Reference of application(No. and date): 18229301 07/01/2024
3. Tata Steel Limited, Gamharia of T V Narendran is hereby granted an authorisation based on the enclosed signed inspection report for generation, collection, reception, storage, transport, reuse, recycling, recovery, pre-processing, co-processing, utilisation, treatment, disposal or any other use of hazardous or other wastes or both on the premises situated at Main Plant-2, Adityapur Industrial Area (Phase - 5), Gamharia, District: Seraikela- kharsawan, Jharkhand

**Details of Authorisation**

Sl.No.	Category of Hazardous Waste as per the Schedules I, II and III of these rules	Authorised mode of disposal or recycling or utilisation or co-processing, etc.	Quantity(ton/annum)
1	Schedule I (Organic residues (Cat 1.4))	Recovery and Reuse Authorized recyclers	1000 KL/Annum
2	Schedule I (Used Spent oil (5.1))	Recovery and Reuse Authorized recyclers	50 KI/annum
3	Schedule I (Wastes or residues containing oil(Cat 5.2))	Recovery and Reuse Authorized recyclers	30 KI/annum
4	Schedule I (Tar storage tank residue (Cat 13.5))	Recovery and Reuse Authorized recyclers	50 KI/annum
5	Schedule I (Discarded asbestos (15.2))	Recovery and Reuse Authorized recyclers	10 MT/ Annum
6	Schedule I (Process wastes, residues and sludges (Discarded Paint) (Cat 21.1))	Recovery and Reuse Authorized recyclers	5 MT/Annum
7	Schedule I (Spent solvents (21.2))	Recovery and Reuse Authorized recyclers	05 T/annum
8	Schedule I ("Empty barrels/containers/liners contaminated with hazardous chemicals /wastes" (Cat 33.1))	Recovery and Reuse Authorized recyclers	20 MT/ Annum
9	Schedule I (Contaminated cotton rags or other cleaning materials (Cat 33.2))	Incineration-Captive	15 MT/Annum
10	Schedule I (Spent ion exchange resin containing toxic metals (Cat 35.2))	Common Landfill-TSDF	10 MT/ Annum
11	Schedule I (Chemical sludge from waste water treatment (Cat 35.3))	Recovery and Reuse Authorized recyclers	300 MT/Annum
12	Schedule I (Chromium sludge from cooling water(35.5))	Common Landfill-TSDF	20 MT/ Annum
13	Schedule II (Used Glass Wool or insulation Material (Class C))	Common Landfill-TSDF	50 MT/Annum
14	Schedule II (Waste Chemicals (Class C))	Incineraton By authorized Agency	50 MT/Annum
15	Schedule IV (Insulated copper wire scrap or copper with pvc sheathing( S No. 7))	Incineraton By authorized Agency	10 MT/Annum

(1) The authorisation shall be valid for a period of 5 years (till 31.07.2025) years

(2) The authorisation is subject to the following general and specific conditions (Please specify any conditions that need to be imposed over and above general conditions, if any):

**A General conditions of authorisation:**

1. The authorised person shall comply with the provisions of the Environment (Protection) Act, 1986, and the rules made there under.
2. The authorisation or its renewal shall be produced for inspection at the request of an officer authorised by the State Pollution Control Board.
3. The person authorised shall not rent, lend, sell, transfer or otherwise transport the hazardous and other wastes except what is permitted through this authorisation.
4. Any unauthorised change in personnel, equipment or working conditions as mentioned in the application by the person authorised shall constitute a breach of his authorisation.
5. The person authorised shall implement Emergency Response Procedure (ERP) for which this authorisation is being granted considering all site specific possible scenarios such as spillages, leakages, fire etc. and their possible impacts and also carry out mock drill in this regard at regular interval of time.
6. The person authorised shall comply with the provisions outlined in the Central Pollution Control Board guidelines on “Implementing Liabilities for Environmental Damages due to Handling and Disposal of Hazardous Waste and Penalty”
7. It is the duty of the authorised person to take prior permission of the State Pollution Control Board to close down the facility.
8. The imported hazardous and other wastes shall be fully insured for transit as well as for any accidental occurrence and its clean-up operation.
9. The record of consumption and fate of the imported hazardous and other wastes shall be maintained.
10. The hazardous and other waste which gets generated during recycling or reuse or recovery or pre-processing or utilisation of imported hazardous or other wastes shall be treated and disposed of as per specific conditions of authorisation.
11. The importer or exporter shall bear the cost of import or export and mitigation of damages if any.
12. An application for the renewal of an authorisation shall be made as laid down under these Rules.
13. Any other conditions for compliance as per the Guidelines issued by the Ministry of Environment, Forest and Climate Change or Central Pollution Control Board from time to time.
14. Annual return shall be filed by June 30th for the period ensuring 31st March of the year.

**B Specific conditions:**

- (1) That, the occupier shall comply the provisions of the Environment Protection Act and Rules.
- (2) That, the authorization shall be produced at the time of inspection.
- (3) That, the occupier authorized shall not rent/sell or otherwise transport the H/W without obtaining prior permission of the Board.
- (4) That, any un-authorization change shall constitute a breach the authorization.
- (5) That, it is the duty of authorized person to take prior permission of the Board to close down the facility.
- (6) That, the renewal of authorization shall be made as laid down in the rules.
- (7) That, any other condition for compliance as per the guidelines issued by the MoEF for CPCB.
- (8) That, the occupier shall submit annual return for the financial year before 30th June, every year.
- (9) That, the occupier shall comply all the conditions.
- (10) That, the occupier shall submit quarterly and annual information on hazardous wastes consumed its source, products generated or resources conserved (specifying the details like type and quantity of resources conserved) to the concerned SPCB.
- (11) That, the occupier shall comply all directions given in standard operating procedure.
- (12) The previous auth. issued vide dated 30.3.2019 is revised up to this extent.

Memo No:JSPCB/HO/RNC/HWM-  
18229301/2025/35  
Date: 10/05/2025

(Rajeev Lochan Bakshi)  
Member Secretary

**Copy To:**

**Dy Commissioner, Jamshedpur / The Regional Officer, Regional Office-Cum-Laboratory, JSPCB, Jamshedpur for information and necessary action. He is directed to submit the compliance status report of the same.**

(Rajeev Lochan Bakshi)  
Member Secretary