

#### Ref. No. - TSG/EC/2023-24/May-24/01

21/05/2024

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, Ranchi

**Subject:** Half yearly environmental clearance compliance report of Tata Steel Limited, Gamharia for the period from October 2024 to March 2024

#### **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 October 23 to March 24.

This is for your kind information and necessary records please.

Thanking you,

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

Vmmw215/24

(V Karthikeyan) Head -Environment & Sustainability

Cc:

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

#### TATA STEEL LIMITED

Tata Steel Gamharia Seraikela Kharsawan Jamshedpur 832 108 India Tel 065771 02349 Registered Office Bombay House 24 Homi Mody Street Fort Mumbai 400 001 India Tel 91 22 6665 8282 Website www.tatasteel.com Corporate Identity Number L27100MH1907PLC000260

S.N.	EC Conditions	Compliance Status
	Specific conditions	
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 larkhand	Adequate Pollution control devices are installed at all required locations to maintain emissions within permitted norms. The equipment installed are as below – <u>Captive Power Plant (CPP)</u> : Electrostatic precipitator (ESPs)
	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	are provided in all WHRBs and Coal based boilers. Water sprinkling arrangement, Dry fog system, sprinklers and rain guns are provided in coal handling area including crushers, screens and 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.	<b>Sinter Plant:</b> ESPs are provided in sinter process and product circuit to control emissions. In Flux Crusher and screen circuits bag filters are provided. Dry fog Dust Suppression system is provided in ground hopper and rain gun sprinklers are installed in material storage yard for dust suppression during material handling.
		<b>Blast furnace:</b> Bag filters are installed in Raw Material Handling Area and Cast House. Gas Cleaning Plant (GCP) is installed for blast furnace gas cleaning. 7 Nos of Mist beam water cannon are provided in RMHS and cast House area for suppression of dust during material handling.
		<b>Steel Melting Shop:</b> The steel melting shop is provided with Fume Extraction System. Bag filters are provided in all raw material handling circuits for control of fugitive dust.
		Water sprinklers are installed at all dust prone areas viz. slag handling area, material storage yards etc.
		List of details APC systems installed is attached as Annexure-3.
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.	Secondary emissions from SMS and Sinter Plant are controlled through high-capacity Fume Extraction System (FES) and Bag Filters respectively. Work-zone Air Quality monitoring is carried out by NABL accredited agency at regular intervals and values are maintained within permitted levels. Guidelines / Code of Practice of the statutory bodies issued from time to time are regularly followed. Work-Zone Air Quality monitoring reports are attached as Annexure-5.

iii	Total water requirement from River Subranarekha shall not exceed $12,110 \text{ m}^3/\text{day}$ 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.	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). Wastewater after treatment in ETP is used for slag granulation, coke quenching, in cooling circuit of Pellet Plant, spraying over roads for dust suppression, plantation and horticulture activities. No ground water is used for industrial purposes. Domestic effluent is treated through sewage treatment plant and septic tank / soak pit arrangement. The treated effluent is 100% recycled within the plant for various process related activities.
iv	Continuous monitoring of Total Organic Compounds (TOCs) shall be done at the outlet of ETP (BOD plant).	As there is no "Recovery type Coke Oven" in the plant the requirement for BOD Plant and Continuous Monitoring of TOC isn't needed. Online monitoring facility of pH, Temperature, TSS, COD & BOD is provided at the outlet of centralized effluent treatment plant.
v	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 Bhuvaneswar, CPCB and Jharkhand SPCB.	Ground water monitoring is carried out by NABL accredited agency at regular intervals around the solid waste disposal site. Monitoring reports are submitted to statutory bodies as directed in the condition. Ground water monitoring report attached as Annexure-6
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.	<ul> <li>Solid waste generated within the plant are segregated and most of the waste are recycled back in process.</li> <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>

#### Half yearly Environment Clearance Compliance Status (From October 23 to March 2024)

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

vii	All the char from DRI plant shall be utilized in AFBC boiler of power plant and no char shall be accumulated anywhere else.	Char from DRI is used in Power Plant as a partial replacement of Coal which reduces CO2 emission from the process. Char is also reused in sponge Iron Plant to improve bed fluidity. Excess quantity of char is sold to outside 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.	Fly ash and bottom bricks is provided to local fly ash brick manufacturers for production of fly-ash.
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.	Agreed.
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.	As per letter No. 1221 dated 26.07.2004 from Chief Conservator of Forests – cum – Chief Wildlife Warden, Jharkhand Dalma sanctuary is beyond 15KM from the plant and hence away from the impact zone.
	General Conditions	
i	The project authorities must strictly adhere to the stipulation made by the Jharkhand Pollution Control Board (Jharkhand SPCB) and the State Government.	Guidelines by JSPCB are strictly adhered.
ii	No further expansion or modifications in the plant should be carried out without prior approval of the Ministry of Environment and Forests.	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 confirm 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	Monitoring of gaseous pollutants in all major stacks is periodically done and record maintained. The monitoring reports are sent to statutory bodies at regular intervals. Online stack monitoring facility is provided in all major stacks. Adequate pollution control devices such as ESPs, bag filters are provided for control of stack dust emission and Particulate matter emissions are maintained within norms. <b>Stack monitoring result attached as Annexure-1.</b>

iv	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.	Four Continuous Ambient Air Quality Monitoring Stations
īv	monitoring stations shall be established in the downwind direction as well as where maximum ground level concentration of SPM, SO2 and NOx 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.	<ul> <li>(CAAQMS) have been installed inside the plant premises in consultation with JSPCB. Ambient Air Quality Monitoring and stack monitoring is carried out by JSPCB accredited agency and report is submitted to JSPCB / CPCB &amp; Regional office of MOEFCC on half-yearly basis.</li> <li>Stack monitoring result attached as Annexure-1.</li> <li>Ambient air monitoring result attached as Annexure-2.</li> </ul>
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.	<ul> <li>Adequate pollution control equipment (APCE) is installed in different units for control of pollution. The type of Pollution Control Equipment installed in different locations are as below –</li> <li>a) DRI – Bag Filters</li> <li>b) Power plant – ESPs, Bag Filters</li> <li>c) Sinter Plant – ESPs, Dry Fog System, Bag Filters</li> <li>d) Steel Melting Shop – Fume Extraction Systems, bag filters</li> <li>e) Blast Furnace – Bag Filters, Dry and Wet Gas Cleaning Plant</li> <li>Dust conditioning systems are provided at required locations to minimize generation of dust during unloading of hoppers / silos. Fixed and mobile sprinklers are deployed at dust generation points for control of fugitive dust. Monitoring records are maintained.</li> </ul>

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.	Industrial effluent generated at various locations within the plant is collected and treated in centralized Effluent Treatment Plant (ETP) of 7200 KLD. Treated water is reused back in Pellet Plant, Blast furnace, Coke Oven etc for various purposes including slag granulation, Coke quenching, spraying over roads for dust suppression and plantation and horticulture activities. ETP treated water analysis report is attached as Annexure-7.
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).	Noise generation sources are isolated with appropriate acoustic enclosures. Equipment is fitted with silencers and acoustic hoods to minimize noise at source. Ambient noise level is maintained within the norms specified under Environment Protection Act, 1986. <b>Ambient Noise monitoring report is attached as Annexure-8.</b>
viii	Green belt shall be developed in 33% area within and around the plant premises as per the CPCB guidelines in consultation with DFO.	Continuous efforts are made to plant more trees within the plant area. 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 Annexure-4.
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.	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 & Mill area.
X	Occupational Health Surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.	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.
xi	Recommendations made in the Corporate Responsibility for Environment Conservation (CREP) issued for the steel plants shall be implemented.	Recommendations made in Corporate Responsibility for Environment Conservation (CREP) for steel plants is regularly reviewed and implemented.

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.	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 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 Annexure - 9
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.	Separate funds for environment management are allocated and spent for betterment of environment.
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.	Half-yearly compliance report and monitoring data are regularly sent to regional office, MoEFCC, CPCB and JSPCB as per stipulated guidelines.
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 <u>http://envfor.nic.in</u> . 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.	Complied.

Half yearly Environment Clearance Compliance Status
(From October 23 to March 2024)

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.	Date of Financial closure: 2007 Date of issue of consent to establish by JSPCB: - 17.11.2007 vide letter no 4250
-----	---	--

Issue date : 25-10-2011

#### COMPLIANCE OF STIPULATED CONDITIONS OF ENVIRONMENTAL CLEARANCE

SN	EC Conditions	Compliance Status
Α	Specific conditions	
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.	<ul> <li>Several Steps are taken to mitigate RSPM levels in ambient air. Measures taken for control of dust levels in ambient air includes the following –</li> <li>Fixed type sprinklers including rain guns are installed in raw material handling areas.</li> <li>7 Nos of Water mist canon is installed in the RMHS and slag dumping area of MBF to control fugitive emission during material handling.</li> <li>Mobile sprinklers are provided to reduce fugitive dust from roads.</li> <li>Source emissions are controlled by effective operation of pollution control systems viz. ESPs, Bag filters, dry fog systems etc.</li> <li>Broad leaved trees are planted in open areas within the department and plant periphery.</li> <li>Construction of RCC roads inside plant.</li> <li>All the paved roads are cleaned by vacuum road sweeper to arrest dust emission due to vehicular movement.</li> <li>Raw material stock yards are covered with tarpaulin.</li> <li>4 Continuous Ambient Air Quality Monitoring Stations (CAAQMS) are installed in different corners of the plant for ambient air quality monitoring.</li> <li>11 online gas analyzers and 25 online dust monitors are also installed at different stacks for monitoring of emission from the stack.</li> </ul>
ii	Stack monitoring facilities for all the major stacks and adequate air pollution control	Stack monitoring facilities are provided at all major stacks, 11 online gas analyzers and 25 online dust
	systems to control particulate emissions	monitors are installed covering all major stacks for
	within the prescribed limits from coke oven shall be provided. Carbon mono-oxide (CO)	monitoring of emission from the stacks. Adequate pollution control devices are installed to
	shall also be monitored along with other	control the particulate matter emission from coke oven
	parameters and standards notified under the Environment (Protection) Act shall be	And pellet plant. PM, SO <sub>2</sub> , and NOx in flue gas of Coke Oven is monitored
	followed. ESP shall be installed to control	at regular intervals. The monitoring reports are
	the particulate emissions from the pellet plant. The reports shall be submitted to	regularly submitted to MoEFCC Ranchi, CPCB and JSPCB.
	the Ministry's Regional Office at	
	Bhubaneswar, SPCB and CPCB.	Stack monitoring result attached as Annexure-1

Half yearly Environment Clearance Compliance Status	5
(From October - 2023 to March - 2024)	

iii	Multi stage 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.	Coke Oven installed is of 'Non-Recovery Type' and hence dust and gaseous emission from the plant is very negligible. Non-recovery type ovens work on negative pressure and leakages in the system is insignificant.
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.	The prescribed emission standard is for 'Recovery type', whereas the Coke Ovens installed at TSG is of Non- recovery type and hence 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.	Adequate pollution control devices are installed at all required locations. Water sprinkling arrangements are provided to control secondary fugitive dust generated from vehicular movement, ground hoppers etc.
	coal handling plant and coke sorting plant of coke oven plant. Bag filters shall be provided to hoods and dust collectors to coal and coke handling to control dust emissions. Water sprinkling system shall be provided to control secondary fugitive dust emissions generated during screening, loading, unloading, handling and storage of raw materials etc.	List of details APC systems installed, and other environmental initiatives is attached as Annexure-3.
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.	Secondary emissions from SMS and Sinter Plant are controlled through high-capacity Fume Extraction System (FES) and Bag Filters respectively. Work-zone Air Quality monitoring is carried out by NABL accredited agency at regular intervals and values are maintained within permitted levels. Guidelines / Code of Practice of the statutory bodies issued from time to time are regularly followed. Work-Zone Air Ouality monitoring reports are
		attached as Annexure-5.

Half yearly Environment Clearance Compliance Status (From October - 2023 to March - 2024) EC Accord No: F. No: J-11011/611/2010-IA-II (I)

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.	Fugitive emissions due to movement of vehicles are controlled through water spraying. Fixed and mobile type sprinklers are deployed at strategic locations to maintain fugitive dust levels. Dust extraction system is installed in conveyor belts for control of dust during material transfer. Material carrying vehicles are closely monitored to prevent any overloading. Vehicles carrying fines and other materials are covered with tarpaulin to prevent emission during transport.
viii	Total requirement of the water for the proposed expansion shall not exceed 3,440 m3/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.	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). Wastewater after treatment in ETP is used for slag granulation, coke quenching, in cooling circuit of Pellet Plant, spraying over roads for dust suppression, plantation and horticulture activities. No ground water is used for industrial purposes. Domestic effluent is treated through sewage treatment plant and septic tank / soak pit arrangement. The treated effluent is 100% recycled within the plant for various process related activities.
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.	Rainwater harvesting structures are created within the premises to harvest rain water. Open reservoirs within the plant also act as sink for rain water during rainy season the water of which is used in the plant.
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.	Coke breeze from Coke Oven Plant is 100% re-used internally in Sinter Plant. Waste Oil generated within the plant is disposed of periodically to authorized recycler.

Half yearly Environment Clearance Compliance Status	s
(From October - 2023 to March - 2024)	

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.	Continuous efforts are made to plant more trees within the plant area. 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 Annexure-4.
xii	The recommendations made in the Charter on Corporate Responsibility for Environment Protection (CREP) for the Coke Oven Plant shall be implemented.	The recommendation of CREP applicable to integrated Iron & Steel Industry is implemented and reviewed regularly.
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.	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 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.	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 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 Annexure - 9
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.	Required infrastructure as directed in EC were provided during project and commissioning stages of the plant.

Half year	ly Eı	nvironmen	t Clea	rance	Com	oliance	Status
(	From	October -	2023	to Ma	rch -	2024)	

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.	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.
В	General Conditions:	
i	The project authorities shall strictly adhere to the stipulations made by the Jharkhand Pollution Control Board (JSPCB) and State Govt.	Stipulations of JSPCB are strictly adhered.
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.	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.	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.	These features are taken care of in Design & Engineering of the project and emissions are maintained within norms.

Half yearly Environment Clearance Compliance Status	
(From October - 2023 to March - 2024)	

	The president existing alkell strictly	The manipiana of Harandona Chamicals Dulas 1000 and
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.	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.
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.	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).	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.
viii	The company shall develop rainwater harvesting structures to harvest the rainwater for utilization in the lean season besides recharging the ground water table.	Rainwater harvesting structures are created within the plant for harvesting rainwater. Open reservoirs within the plant serve as catchment pits and storage of rainwater.
ix	Occupational Health Surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.	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.	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.	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.

			EC Accord No: F No:
	Half vearly Environment Clearance Com	pliance Status	J-11011/611/2010-IA-II (I)
	(From October - 2023 to March -	2024)	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.	The funds provided to other purpose.	for EMP are not diverted for any
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.	Status of compliance uploaded in the webs the same is periodice government bodies JSPCB twice in a yee emissions, ambient a displayed in the elect gate of the company.	e of the EC conditions is being site of the company. The status of ally updated and sent to various including MoEFCC, CPCB and ear. The monitored data of stack air quality and effluent quality is ronic display board near the main
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.	Compliance and mor PARIVESH portal onco	nitoring reports are submitted in e in every six months as stipulated.

	Half yearly Environment Clearance Com (From October - 2023 to March -	pliance Status 2024)	EC Accord No: F. No: J-11011/611/2010-IA-II (I) Issue date : 25-10-2011
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.	Environmental State submitted regularly to every year.	ment for each financial year is o JSPCB before 30 <sup>th</sup> of September
xvii xvii i	The Project proponent shall inform the public that the project has been accorded environmental clearance by the Ministry and copies of the clearance letter are available with the JSPCB and may also be seen at website of the Ministry of Environment and Forests at http:/envfor.nic.in. This shall be advertised within seven days from the date of issue of the clearance letter, at least in two local newspapers that are widely circulated in the region of which one shall be in the vernacular language of the locality concerned and a copy of the same should be forwarded to the Regional office. 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.	The issuance of enviro in local newspaper - dated 01.07.2012. Date of financial closu NOC issue date by JS Land development job	prabhat Khabar & Avenue Mail Prabhat Khabar & Avenue Mail ure: 01.02.12. PCB: 18.01.12. o started on: 15.02.12

#### Stack Emission Monitoring

S/N	Unit	Stack Attached to	Month	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		WHRB - 1 & 40 TPH	Oct-23	RN-230714001S16	26.10.2023	160	6.5	125703.7	37.4	290.6	68.9
2	CPP	WHRB - 2 & 3 (DRI-2&3)	Oct-23	RN-230714001S08	10.10.2023	125	15.8	332471.9	39.9	356.1	96.5
3		WHRB - 4 & 5 (DRI-4&5)	Oct-23	RN-230714001S07	10.10.2023	120	7.4	157687.3	36.9	312.5	120.3
4	SMS	FES of SMS - 1 & 2	Oct-23	RN-230714001S14	25.10.2023	64	5.8	351999.0	19.6	46.9	79.4
5	omo	FES of SMS - 3	Oct-23	RN-230714001S09	13.10.2023	87	6.7	380564.5	24.1	55.7	89.7
6	WRM	Reheating Furnace	Oct-23	RN-230714001S15	25.10.2023	386	12.7	35469.2	27.6	69.4	139.4
7	Blooming Mill	Reheating Furnace	Oct-23	RN-230714001S13	21.10.2023	332	7.4	39936.1	28.3	82.4	152.9
8	Sinter Plant	Process ESP	Oct-23	RN-230714001S04	05.10.2023	121	6.5	505011.7	53.7	63.7	126.8
9	Sinter Flant	Tail ESP	Oct-23	RN-230714001S03	05.10.2023	107	6.6	285717.7	25.8	-	-
10	Pellet Plant	Kiln Stack	Oct-23	RN-230714001S18	17.10.2023	131	6.1	499956.2	23.4	64.2	85.4
11		Cast House	Oct-23	RN-230714001S02	04.10.2023	34	5.8	55835.2	19.5	-	-
12	MBF-1	Ground Hopper	Oct-23	RN-230714001S01	04.10.2023	47	13.9	28713.5	16.2	-	-
13		Stock House	Oct-23	RN-230714001S10	14.10.2023	45	7.2	26669.7	16.2	-	-
14		Stoves	Oct-23	RN-230714001S11	16.10.2023	138	6.2	65765.2	22.9	30.9	63.4
15	MBF-2	Cast House	Oct-23	RN-230714001S05	06.10.2023	61	8.0	142790.6	21.8	-	-
16	MBF-2	PCI Stack	Oct-23	RN-230714001S06	06.10.2023	70	16.6	39503.2	19.6	-	-
17		RMHS	Oct-23	RN-230714001S12	16.10.2023	45	6.1	30750.0	17.6	-	-
18		CPP 25 MW Stack	Nov-23	RN-230714001S02	01.11.2023	123	7.4	198826.7	62.7	529.3	442.3
19	CPP	WHRB - 1 & 40 TPH	Nov-23	RN-230714001S18	22.11.2023	127	5.3	110954.4	30.7	356.6	78.2
20	MBF-2 CPP SMS WRM Blooming Mill Sinter Plant Pallet Plant	WHRB - 2 & 3 (DRI-2&3)	Nov-23	RN-230714001S05	03.11.2023	120	7.4	158292.6	31.9	331.2	188.6
21		WHRB - 4 & 5 (DRI-4&5)	Nov-23	RN-230714001S17	17.11.2023	95	5.9	134322.3	33.6	299.6	131.4
22	SMS	FES of SMS - 1 & 2	Nov-23	RN-230714001S14	15.11.2023	62	5.9	358335.6	22.6	39.7	72.4
23		FES of SMS - 3	Nov-23	RN-230714001S16	16.11.2023	78	8.3	481932.0	25.9	56.8	91.4
24	WRM	Reheating Furnace	Nov-23	RN-230714001S15	14.11.2023	390	12.7	35111.3	24.9	66.4	128.3
25	Blooming Mill	Reheating Furnace	Nov-23	RN-230714001S13	11.11.2023	327	11.1	60137.6	31.4	78.9	149.5
26	Sinter Plant	Process ESP	Nov-23	RN-230714001S09	06.11.2023	125	6.5	524372.6	49.7	61.9	117.4
27		Tail ESP	Nov-23	RN-230714001S08	06.11.2023	112	5.6	239314.0	27.9	-	-
28	Pellet Plant	Kiln Stack	Nov-23	RN-230714001S01	08.11.2023	133	10.6	768041.2	28.0	65.4	85.0
29		Cast House	Nov-23	RN-230714001S04	02.11.2023	42	5.4	56096.4	22.7	-	-
30	MBF-1	Ground Hopper	Nov-23	RN-230714001S03	02.11.2023	47	13.9	28739.7	18.8	-	-
31		Stock House	Nov-23	RN-230714001S11	10.11.2023	41	6.9	25878.5	15.8	-	-
32		Cast House	Nov-23	RN-230714001S06	04.11.2023	58	13.1	235888.2	22.7	-	-
33	MBF-2	PCI Stack	Nov-23	RN-230714001S07	04.11.2023	74	16.5	38855.9	15.6	-	-
34		Stock House	Nov-23	RN-230714001S10	07.11.2023	35	13.1	153372.3	17.8	-	-
35		RMHS	Nov-23	RN-230714001S12	10.11.2023	47	6.2	31060.9	16.7	-	-
36	СРР	WHRB - 2 & 3 (DRI-2&3)	Dec-23	RN-230714001S13	26.12.2023	122	7.0	148486.2	35.1	327.6	55.6
37		WHRB - 4 & 5 (DRI-4&5)	Dec-23	RN-230714001S12	26.12.2023	108	5.9	129700.9	31.6	287.4	130.1
38	SMS	FES of SMS - 1 & 2	Dec-23	RN-230714001S14	27.12.2023	52	5.9	371278.9	20.5	37.4	71.1
39		FES of SMS - 3	Dec-23	RN-230714001S15	27.12.2023	78	7.4	430397.1	22.0	55.7	91.4
40	WRM	Reheating Furnace	Dec-23	RN-230714001S10	25.12.2023	387	12.3	34272.9	25.5	65.3	126.4
41	Blooming Mill	Reheating Furnace	Dec-23	RN-230714001S11	25.12.2023	335	12.4	66634.6	27.5	77.8	148.2
42	Sinter Plant	Process ESP	Dec-23	RN-230714001S02	11.12.2023	122	6.5	516684.5	52.6	60.2	116.1

43	Sincer r lanc	Tail ESP	Dec-23	RN-230714001S01	11.12.2023	110	6.1	262056.6	27.6	-	-
44	Pellet Plant	Kiln Stack	Dec-23	RN-230714001S03	12.12.2023	141	8.3	589967.6	24.5	61.8	81.1
45		Cast House	Dec-23	RN-230714001S18	22.12.2023	40	5.6	58548.9	21.5	-	-
46	MBF-1	Ground Hopper	Dec-23	RN-230714001S06	19.12.2023	36	12.7	27208.7	17.4	-	-
47		Stock House	Dec-23	RN-230714001S07	19.12.2023	26	8.4	33096.8	18.4	-	-
48		Stoves	Dec-23	RN-230714001S08	22.12.2023	128	6.0	64731.3	24.6	35.3	67.4
49		Cast House	Dec-23	RN-230714001S04	13.12.2023	65	13.6	239887.4	21.3	-	-
50	MBF-2	PCI Stack	Dec-23	RN-230714001S05	13.12.2023	75	13.9	32670.6	15.8	-	-
51	MBF-2	Stock House	Dec-23	RN-230714001S17	16.12.2023	28	11.8	141376.6	16.4	-	-
52		RMHS	Dec-23	RN-230714001S09	16.12.2023	44	6.3	31867.4	16.0	-	-
53	CPP	WHRB - 4 & 5 (DRI-4&5)	Jan-24	RN-230714001S02	08-01-2024	145	7.6	152109.8	33.9	274.5	149.7
54	Sinter Plant	Process ESP	Jan-24	RN-230714001S03	11-01-2024	135	6.5	501760.7	50.9	63.8	112.8
55	Sinter Flant	Tail ESP	Jan-24	RN-230714001S04	11-01-2024	108	5.8	252264.9	24.8	-	-
56	Pellet Plant	Kiln Stack	Jan-24	RN-230714001S01	10-01-2024	113	6.6	503437.9	22.1	63.8	82.9
57		CPP 25 MW Stack	Feb-24	RN-230714001S10	23.02.2024	120	7.0	188848.6	59.6	552.4	452.3
58	CPP	WHRB - 1 & 40 TPH	Feb-24	RN-230714001S15	27.02.2024	155	7.1	138916.8	33.4	342.5	82.4
59		WHRB - 4 & 5 (DRI-4&5)	Feb-24	RN-230714001S09	23.02.2024	116	7.4	159302.4	34.2	274.3	135.8
60	SMS	FES of SMS - 1 & 2	Feb-24	RN-230714001S08	21.02.2024	61	5.9	361187.2	22.1	39.6	75.4
61	5115	FES of SMS - 3	Feb-24	RN-230714001S13	26.02.2024	82	6.2	357129.0	27.2	59.3	95.7
62	<b>Blooming Mill</b>	Reheating Furnace	Feb-24	RN-230714001S11	24.02.2024	336	7.4	39840.6	28.3	75.2	152.3
63	Sinter Plant	Process ESP	Feb-24	RN-230714001S12	27.02.2024	140	6.5	493893.9	43.2	62.4	121.7
64	Shiter I lant	Tail ESP	Feb-24	RN-230714001S03	16.02.2024	112	6.2	264986.8	29.1	-	-
65	MBF-1	Ground Hopper	Feb-24	RN-230714001S06	20.02.2024	45	13.3	27674.4	16.7	-	-
66	MDF-1	Stock House	Feb-24	RN-230714001S07	20.02.2024	35	7.3	27875.4	15.3	-	-
67		Stoves	Feb-24	RN-230714001S01	15.02.2024	114	5.9	65970.2	21.8	39.7	72.4
68		Cast House	Feb-24	RN-230714001S14	26.02.2024	65	9.2	162318.1	24.3	-	-
69	MBF-2	PCI Stack	Feb-24	RN-230714001S02	15.02.2024	70	13.3	31715.6	17.8	-	-
70		Stock House	Feb-24	RN-230714001S05	19.02.2024	40	13.6	156623.8	18.2	-	-
71		RMHS	Feb-24	RN-230714001S04	19.02.2024	44	6.2	31354.8	17.3	-	-
72	CDD	CPP 25 MW Stack	Mar-24	RN-230714001S1	05.03.2024	114	7.1	194539.6	56.8	536.8	423.6
73	011	WHRB - 4 & 5 (DRI-4&5)	Mar-24	RN-230714001S12	21.03.2024	146	8.0	159892.4	36.7	259.1	136.4
74	SMS	FES of SMS - 1 & 2	Mar-24	RN-230714001S14	29.03.2024	65	5.6	338787.4	25.9	42.5	77.5
75	0.120	FES of SMS - 3	Mar-24	RN-230714001S15	30.03.2024	70	6.8	405306.3	21.8	62.4	105.7
76	WRM	Reheating Furnace	Mar-24	RN-230714001S7	14.03.2024	375	9.5	26951.0	24.8	62.4	132.6
77	Blooming Mill	Reheating Furnace	Mar-24	RN-230714001S13	29.03.2024	355	8.9	46275.3	26.3	82.4	165.9
78	Sinter Plant	Tail ESP	Mar-24	RN-230714001S16	30.03.2024	97	6.2	275699.9	31.2	-	-
79	Pellet Plant	Kiln Stack	Mar-24	RN-230714001S6	13.03.2024	129	7.4	541936.4	25.4	65.2	88.5
80		Cast House	Mar-24	RN-230714001S11	13.03.2024	45	5.6	57627.5	22.3	-	-
81	- CPP - SMS WRM Blooming Mill Sinter Plant Pellet Plant MBF-1	Ground Hopper	Mar-24	RN-230714001S9	12.03.2024	47	13.4	27710.4	17.6	-	-
82		Stock House	Mar-24	RN-230714001S10	12.03.2024	35	8.0	30571.4	17.2	-	-
83		Cast House	Mar-24	RN-230714001S2	06.03.2024	40	11.0	209159.3	20.6	-	-
84	CPP SMS WRM Blooming Mill Sinter Plant Pellet Plant MBF-1 MBF-2	PCI Stack	Mar-24	RN-230714001S3	06.03.2024	74	14.0	32897.8	19.3	-	-
85	mD1'-4	Stock House	Mar-24	RN-230714001S4	07.03.2024	28	12.2	145948.7	20.7	-	-
86		RMHS	Mar-24	RN-230714001S5	07.03.2024	45	5.9	29745.4	21.5	-	-



Т

С

# Institute for Environmental Management Accredited by Jharkhand State Pollution Control Board, JSPCB

Accredited byJharkhand State Pollution Control Board, JSPCB<br/>National Accreditation Board for Testing Laboratory (NABL) vide TC-11515Certified ByISO 9001:2015 (QMS) & ISO 45001:2018



### **Test Report**

Disciplin	e: Chemical		Group: Atmosp	heric Pollution Sub-Group: Stack Emission				
Report I	ssue Date: 20-1	2-2023	Test Rep	Test Report No.: RN-230714001S01				
Sample	ID: 231218AP13	001	Sample D	Descripti	on: Stack Emission			
Challan	No./P.O. No.: 45	511012880	Challan N	Challan No./P.No. Date: 13-07-2023				
Issued t Type of Sample	o: M/s Tata Sta (Formerly Ta Gamaharia I Seraikela-K Industry: Iron & Drawn by: IEM	eel Limited ata Steel Long P Phase-V, Aditya harsawan, Jharl Steel Team	Products Limited pur Industrial Ar khand-832108	) ea, Custome Sampling	r Repres	entative: Shweta Ku 2-12-2023 (11:07 an	imari 1 to 11:45 am)	
Protocol	CPCB Guidelin	e (LATS/80/2013-1	4) & IS Method 11	255 Series			· · · · ·	
Field Me	teorological Inf	ormation A 1	femp.(°C): 27 R.	(%): 65	W.C.:C	lear W.D.:	West to East	
Sample	Receiving Date:	18-12-2023	Testing Started:	18-12-2023	1	Testing Ended: 20-1	2-2023	
Sample	Receiving Date.	10-12-2025	General Physical	Information		resting chied. 20 1	2 2025	
Stack Id	entification	Single	9	tack Height	from Gro	ound Level (m)	50	
Emissio	n Due to			Port Hole Hei	ight from	Ground Level (m)	26.5	
Diat Fer		Available		nor Dimon	ion of G	tack (m)	1 19	
Plat For	m • • •	Available		inter Dimens	Sion of St		4.43	
Stack De	escription	Sinter Plant Dec	austing	ype of Fuel	Used			
Shape o	of Stack	Circular		Quantity of F	uel			
Constru	ction Material	RCC	F	Production C	apacity			
Samplin	ig Port	Yes	F	Pollution Cor	ntrol Dev	rice (if any)	ESP	
		10	Test Re	sult				
SI. NO.	Para	ameters	Test Methods	Uni	t	Result	Norms**	
1.	Flue Gas Tempe	erature	IS 11255 (Part-3)	°C		110		
2.	Flue Gas Veloci	ty	IS 11255 (Part-3)	m/s	S	6.1		
3.	Flue Gas Volum	etric Flow Rate	IS 11255 (Part-3)	Nm <sup>3</sup> /hr. 262056.6				
4.	Particulates Ma	atter (PM)	IS 11255 (Part-1)	mg/N	m³	27.6		
5.	Sulphur Dioxide	e (SO <sub>2</sub> )	IS 11255 (Part-2)	(-2) mg/Nm <sup>3</sup>				
6.	Oxides of Nitro	gen (NO <sub>2</sub> )	IS 11255 (Part-7)	(Part-7) mg/Nm <sup>3</sup>				
7.	Carbon Dioxide	(CO <sub>2</sub> )	IS 13270:1992	% v/	'v			
8.	Carbon Monox	ide (CO)	IS 13270:1992	ppn	n			
9.	Oxygen (O <sub>2</sub> )		IS 13270:1992	% v/	'v			
		Laboratory is maintai	End of Re	Port	Humidity	65+5 % in all testing area	as ner IS	
Env. Co	ndition of Lab.	196:1966(C).	ing remperature 2/1		inamorey		as her in	
Abbrevia	ation	MDL: Minimum Dete	ction Limit, BDL: Belo	w Detection Li	mit			
Remark	is specified							
Tested I	By: Neema Kumar	ri				Contraste de la contrastante		
Sample	Drawn By: Arjun	Besra & team						
Specific Contr	ractual Notes: -		S	Qua	ality Chec	ked by Autho	rized Signatory	
<ol> <li>The labor</li> <li>This repo</li> <li>This repo</li> <li>This repo</li> <li>Any comp</li> <li>Total liabi</li> <li>In case of</li> </ol>	ratory accepts responsibi rt shall not be reproduce rt is intended for only gui plaint about this report sh ility of Institute for Enviro f feedback/ complaints, p	lity for content of this report. d except in full, without writte dance and not for legal purp ould be communicated in wr nmental Management will be lease send an email at gm.ie	en approval of the MD. ose or for advertisement. iting within 7 days of its issue ilimited to invoiced amount of emeco@gmail.com	e Sh	shreya S	onal)	r, S. C. Jain)	
On the basis of	n the basis of Quality Checked and Technical data verified by the Authorized signatory, the report					t Dy Quality Manager Randh Director		
s issued by the	e Director of the Organiz	ation. 8, Modi Heights,	OppAll India Radio	Station, Ratu	Road, Rai	nchi, Jharkhand - 8340	01	
	Laborato	ry Site - H.No A-1	3, Saket Vihar, Near S	Sohrai Bhawar	1, Harmu	Housing Colony,		

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



# **Institute for Environmental Management**

Jharkhand State Pollution Control Board, JSPCB Accredited by National Accreditation Board for Testing Laboratory (NABL) vide TC-11515 Certified By ISO 9001:2015 (QMS) & ISO 45001:2018



Dr. S. C. Jain)

Director

001

### **Test Report**

	-			2 2 2		0 1	0 7	
ULK NO.:			5 1 5	2 3 0			8 / /	
Disciplin	e: Chemical		Group: Atm	ospheric Pollut	ion Sub-Gro	up: Stack E	mission	
Report Is	ssue Date: 20-1	2-2023		Test Rep	Test Report No.: RN-230714001S02			
Sample I	D: 231218AP13	002		Sample	Description: Stack	Emission		
Challan I	No./P.O. No.: 45	511012880		Challan	No./P.No. Date: 13	3-07-2023		
lssued to	o: M/s Tata Ste (Formerly Ta Gamaharia F Seraikela-K	eel Limited ata Steel Long Phase-V, Adit harsawan, Jh	g Products Limit yapur Industrial arkhand-832108	ted) Area,				
Type of I	ndustry: Iron &	Steel		Custom	er Representative:	Shweta Ku	mari	
Sample	Drawn by: IEM	Team	and the second se	Samplin	g Date: 12-12-2023	3 (12:15 pm	to 12:51 pm)	
Protocol	: CPCB Guideline	e (LATS/80/201	3-14) & IS Method	11255 Series		· · · · · · · · ·	<u> </u>	
Field Me	teorological Inf	ormation	A. Temp.(°C): 27	R.H. (%): 65	W.C.: Clear	W.D.:	West to East	
Sample F	Receiving Date:	18-12-2023	Testing Starte	d: 18-12-2023	Testing F	nded: 20-1	2-2023	
ampier	tetering bute.	10 12 2025	General Phys	ical Information	i coung c	114Cu. 20 1	2 2025	
Stack Ide	entification	Single		Stack Height	from Ground Leve	el (m)	78	
Emission	Due to		the second s	Port Hole He	ight from Ground	Level (m)	31.2	
Plat For	m	Permanent		Inner Dimension of Stack (m)			6.195	
Stack De	escription	Sinter plant F	Process ESP	Type of Fuel	Used		Bfgas	
Shane of	f Stack	Circular	100033 201	Quantity of Fuel			01 803	
Construe	tion Material	PCC		Broduction Canacity				
Construc		NCC Yes			allution Control Davica (if any)			
Samplin	g Port	Yes	Test	Test Result			ESP	
SI NO	Para	matars	Test Metho	de Un	it Bos	aul+	Norme**	
1	Flue Cos Temps	meters	IS 11255 (Dar				Norms	
1.	Flue Gas Tempe	erature	15 11255 (Par	(-3) (		E		
2.	Flue Gas Veloci	etric Flow Poto	15 11255 (Par	(-3) $(1)$	5 0. /br E166	.Э :0л Е		
3.	File Gas Volum	etric Flow Rate	15 11255 (Par		/nr. 5100	64.5		
4.	Particulates Ma		15 11255 (Par	(-1) mg/r	Vm 52			
5.	Sulphur Dioxide	$(SO_2)$	IS 11255 (Par	(-2) mg/r	VM 60			
6.	Oxides of Nitro	gen (NO <sub>2</sub> )	IS 11255 (Par			D.1		
7.	Carbon Dioxide		15 13270:19	%V	/v 6.	./		
8.	Carbon Monoxi	de (CO)	15 13270:19	ppi	m 40	23		
9.	Oxygen (O <sub>2</sub> )		15 13270:19	f Reportant	/v 1/	.1		
Env. Cor	dition of Lab.	Laboratory is main	ntaining Temperature 2	7± 2°C and Relativ	e Humidity 65±5 % in al	I testing area	as per IS	
Abbrevia	ation	196:1966(C).	etection Limit BDL -	Below Detection I	imit			
Norms**	is specified							
Remark								
Tested E Sample I	<b>By:</b> Neema Kumar <b>Drawn By:</b> Arjun I	i Besra & team			2			
ecific Contr	actual Notes				ality Checked by	Autho	rized Signator	
. The labora	atory accepts responsibil	ity for content of this rep	port.		anty checked by	Autic	Signator	
. This report. This report	t shall not be reproduced	d except in full, without without without without with a second not for legal in the second sec	vritten approval of the MD. purpose or for advertisement	0)	montest	1	Jan Barris	

4. Any complaint about this report should be communicated in writing within 7 days of its issue

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 gm.iemeco@gmail.com

On the basis of Quality Checked and Technical data verified by the Authorized signatory, the report

Dy. Quality Manager n, Ratu Road, Ranchi, Jharkhand is issued by the Director of the Organization - 8, Modi Heights, Opp.-All India Radio Statio

> Laboratory Site - H.No. - A-13, Saket Vihar, Near Sohrai Bhawan, Harmu Housing Colony, Ranchi-834002, Jharkhand, India

(Shreya Sonal)



С

Т

## **Institute for Environmental Management**

Accredited byJharkhand State Pollution Control Board, JSPCB<br/>National Accreditation Board for Testing Laboratory (NABL) vide TC-11515Certified ByISO 9001:2015 (QMS) & ISO 45001:2018



### **Test Report**

Discipline	e: Chemical		Group: Atn	nosphe	eric Polluti	on	Sub-Group:	Stack	Emission
Report Is	sue Date: 20-1	2-2023			Test Rep	ort No.:	RN-23071400	1S03	
Sample I	D: 231218AP15	001			Sample	Descript	ion: Stack Emis	ssion	
Challan N	lo./P.O. No.: 45	11012880			Challan	No./P.N	o. Date: 13-07-	-2023	
Issued to	); )								
	M/s Tata Sto (Formerly Ta Gamaharia F	el Limited Ita Steel Lon Phase-V, Adi	g Products Lim tyapur Industria	ited) I Area	а,				
Type of l	oductor Iron &	Stool	1a1 Kilanu-052 10	0	Custome	r Ronro	contative: Shu	eta K	umari
Sample I	Drawn by: IEM	Toom			Custome	a Dato:	12.12.2022 /10	16 2	m to 11.19 am)
Drotocol	CDCP Cuidelin		2 14) 8 IS Matha	11125	5 Sorios	g Date.	12-12-2025 (10	.10 a	11 to 11.15 any
Protocol:	CPCB Guideline	(LATS/80/20)	A Tomp (20): 25		5 Series	MC	loor	W/D	· Most to East
Field Me	teorological inf	ormation	A. Temp.(°C): 25	к.п.	(%): /8	w.c.: (	Testing Ender	4. 20	
Sample H	eceiving Date:	18-12-2023	lesting Start	ea: 18	-12-2023		Testing Ended	<b>a:</b> 20-	12-2023
Stack Ide	ntification	Single	General Phy	Star	k Hoight	from Gr	ound Level (m)		78
Stack Ide	nuncation	Single		Stat	K Height	-b.t.from	Ground Lough	(	21
Emission	Due to	Kiin		Por	Hole Hel	gnt fron	Ground Level	(m)	51
Plat Forr	n	Permanent	in the second second second	Inne	er Dimens	ion of St	tack (m)		6.0
Stack De	scription	Pellet Plant (	Kiln Stack)	Тур	e of Fuel L	Jsed			Coal
Shape of	Stack	Circular	and and a second second	Qua	antity of F	uel			
Construc	tion Material	RCC		Pro	duction Ca	apacity			
Sampling	g Port	Yes		Poll	ution Con	trol Dev	vice (if any)		ESP
			Tes	st Resu	lt				
SI. NO.	Para	meters	Test Meth	ods	Un	it	Result		Norms**
1.	Flue Gas Tempe	erature	IS 11255 (Pa	rt-3)	°C	:	141		
2.	Flue Gas Veloci	ty	IS 11255 (Pa	irt-3)	m/	s	8.3		
3.	Flue Gas Volum	etric Flow Rate	IS 11255 (Pa	irt-3)	Nm <sup>3</sup> /	/hr.	589967.6		
4.	Particulates Ma	itter (PM)	IS 11255 (Pa	rt-1)	mg/N	1m <sup>3</sup>	24.5		
5.	Sulphur Dioxide	e (SO <sub>2</sub> )	IS 11255 (Pa	irt-2)	mg/N	1m°	61.8		
6.	Oxides of Nitro	gen (NO <sub>2</sub> )	IS 11255 (Pa	irt-7)	mg/N	Im <sup>°</sup>	81.1		
7.	Carbon Dioxide	(CO <sub>2</sub> )	IS 13270:1	992	% v,	/v	17.6		
8.	Carbon Monox	de (CO)	IS 13270:1	992	ppr	m	36		
9.	Oxygen (O <sub>2</sub> )		IS 13270:1	992	% v	/v	1.67		
En. 01-	dition of Lab	Laboratory is ma	intaining Temperature	27± 2°0	and Relative	e Humidity	65±5 % in all test	ing are	a as per IS
Abbroule	tion	196:1966(C).	Detection Limit BDL	Relow	Detection I	imit			
Norms**	is specified		Detection Limit, BDL:	Below	Detection				
Remark									
Tested B Sample I	by: Neema Kumar D <b>rawn By</b> : Arjun	i Besra & team							
Specific Contra	actual Notes: -	lity for content of this r	-		Qui	ality Che	ecked by	Aut	norized Signatory
2. This report 3. This report 4. Any comp 5. Total liabil 6. In case of	t shall not be reproduce t is intended for only gui laint about this report sh ity of Institute for Enviro feedback/ complaints, p	d except in full, without dance and not for lega ould be communicated mmental Management lease send an email a	t written approval of the MD. Il purpose or for advertiseme d in writing within 7 days of it will be limited to invoiced an t <u>am.iemeco@gmail.com</u> w the Authorized signature	ent. Is issue nount only	, <u>St</u>	Shreya	Sonal)		Dr. S. C. Jain)
is issued by the	Director of the Organiz	ation -8, Modi He	ights, OppAll India	Radio	Dy. Station, Rat	Quality u Road, I	Manager Ranche Jharkhan	d 83	Director

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

Ranchi-834002, Jharkhand, India



Т

С

# **Institute for Environmental Management**

Accredited byJharkhand State Pollution Control Board, JSPCB<br/>National Accreditation Board for Testing Laboratory (NABL) vide TC-11515Certified ByISO 9001:2015 (QMS) & ISO 45001:2018



### **Test Report**

Discipline	e: Chemical		Gro	oup: Atm	osphe	ric Polluti	on	Sub-Group:	: Stack	Emission
Report Is	sue Date: 20-1	2-2023				Test Rep	ort No.:	RN-23071400	1S04	
Sample I	D: 231218AP16	001				Sample I	Descript	ion: Stack Em	ission	
Challan M	No./P.O. No.: 45	11012880				Challan I	No./P.N	o. Date: 13-07	7-2023	
Issued to	o: M/s Tata Ste (Formerly Ta Gamaharia F Seraikela-K	el Limited Ita Steel Lor Phase-V, Ad	ng Produc ityapur Ind	cts Limi dustria	ited) I Area 8	ı,				
Type of I	ndustry: Iron &	Steel	narknana	002100		Custome	er Renre	sentative: Sh	weta k	(umari
Sample	Drawn by: IEM	Team			-	Samplin	Date:	13-12-2023 (1)	0.48 a	m to 11.25 am)
Protocol	CPCB Guideline	(I ATS/80/20	13-14) 8 15	Method	1125	5 Series	5 Duter	15 12 2025 (1	0.40 0	
Field Ma	teorological Inf	ermation	A Temp (	· · · 23	PH /	% \· 80	WC·	lear	WD	· North to South
Field We	Leonological Inte	00 10 2022	A. Temp.(	of. 25	d. 00	10 2022	vv.c (	Tosting Ende	d: 20	12,2022
Sample	leceiving Date:	09-10-2023	Testi	Seneral Phy	sical Infe	ormation		Testing Enue	eu. 20	-12-2025
Stack Ide	entification	Single		Seneral rity	Stack	Height fr	om Gro	und Level (m)		30
Emission	Due to	Eurpaco			Port	Hole Hole	ht from	Ground Level	(m)	25
Dist		Parmace			lear	Dimensi	an of Ct	al (m)	(11)	2.7
Plat For	n • ••	Permanent			inner	Dimensio	on of Sta	ick (m)		2.7
Stack De	scription	MBF - 2 CAS	T HOUSE STA	ACK	Туре	of Fuel U	sed			Соке
Shape of	Stack	Circular			Quan	tity of Fu	el			
Construc	tion Material	Metal			Prod	uction Cap	pacity			
Sampling	g Port	Available	Lange and Lange		Pollu	tion Cont	rol Devi	ce (if any)		Bag Filter
				Tes	t Resul	t				
SI. NO.	Para	meters	Te	est Metho	ods	Un	it	Result		Norms**
1.	Flue Gas Tempe	rature	IS 1	1255 (Par	rt-3)	°C		65		
2.	Flue Gas Velocit	:y	IS 1	.1255 (Pai	rt-3)	m/	s	7.9		
3.	Flue Gas Volum	etric Flow Rate	IS 1	1255 (Par	rt-3)	Nm <sup>3</sup> /	/hr.	139346.	3	
4.	Particulates Ma	tter (PM)	IS 1	.1255 (Pai	rt-1)	mg/N	Im	21.3		
5.	Sulphur Dioxide	(SO <sub>2</sub> )	IS 1	1255 (Par	rt-2)	mg/N	Im <sup>°</sup>			
6.	Oxides of Nitro	gen (NO <sub>2</sub> )	IS 1	.1255 (Pai	rt-7)	mg/N	lm°			
7.	Carbon Dioxide	(CO <sub>2</sub> )	IS	13270:19	92	% v,	/v			
8.	Carbon Monoxi	de (CO)	IS	13270:19	92	ppr	n			
9.	Oxygen (O <sub>2</sub> )		IS	13270:19	92 of Penc	% V,	/v			
Env Cor	dition of Lab	Laboratory is m	aintaining Ten	nperature	27± 2°C	and Relative	e Humidity	65±5 % in all tes	sting are	ea as per IS
Abbrovie	tion	196:1966(C).	Detection Li		Below	Detection L	imit			
Norms**	is specified		Detection LI	init, obc.	50.01					
Remark										
Tested E Sample I	ly: Neema Kumar Drawn By: Arjun I	i Besra & team								
Specific Contra	actual Notes: -					Qua	ality Che	cked by	Aut	horized Signatory
<ol> <li>The labora</li> <li>This report</li> <li>This report</li> <li>This report</li> <li>Any complication</li> <li>Total liabili</li> <li>In case of</li> </ol>	atory accepts responsibilit t shall not be reproduced t is intended for only gui laint about this report sh ity of Institute for Enviror feedback/ complaints, p	ity for content of this I except in full, without dance and not for leg build be communicate immental Management ease send an email in	report. It written approva al purpose or for d in writing within will be limited to at <u>qm.iemeco@q</u>	al of the MD. advertisemen 7 days of its invoiced amo mail.com	nt. s issue ount only	Sh	Shreya S	Sonal)	The start	Dr. S. C. Jain)
On the basis of is issued by the	Quality Checked and Te Director of the Organiza	tion	by the Authorized	a signatory, th	Padia	Dy.	Quality	Manager +	Reachie	Director
-	- Corporate office	TA-8, Modi H	eights, Opp	All India	Kadio	station, Rai	u Koad,	kanchi, Jharkha	ing 8	64001

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

Ranchi-834002, Jharkhand, India



Т

С

# Institute for Environmental Management Accredited by Jharkhand State Pollution Control Board, JSPCB

Accredited byJharkhand State Pollution Control Board, JSPCB<br/>National Accreditation Board for Testing Laboratory (NABL) vide TC-11515Certified ByISO 9001:2015 (QMS) & ISO 45001:2018



### **Test Report**

Discipline	e: Chemical		Group: Atm	nosph	eric Pollution	Sub-Group: Stac	k Emission
Report Is	sue Date: 20-1	2-2023			Test Report No	.: RN-230714001S0	5
Sample I	D: 231218AP16	002			Sample Descrip	otion: Stack Emission	1
Challan N	No. /P.O. No.: 45	11012880			Challan No./P.	No. Date: 13-07-202	3
Issued to	o: M/s Tata Ste (Formerly Ta Gamaharia F Seraikela-K ndustry: Iron &	eel Limited ata Steel Long Phase-V, Adity harsawan, Jha Steel	Products Lim apur Industria Irkhand-83210	ited) Il Are 8	a, Customer Rep	resentative: Shweta	Kumari
Sample	Drawn by: IEM	Team			Sampling Date	: 13-12-2023 (12:00	om to 12:38 pm)
Protocol	CPCB Guideline	e (LATS/80/2013	-14) & IS Method	d 1125	5 Series		
Field Me	teorological Inf	ormation A	. Temp.(°C): 23	R.H.	(%): 80 W.C.	Clear W.I	D.: North to South
Sample F	Receiving Date:	09-10-2023	Testing Start	ed: 09	-10-2023	Testing Ended: 20	)-12-2023
			General Phy	ysical In	formation		
Stack Ide	entification	Single		Stac	k Height from Gr	ound Level (m)	30.2
Emission	Due to	Furnace		Port	Hole Height from	m Ground Level (m)	30
Plat For	m	Permanent		Inne	r Dimension of S	tack (m)	1
Stock De	scription	MBE - 2 PCI		Type	of Fuel Lised		RMHS
Stack De	Scription ( Steph	Circular		Oup	ntity of Eugl		
Snape of	Stack	Circular		Qua	hity of Fuer		
Constru	ction Material	Metal		Proc	luction Capacity	· // ·	Dee Cilter
Samplin	g Port	Available		Pollu	ution Control De	vice (if any)	Bag Filter
			Tes	st Resu	nt		
SI. NO.	Para	ameters	Test Meth	ods	Unit	Result	Norms**
1.	Flue Gas Tempe	erature	IS 11255 (Pa	art-3)	°C	75	
2.	Flue Gas Veloci	ty	IS 11255 (Pa	art-3)	m/s	13.9	
3.	Flue Gas Volum	netric Flow Rate	IS 11255 (Pa	art-3)	Nm <sup>°</sup> /hr.	32670.6	
4.	Particulates Ma	atter (PM)	IS 11255 (Pa	art-1)	mg/Nm <sup>°</sup>	15.8	
5.	Sulphur Dioxide		IS 11255 (Pa	art-2)	mg/Nm		
6.	Oxides of Nitro	gen (NO <sub>2</sub> )	IS 11255 (Pa	art-/)	mg/Nm		
7.	Carbon Dioxide	$(CO_2)$	15 13270:1	992	% V/V		
8.	Carbon Monox	ide (CO)	IS 13270:1	992	% v/v		
9.	Oxygen (O <sub>2</sub> )		End	of Rep	ort		
Env Cou	dition of Lab	Laboratory is main	taining Temperature	27± 2°	C and Relative Humid	ity 65±5 % in all testing a	rea as per IS
Abbrevis	tion	196:1966(C).	etection Limit BDL	Below	Detection Limit		
Norms**	is specified						
Remark							
Tested E Sample	By: Neema Kuma Drawn By: Arjun	ri Besra & team					
Specific Contr	actual Notes: -			-	Quality C	hecked by	thorized Signatory
<ol> <li>The labor</li> <li>This repo</li> <li>This repo</li> <li>Any comp</li> <li>Total liabi</li> <li>In case of</li> </ol>	atory accepts responsib rt shall not be reproduce rt is intended for only gu plaint about this report sh lity of Institute for Enviro f feedback/ complaints, p	ility for content of this rep d except in full, without w idance and not for legal p nould be communicated in nomental Management wi please send an email at g	ort. ritten approval of the MD suppose or for advertisem n writing within 7 days of i II be limited to invoiced ar <u>m.iemeco@gmail.com</u>	). ent. its issue mount on	y. Show (Shrey	sore a Sonal)	(Dr. S. C. Jain)
On the basis of s issued by the	f Quality Checked and T Director of the Organiz	echnical data verified by tation A-8, Modi Heis	the Authorized signatory, <del>ςhts, OppAll India</del>	the report	t Dy. Qualit	y Manager I, Ranchi, Jharkhand	Director
	Labora	tory Site - H.No. –	A-13, Saket Vihar, Ranchi-834002	, Near S 2, Jharl	Sohrai Bhawan, Ha khand, India	rmu Housing Colony,	



ž

**Discipline:** Chemical

# Institute for Environmental Management Accredited by Jharkhand State Pollution Control Board, JSPCB

Accredited byJharkhand State Pollution Control Board, JSPCB<br/>National Accreditation Board for Testing Laboratory (NABL) vide TC-11515Certified ByISO 9001:2015 (QMS) & ISO 45001:2018

3

0

0

0

0

0

1

Sub-Group: Stack Emission

8

7



8

### **Test Report**

Group: Atmospheric Pollution

2

5

1

С

Т

1

5

1

Report Is	sue Date: 27-1	2-2023				Test Rep	oort No.: RI	N-2307140	01509	
Sample I	D: 231225AP15	002				Sample	Description	: Stack Em	ission	
Challan M	No./P.O. No.: 45	511012880				Challan	No./P.No. I	Date: 13-0	7-2023	3
Issued to	M/s Tata Sto M/s Tata Sto (Formerly Ta Gamaharia F Seraikela-K	eel Limited ata Steel Lo Phase-V, A Charsawan	ong P dityap Jhar	roducts Lim our Industria	iited) al Are 08	a,				
Type of I	ndustry: Iron &	Steel	, onan			Custom	er Renreser	tative: Sh	weta k	(umari
Comple I	Drawn by IEM	Toom				Custolin	a Data: 16	12-2022 (0	1.00 n	m to 01.37 nm)
Sample	CRCR Cuidelin		012 1	A) Q IC Matha	4 1 1 2 1	- Sampin	g Date. 10-	12-2025 (0	1.00 p	in to 01.57 pm)
Protocol	CPCB Guideline	e (LATS/80/2	2013-14	4) & IS Metho	a 1125	os series			144.0	Fast Mast
Field Me	teorological Inf	ormation	A. 1	emp.(°C): 23	K.H.	(%): 80	w.c.: Clea	ar	W.D	.: East - west
Sample F	Receiving Date:	25-12-2023		Testing Start	ted: 25	-12-2023	Te	esting End	ed: 27	-12-2023
				General Ph	ysical In	formation				20
Stack Ide	entification	Single			Stac	k Height fi	rom Ground	Level (m)	)	30
Emission	Due to	Furnace			Port	<b>Hole Heig</b>	ht from Gr	ound Leve	l (m)	24.5
Plat Form	n	Permane	nt		Inne	r Dimensi	on of Stack	(m)		1.4
Stack De	scription	MBF-2 (R	MHS)		Type	of Fuel U	sed			RMHS
Shane of	Stack	Circular			Oua	ntity of Fu	el			
Shape of	tion Meterial	Matal		and the second second	Drog	luction Co	nacity	<u></u>		
Construc	tion waterial	Ivietai			PIOU	uction ca				Dee Cilter
Samplin	g Port	Yes			Pollu	ution Cont	rol Device	if any)		Bag Filter
			11	Te	st Resu	It				
SI. NO.	Para	ameters		Test Meth	ods	Un	it	Result		Norms**
1.	Flue Gas Tempe	erature		IS 11255 (Pa	art-3)	°C		44		
2.	Flue Gas Veloci	ty		IS 11255 (Pa	art-3)	m/	s	6.3		
3.	Flue Gas Volum	etric Flow Ra	te	IS 11255 (Pa	art-3)	Nm <sup>3</sup>	/hr.	31867.4	4	
4.	Particulates Ma	atter (PM)		IS 11255 (Pa	art-1)	mg/N	Nm <sup>3</sup>	16		
5.	Sulphur Dioxide	e (SO <sub>2</sub> )		IS 11255 (Pa	art-2)	mg/N	Vm <sup>3</sup>			
6.	Oxides of Nitro	gen (NO <sub>2</sub> )		IS 11255 (Pa	art-7)	mg/N	Nm <sup>3</sup>			
7.	Carbon Dioxide	(CO <sub>2</sub> )		IS 13270:1	.992	% v	/v			
8.	Carbon Monox	ide (CO)		IS 13270:1	.992	pp	m	0		
9.	Oxygen (O <sub>2</sub> )			IS 13270:1	.992	% v	/v			
	1 10 12			End	of Rep	ort				
Env. Cor	dition of Lab.	Laboratory is	maintair	ning Temperature	27± 2°(	C and Relativ	e Humidity 65:	±5 % in all te	sting are	ea as per 15
Abbrevia	tion	MDL: Minimu	m Dete	ction Limit, BDL	Below	Detection L	.imit			
Norms**	is specified									
Remark										
Sample I	sy: Neema Kumar Drawn By: Arjun	n Besra & team								
pecific Contr	actual Notes: -					Qu	ality Check	ed by	Aut	horized Signatory
<ol> <li>The labora</li> <li>This report</li> <li>This report</li> <li>Any comption</li> <li>Total liabilities</li> <li>In case of</li> </ol>	atory accepts responsibilits that not be reproduced to the reproduce to the intended for only guillaint about this report shifty of Institute for Enviro feedback/ complaints, p	lity for content of th d except in full, with dance and not for l ould be communic nmental Managem dease send an ema	his report. hout writte legal purpo ated in write ent will be ail at gm.ie	n approval of the MD ose or for advertisem- ting within 7 days of i limited to invoiced ar meco@gmail.com	i. ent. its issue mount onl	y Sh	Shreya Son			(Dr./S. C. Jain)
n the basis of issued by the	Quality Checked and To Director of the Organiz	echnical data verific ation - 8, Modi	ed by the /	Authorized signatory,	the repor	t Dy. Station, Ra	Quality Ma	nager chi, Ibarkha	ind 8	Director
-	Laborat	ory Site - H.N	0. – A-1	3, Saket Vihar,	Near S	ohrai Bhaw	ran, Harmu H	lousing Cold	ony,	

Ranchi-834002, Jharkhand, India



С

Т

1

1

5

# Institute for Environmental Management

Jharkhand State Pollution Control Board, JSPCB Accredited by National Accreditation Board for Testing Laboratory (NABL) vide TC-11515 Certified By ISO 9001:2015 (QMS) & ISO 45001:2018



6

8

8

### **Test Report**

2

3

0

0

0

0

0

1

5

1

Discipline: Chemical		Group: Atr	nosphe	eric Polluti	on	Sub-Group:	Stack	Emission
Report Issue Date: 27-12	-2023			Test Rep	ort No.:	RN-23071400	)1S17	
Sample ID: 231230AP130	01A1			Sample I	Descript	ion: Stack Emi	ission	
Challan No./P.O. No.: 45:	11012880			Challan I	No./P.N	o. Date: 13-07	-2023	
Issued to:								
M/s Tata Ste	el Limited							
(Formerly Tat	ta Steel Lon	g Products Lim	ited)					
Gamaharia P	hase-V, Adit	yapur Industria	al Area	<b>1</b> ,				
Seraikela-Kh	arsawan, Jh	arkhand-83210	8		-			
Type of Industry: Iron & S	Steel			Custome	r Repre	sentative: Shu	veta K	(umari
Sample Drawn by: IEM I	eam	2 4 4) 0 10 14 11	14425	Sampling	g Date:	16-12-2023 (1	1:45 a	m to 12:30 pm)
Protocol: CPCB Guideline	(LATS/80/201	3-14) & IS Metho	d 1125	5 Series		51		No. the to Oo th
Field Meteorological Info	ormation	A. Temp.(°C): 25	R.H. (	%): 81	w.c.: (	lear	W.D	.: North to South
Sample Receiving Date: 2	5-12-2023	Testing Start	ed: 25	-12-2023	-	Testing Ende	d: 27-	12-2023
	1	General Ph	ysical inte	ormation	-			
Stack Identification	Single		Stack	Height fr	om Gro	und Level (m)		30
Emission Due to			Port	Hole Heig	ht from	Ground Level	(m)	23
Plat Form	Permanent		Inner	Dimensio	on of Sta	ick (m)		2.1
Stack Description	MBF-2 Stock	House	Туре	of Fuel Us	sed			
Shape of Stack	Circular		Quan	tity of Fu	el 💦			
<b>Construction Material</b>	Metal		Prod	uction Cap	pacity			
Sampling Port	Yes		Pollu	tion Conti	ol Devi	ce (if any)		Bag Filter
	100	Te	st Resul	t				
SI. NO. Parar	neters	Test Meth	ods	Uni	t	Result		Norms**
1. Flue Gas Temper	rature	IS 11255 (Pa	art-3)	°C		28		
2. Flue Gas Velocity	1	IS 11255 (Pa	art-3)	m/	s	11.8		
3. Flue Gas Volume	etric Flow Rate	IS 11255 (Pa	art-3)	Nm <sup>3</sup> /	hr.	141376.4	ł	
4. Particulates Mat	ter (PM)	IS 11255 (Pa	art-1)	mg/N	lm³	16.4		
5. Sulphur Dioxide	(SO <sub>2</sub> )	IS 11255 (Pa	art-2)	mg/N	lm <sup>°</sup>			
6. Oxides of Nitrog	en (NO <sub>2</sub> )	IS 11255 (Pa	art-7)	mg/N	lm <sup>°</sup>		-	
7. Carbon Dioxide (	$(CO_2)$	IS 13270:1	992	% V/	/v			
8. Carbon Monoxid	ie (CO)	15 132/0:1	992	ppr	n /		-	
9. Oxygen (O <sub>2</sub> )		End	of Repo	70 V/	v I			
Env. Condition of Lab.	Laboratory is mai	ntaining Temperature	27± 2°C	and Relative	Humidity	65±5 % in all test	ting are	a as per IS
Abbreviation	196:1966(C). MDL: Minimum [	Detection Limit, BDL:	Below	Detection Li	mit			
Norms** is specified								
Remark			_					
Sample Drawn By: Ariun B	esra & team							
oumpio Diann Dji / ajan D								
							-	
Specific Contractual Notes: -	(			Qua	ality Che	cked by conme	Aut	orized Signatory
<ol> <li>The laboratory accepts responsibility</li> <li>This report shall not be reproduced</li> </ol>	y for content of this re except in full, without	port. written approval of the MD.				Hart	- Ale	-COM
3. This report is intended for only guida	ance and not for legal	purpose or for advertiseme	ent.	CL	zuja	son	2.	P
<ol> <li>Any complaint about this report shot</li> <li>Total liability of Institute for Environr</li> </ol>	nental Management w	in writing within 7 days of in ill be limited to invoiced an	ts issue nount only.	2	-1	12100	and I	
6. In case of feedback/ complaints, please send an email at <u>gm.iemeco@gmail.com</u>					Shreva S	Sonal)	16	Dr/S. C. Jain)
On the basis of Quality Checked and Tec			11			No. 1	1	1
s issued by the Director of the Organizati	hnical data verified by	the Authorized signatory,	the report	Dy.	Quality I	Manager	non	Director

Laboratory Site - H.No. - A-13, Saket Vihar, Near Sohrai Bhawan, Harmu Housing Colony, Ranchi-834002, Jharkhand, India



## **Institute for Environmental Management**

Jharkhand State Pollution Control Board, JSPCB Accredited by National Accreditation Board for Testing Laboratory (NABL) vide TC-11515 Certified By ISO 9001:2015 (QMS) & ISO 45001:2018



### **Test Report**

ULR No.:	T	С	1	1	5	1	5	2	3	0	0	0	0	0	1	8	7	5
Disciplin	e: Chemical					Grou	p: Atr	nosph	eric P	olluti	on		Sub-Gr	oup:	Stack E	missi	on	
Report Is	sue Date: 20-	12-2	023						Tes	st Rep	ort No	.: F	RN-2307	1400	1S06			
Sample I	D: 231225AP1	400	1				10		Sar	nple I	Descrip	otic	n: Stack	Emis	sion	A contractor		
Challan M	No./P.O. No.: 4	511	0128	80					Cha	allan I	No./P.I	No	Date: 1	3-07-	2023			
Issued to	D:								1									
	M/s Tata S	teel	Lim	ited														
	(Formerly 1	ata	Stee	l Lon	g Pro	oduct	s Lim	nited)										
	Gamaharia	Pha	ase-\	/, Adi	tyapı	Ir Ind	ustria	al Are	a,									
	Seraikela-l	(hai	rsaw	an, Jl	harkh	and-8	3210	8	020									
Type of I	ndustry: Iron	& Ste	eel						Cus	stome	r Repr	ese	entative	: Shw	eta Ku	ımari		
Sample	Drawn by: IEN	1 Tea	am						Sar	nplin	g Date:	: 19	-12-202	3 (12	:13 pm	n to 12	2:54 pi	m)
Protocol	CPCB Guideli	ne (L	ATS/8	80/201	13-14)	& IS N	<b>letho</b>	d 1125	5 Se	ries								
Field Me	teorological Ir	forn	natio	n	A. Te	mp.(°C	): 22	R.H.	(%): 8	32	W.C.:	Su	nny		W.D.:	SW -	NE	
Sample F	Receiving Date	: 18-	12-20	023		resting	Star	ted: 18	3-12-2	2023		T	Testing	Ended	1: 20-1	2-202	3	
						Ger	neral Ph	ysical Inf	format	ion		1						
Stack Ide	entification		Single	3	1.1		St	ack He	ight	from	Ground	d L	evel (m)		30			
Emission	Due to	(	Crush	ing			Pc	ort Hol	e Hei	ght fr	om Gr	ou	nd Level	(m)	22			
Plat For	n		Dorm	anont			In	ner Dir	mone	ion	F Stack	Im	1	1.1	0.9			
Stack De	againtion	-	ADE	1 Grou		nnor	- T.	inci bii	Evol	load	Juck	1.1	·/		DM	цс		
Stack De	Scription		VIDF-	I GIOL		phei		peori	ruer	used						13		
Shape of	Stack		Lircul	ar		+		uantity	OTH	uel				m				
Construc	ction Material		Meta	1			Pr	oducti	on Ca	apacit	:y	102.00		-				
Samplin	g Port	1	Availa	able			Po	ollution	n Con	trol D	evice	(if a	any)		Bag	Filter		
							Te	st Resu	lt									
SI. NO.	Pa	ame	ters			Test	Meth	nods		Uni	it		Re	sult		N	lorms*	*
1.	Flue Gas Tem	perat	ure	_		IS 112	255 (P	art-3)		°C			1	36				
2.	Flue Gas Velo	ity				IS 112	255 (P	art-3)		m/	s		1	2.7	_			
3.	Flue Gas Volu	metri	ic Flov	w Rate		IS 112	255 (P	art-3)	_	Nm <sup>3</sup> /	hr.		272	208.7				
4.	Particulates N	atte	r (PM)	)		IS 112	255 (P	art-1)	_	mg/N	lm		1	7.4		-		
5.	Sulphur Dioxi	le (So	$O_2)$		_	IS 112	255 (P	art-2)		mg/N	lm	_						
6.	Oxides of Nitr	ogen	(NO <sub>2</sub> )	)		IS 112	255 (P	art-7)		mg/N	lm							
7.	Carbon Dioxid	e (CC	D <sub>2</sub> )			IS 13	3270:1	.992	-	% V,	v	-	- and		-			
8.	Carbon Mono	kide	(CO)	-		IS 13	3270:1	.992	-	ppr	n	-	-					
9.	Oxygen (O <sub>2</sub> )					15 1:	5270:1	.992	ort	% V,	/v	-						
Env Cor	dition of Lab	La	borato	ry is ma	intainii	ng Temp	erature	27± 2°0	and F	Relative	Humidi	ty 6	5±5 % in a	II testi	ng area	as per	IS	
Abbrovia	tion	19	6:1966	i(C).	Detect	ion Limi	+ 801	Balow	Data	tion L	mit							
Norms**	is specified		-	mmum	Delect		I, DDL	. Below	Detet		mit							
Remark			-															
Tested E	By: Neema Kum	ari																
Sample	Drawn By: Arjur	Bes	ra & t	eam														
				-								_						
1 The labora	actual Notes: -	nility fo	r conter	nt of this n	enort					Qua	ality Ch	ec	ked by		Autho	orized	Signa	tory
2. This report	t shall not be reproduc	ed exc	cept in fu	ill, without	written a	approval o	f the MD	l.					1454	Sinney	la la	-	K	
3. This report	t is intended for only g	uidanc	e and no	ot for lega	I purpose	e or for adv	vertisem	ent.		SL	ro	e	TEP.	13	131	-X	g_	
5. Total liabil	ity of Institute for Envi	onmer	ntal Man	agement	will be lin	nited to inv	voiced a	mount only					C) PS	and a star	18			
6. In case of	feedback/ complaints	please	e send a	n email a	gm.iem	eco@gma	il.com	440.0000	_	(5	shreya	Sc	nal)	19 Ania 19 Ania	×/39	r. S. C	Jain	)
On the basis of is issued by the	Quality Checked and Director of the Organ	echni zation	cal data	verified b	y the Au	inorized si	gnatory,	the report		Dy.	Quality	M	anager	1	and .	Direc	ctor	
	corporate offic	A	-8, M	oai Hei	gnts, C	ppAll	India	Kadio S	tatior	i, Katu	Koad,	Kar	icn Anar	spand	20040	101		

Laboratory Site - H.No. - A-13, Saket Vihar, Near Sohrai Bhawan, Harmu Housing Colony, Ranchi-834002, Jharkhand, India



Т

С

## Institute for Environmental Management

Accredited byJharkhand State Pollution Control Board, JSPCB<br/>National Accreditation Board for Testing Laboratory (NABL) vide TC-11515Certified ByISO 9001:2015 (QMS) & ISO 45001:2018



### **Test Report**

Disciplin	e: Chemical		Group:	Atmosph	eric Polluti	on	Sub-Group: S	Stack Em	ission
Report Is	sue Date: 27-1	2-2023			Test Rep	ort No.:	RN-23071400	1S07	
Sample I	D: 231225AP14	002			Sample I	Descripti	on: Stack Emis	sion	
Challan I	No./P.O. No.: 45	511012880			Challan I	No./P.No	Date: 13-07-	2023	
Issued to	o: M/s Tata Sto (Formerly Ta Gamaharia I	eel Limited ata Steel Lor Phase-V, Ad	ng Products ityapur Indus	Limited) strial Are	a,				
Tune of I	Seraikela-K	harsawan, J	narknand-83	2108	Custom	r Bonros	contativo: Shw	oto Kum	ari
Type of I	naustry: Iron &	Steel			Custome	Data: 1	0 12 2022 (10	27 am t	all 0.11.20 pm)
Dretecol	CDCR Guidelin		12 14) 8. IS MO	thad 112	5 Sorios	g Date. 1	.9-12-2023 (10.	.27 am u	J 11.25 any
Field Me	toorological Inf	e (LAT3/80/20	A Tomp (%C):		10/ 1. 87	WC·S		WD·S	W - NE
Field Me	Reorological Ini	25.12.2022	A. Temp.( C).	tarted: 25	12-2023	vv.c 3	Testing Ender	· 27-12-	2023
Sample	Receiving Date.	25-12-2025	Gener	al Physical In	formation		Testing Linder		2025
Stack Ide	entification	Single	001101	Stack He	ight from	Ground	Level (m)	30	
Emission	Due to			Port Hol	e Height fr	om Grou	und Level (m)	27	
Plat For	m	Permanent	•	Inner Di	mension o	f Stack (	m)	1.2	
Stack De	escription	MBE-1 STO		Type of	Fuel Used				
Shane of	f Stack	Circular		Quantity	of Fuel				
Construe	ction Material	Metal		Producti	on Canacit	tv			
Constru	a Port	Available		Pollutio		)evice (if	any)	Bag Fi	lter
Sampin	gron	Available	la factoria de la composición de la composicinde la composición de la composición de la composición de	Test Resu	It	evice (ii	any	Dagin	
	Dar	motors	Tost	Anthode	lin	i+	Posult		Norms**
1	Flue Gas Temp	erature	15 1125	5 (Part-3)	°C		26		
2.	Flue Gas Veloci	tv	IS 1125	5 (Part-3)	m/	s	8.4		
3.	Flue Gas Volum	netric Flow Rate	IS 1125	5 (Part-3)	Nm <sup>3</sup> /	'nr.	33096.8		1202
4.	Particulates Ma	atter (PM)	IS 1125	5 (Part-1)	mg/N	lm <sup>3</sup>	18.4		
5.	Sulphur Dioxide	e (SO <sub>2</sub> )	IS 1125	5 (Part-2)	mg/N	Im <sup>3</sup>			
6.	Oxides of Nitro	gen (NO <sub>2</sub> )	IS 1125	5 (Part-7)	mg/N	Im <sup>°</sup>			
7.	Carbon Dioxide	e (CO <sub>2</sub> )	IS 132	70:1992	% V,	/v			
8.	Carbon Monox	ide (CO)	15 132	70:1992	ppr %	n //			
9.	Oxygen (O <sub>2</sub> )		15 132	End of Repo	70 V,				
Env. Cor	ndition of Lab.	Laboratory is m 196:1966(C).	aintaining Tempera	ature 27± 2°	C and Relative	e Humidity	65±5 % in all testi	ng area as	per IS
Abbrevia Norme**	ation	MDL: Minimum	Detection Limit,	BDL: Below	Detection L	imit			
Remark	is specified								
Tested E Sample	<b>3y:</b> Neema Kuma <b>Drawn By</b> : Arjun	ri Besra & team				a'			
Specific Contr	actual Notes: -		26		Qua	ality Che	cked by	Authori	zed Signatory
1. The labora 2. This report 3. This report 4. Any comp 5. Total liabi 6. In case of	atory accepts responsible rt shall not be reproduce rt is intended for only gu alaint about this report sh lity of Institute for Enviro feedback/ complaints, p	ility for content of this d except in full, witho idance and not for leg rould be communicate nmental Managemen please send an email	report. ut written approval of th jal purpose or for adver ad in writing within 7 da t will be limited to invoir at <u>gm.iemeco@gmail.c</u>	ne MD. tisement. ys of its issue ced amount onl	y. Sh	shreya S	sonal	Dr.	S. C. Jain)
is issued by the	Director of the Organiz	ation. 8, Modi H	eights, OppAll I	ndia Radio	Dy. Station, Rat	Quality Nu Road, R	Manager Manual	83400	Director

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

### **Institute for Environmental Management**



ULR No .:

Accredited byJharkhand State Pollution Control Board, JSPCB<br/>National Accreditation Board for Testing Laboratory (NABL) vide TC-11515Certified ByISO 9001:2015 (QMS) & ISO 45001:2018



### Test Report

С

Т

		Group. /	Atmosphe	enc Ponutic	n	Sub-Group. 5	LACK ETHISSION	
Report Issue Date: 27-12-	2023			Test Rep	ort No.	:RN-230714001	S18	
Sample ID: 231230AP1300	)1A2			Sample D	escript	ion: Stack Emis	sion	
Challan No./P.O. No.: 451	1012880			Challan N	lo./P.N	o. Date: 13-07-2	2023	
Issued to:								
M/s Tata Stee (Formerly Tata Gamaharia Ph Seraikela-Kha	l Limited a Steel Long P ase-V, Adityap rsawan, Jhark	roducts L our Indust hand-832	imited) trial Area	a,				
Type of Industry: Iron & St	reel			Custome	r Repre	sentative: Shw	eta Kumari	
Sample Drawn by: IEM Te	eam			Sampling	Date:	22-12-2023 (10:	25 am to 11:06	am)
Protocol: CPCB Guideline (	LATS/80/2013-14	4) & IS Met	hod 1125	5 Series				<u> </u>
Field Meteorological Infor	mation A. T	'emp.(°C): 2	4 <b>R.H.</b>	(%): 83	W.C.: (	Clear	W.D.: North to	South
Sample Receiving Date: 25	5-12-2023	<b>Testing St</b>	arted: 25	-12-2023	and the second	Testing Ended	: 27-12-2023	
T		General	Physical Inf	ormation			20	
Stack Identification	Single		Stack He	ight from (	sround	Level (m)	30	
Emission Due to	Furnace		Port Hole	e Height fro	om Gro	und Level (m)	25	
Plat Form	Permanent		Inner Dir	mension of	Stack	(m)	2	
Stack Description	MBF-1 CAST HO	USE	Type of F	uel Used			Coke	
Shape of Stack	Circular		Quantity	of Fuel				
Construction Material	Metal		Producti	on Canacit	v	Program and the second second		
Compline Dent	Available		Pollution	Control D	vice (i	fany)	Bag Filter	
Sampling Port	Available		Test Resu	I CONTION D	evice (i	i aliy)	Dagrinter	
		Han Martin						
SI. NO. Param	eters	Test M	ethods	Uni	t	Result	Norm	15**
1. Flue Gas Tempera	ature	IS 11255	(Part-3)	°C		40		-
2. Flue Gas Velocity		IS 11255	(Part-3)	m/s	5	5.6		
3. Flue Gas Volumet	ric Flow Rate	IS 11255	(Part-3)	Nm <sup>*</sup> /	hr.	58548.9		-
4. Particulates Matt	er (PM)	IS 11255	(Part-1)	mg/N	m	21.5		-
5. Sulphur Dioxide (	SO <sub>2</sub> )	15 11255	(Part-2)	mg/N	m 3			<u>.</u>
6. Oxides of Nitroge	$n(NO_2)$	15 11255	(Part-/)	mg/N	m			-
7. Carbon Dioxide (C	(CO)	15 132/	0:1992	% V/	v			
8. Carbon Monoxide	e (CO)	15 1327	0:1992	ppn % v/				-
9. Oxygen (O <sub>2</sub> )		15 132/	0:1992	% V/	v			
Env. Condition of Lab.	aboratory is maintain 96:1966(C).	ning Temperat	ure 27± 2°0	and Relative	Humidit	y 65±5 % in all testi	ng area as per IS	
Abbreviation	ADL: Minimum Dete	ction Limit, B	DL: Below	Detection Li	mit			
Remark -						_		
Tested By: Neema Kumari								
Sample Drawn By: Arjun Be	esra & team							
Specific Contractual Notes: -			1997	Qua	lity Che	ecked by wooms	Authorized Sig	natory
<ol> <li>The laboratory accepts responsibility</li> <li>This report shall not be reproduced e</li> </ol>	for content of this report. xcept in full, without writte	en approval of the	MD.				131-60	1
<ol> <li>This report is intended for only guidar</li> </ol>	nce and not for legal purpo	ose or for advertis	sement.	QL.	rupe	sorter .	3485	•
<ol> <li>Any complaint about this report shoul</li> <li>Total liability of lastitute for Environm</li> </ol>	ld be communicated in wri	iting within 7 days	s of its issue	0	A	et al	E P	
<ol> <li>In case of feedback/ complaints, plea</li> </ol>	se send an email at gm.ie	emeco@gmail.co	m	(5	Shreya	Sonal)	Dr.S.C. Ja	ain)
On the basis of Quality Checked and Tech	nical data verified by the	Authorized signat	ory, the report	Dy. (	Quality	Manager	Director	
is issued by the Director of the Organizatio	n8, Modi Heights.	OppAll Ind	ia Radio St	ation, Ratu	Road, Re	inchi, Jharkhand	-834001	

Ranchi-834002, Jharkhand, India



Т

С

## **Institute for Environmental Management**

Accredited byJharkhand State Pollution Control Board, JSPCB<br/>National Accreditation Board for Testing Laboratory (NABL) vide TC-11515Certified ByISO 9001:2015 (QMS) & ISO 45001:2018



### Test Report

Disciplin	e: Chemical		Group: Atmosphe	eric Pollution	Sub-G	oup: Stack	Emission
Report Is	sue Date: 27-1	2-2023		Test Report No.	: RN-2307	714001S08	
Sample I	D: 231225AP15	001		Sample Descrip	tion: Stac	k Emission	
Challan N	No./P.O. No.: 45	11012880		Challan No./P.N	lo. Date:	13-07-2023	
Type of I Sample Field Me Sample F	<ul> <li>M/s Tata Ste</li> <li>(Formerly Ta</li> <li>Gamaharia F</li> <li>Seraikela-Ki</li> <li>ndustry: Iron &amp;</li> <li>Drawn by: IEM</li> <li>CPCB Guideline</li> <li>teorological Inference</li> <li>Receiving Date:</li> </ul>	eel Limited Ita Steel Long P Phase-V, Adityap harsawan, Jhark Steel Team e (LATS/80/2013-14 ormation A. T 25-12-2023	toducts Limited) our Industrial Area thand-832108 4) & IS Method 1125 emp.(°C): 23 R.H. Testing Started: 25	a, Customer Reprosentation Sampling Date: 55 Series (%): 80 W.C.: 5-12-2023	esentative 22-12-20 Clear Testing	e: Shweta k 23 (11:32 a W.D Ended: 27-	Cumari m to 12:11 pm) .: East - West 12-2023
Sample	cectring puter		General Physical Inf	formation			
Stack Ide	entification	Single	Stack Height fr	om Ground Leve	l (m)	50	
Emission	Due to	Furnace	Port Hole Heig	ht from Ground L	evel (m)	30	-
Plat For	m	Permanent	Inner Dimensio	on of Stack (m)	1	2.3	
Stack De	scription	MBE-2 Stove	Type of Fuel II	sed		BEgas	
Stack De	Scription Check	Cincular	Ouentity of Eu	al		Digus	en e
Snape of	r Stack	Circular	Quantity of Fu				
Constru	ction Material	RCC	Production Ca	pacity			
Samplin	g Port	Yes	Pollution Cont	rol Device (if any	)	Dry gas ci	eaning plant
		and the second s	1631 1634				
SI. NO.	Para	imeters	Test Methods	Unit	R	esult	Norms**
1.	Flue Gas Tempe	erature	IS 11255 (Part-3)	<u>°C</u>		128	
2.	Flue Gas Veloci	ty	IS 11255 (Part-3)	m/s	64	5.0	
3.	Flue Gas Volum	etric Flow Rate	IS 11255 (Part-3)	mg/Nm <sup>3</sup>	04	751.5	
4.	Particulates Ma		IS 11255 (Part-1)	mg/Nm <sup>3</sup>		25.2	
5.	Ovides of Nitro	$ran(NO_1)$	IS 11255 (Part-7)	mg/Nm <sup>3</sup>		57.4	
0. 7	Carbon Dioxide	$(CO_2)$	IS 13270-1992	% v/v		10.1	
2	Carbon Monox		IS 13270:1992	ppm		6.2	
9	Oxygen (O <sub>2</sub> )		IS 13270:1992	% v/v		3.1	
5.	0.18011 (02/		End of Rep	ort			
Env. Con Abbrevia Norms** Remark Tested E	ndition of Lab. ation is specified By: Neema Kuman	Laboratory is maintain 196:1966(C). MDL: Minimum Deter 	ning Temperature 27± 2°C	Detection Limit	ty 65±5 % In	all testing are	
Sample Specific Contr	actual Notes: -	Lity for content of this report		Quality Ch	ecked by	Aut	horized Signatory
<ol> <li>This report</li> <li>This report</li> <li>This report</li> <li>Any comp</li> <li>Total liabit</li> <li>In case of</li> </ol>	t shall not be reproduce t is intended for only gui laint about this report sh lity of Institute for Enviro feedback/ complaints, p	d except in full, without writte dance and not for legal purp ould be communicated in wri nmental Management will be lease send an email at gm.ie	n approval of the MD. ose or for advertisement. ting within 7 days of its issue limited to invoiced amount only meco@gmail.com	y. Shruj (Shreya	sonal)	themadeune.	Dr. S. C. Jain)
On the basis of is issued by the	Quality Checked and To Pirector of the Organiz	echnical data verified by the / ation	Authorized signatory, the repor , OppAll India Radio	t Dy. Quality Station, Ratu Road,	Manager Ranchi, Jhi	irkhand 83	Director
-	Laborato	ory Site - H.No A-1	3, Saket Vihar, Near So	ohrai Bhawan, Harr	nu Housing	Colony,	



Discipline: Chemical

Т

С

# Institute for Environmental Management Accredited by Jharkhand State Pollution Control Board, JSPCB

Accredited byJharkhand State Pollution Control Board, JSPCB<br/>National Accreditation Board for Testing Laboratory (NABL) vide TC-11515Certified ByISO 9001:2015 (QMS) & ISO 45001:2018

3

0

0

0

0

0

1

Sub-Group: Stack Emission

8

7



9

#### **Test Report**

Group: Atmospheric Pollution

2

1

1

5

1

5

Report Is	sue Date: 02-0	1-2024			Test Rep	oort No	.: RN-23071400	1S10	
Sample I	D: 231230AP03	001			Sample	Descrip	otion: Stack Emis	ssion	
Challan I	No./P.O. No.: 45	511012880			Challan	No./P.	No. Date: 13-07-	2023	
Issued to	o: M/s Tata Sta (Formerly Ta Gamaharia I Seraikela-Kl	eel Limited ata Steel Lo Phase-V, Ac narsawan, J	ong Products Lim lityapur Industria Iharkhand-832108	ited) I Area 3	a,	14			
Type of I	ndustry: Iron &	Steel		1	Custom	er Repr	esentative: Shw	veta Ku	umari
Sample	Drawn by: IEM	Team	and the first of the second		Samplin	g Date	: 25-12-2023 (11	:28 an	n to 12:11 pm)
Protocol	CPCB Guidelin	e (LATS/80/2	013-14) & IS Method	1125	5 Series	-			
Field Me	teorological Inf	ormation	A. Temp.(°C): 25	R.H.	(%): 76	W.C.:	Clear	W.D.:	East - West
Sample F	Receiving Date:	30-12-2023	Testing Start	ed: 30	-12-2023		Testing Ender	d: 02-0	1-2024
		- 1	General Phy	sical Inf	ormation				
Stack Id	entification	Single		Sta	ck Height	from (	Ground Level (m	)	55
Emission	Due to	Reheating		Po	rt Hole He	eight fr	om Ground Leve	el (m)	30
Plat For	n	Permanen	t	Inn	er Dimen	sion of	Stack (m)		1.5
Stack De	scription	WRM STA	СК	Ту	pe of Fuel	Used			BF/LDO
Shape of	Stack	Circular		Qu	antity of	Fuel			
Construe	tion Material	Metal		Pro	duction (	Capacit	у		
Samplin	g Port	Yes		Po	llution Co	ntrol D	evice (if any)		None
		1	Tes	t Resu	lt				
SI. NO.	Para	ameters	Test Metho	ods	Un	it	Result		Norms**
1.	Flue Gas Temp	erature	IS 11255 (Pa	rt-3)	°(	2	387		
2.	Flue Gas Veloci	ty	IS 11255 (Pa	rt-3)	m,	/s	12.3		
3.	Flue Gas Volum	netric Flow Rat	e IS 11255 (Pa	rt-3)	Nm <sup>3</sup>	/hr.	34272.9		
4.	Particulates Ma	atter (PM)	IS 11255 (Pa	rt-1)	mg/I	Vm <sup>3</sup>	25.5	-	
5.	Sulphur Dioxid	e (SO <sub>2</sub> )	IS 11255 (Pa	rt-2)	mg/I	Vm <sup>°</sup>	65.3		
6.	Oxides of Nitro	gen (NO <sub>2</sub> )	IS 11255 (Pa	rt-7)	mg/l	Nm <sup>-</sup>	126.4		
7.	Carbon Dioxide	$(CO_2)$	15 132/0:15	392	% V	m	BDI/MDI-0	21	
0. Q			IS 13270.15	992	94 %		13 5	2)	
	0,1501 (02)		End	of Rep	ort		10.0		1
Env. Cor	dition of Lab.	Laboratory is r 196:1966(C).	naintaining Temperature	27± 2°C	and Relativ	e Humidi	ty 65±5 % in all test	ing area	as per IS
Abbrevia Norms**	is specified	MDL: Minimur	m Detection Limit, BDL:	Below	Detection L	imit			
Remark	ie opeenieu								
Tested E Sample	By: Neema Kuma Drawn By: Arjun	ri Besra & team				2			
Specific Contr	actual Notes: -				Qu	ality Ch	necked by	Auth	orized Signatory
1. The labora 2. This report 3. This report 4. Any comp 5. Total liabil 6. In case of	atory accepts responsibilits t shall not be reproduce t is intended for only guilaint about this report shity of Institute for Enviro feedback/ complaints, p	lity for content of this d except in full, with dance and not for le ould be communica nmental Manageme lease send an emai	s report. out written approval of the MD. gal purpose or for advertiseme ted in writing within 7 days of it nt will be limited to invoiced am I at gm.iemeco@gmail.com	nt. s issue iount only	Sh (	Shreya	Sonal)		Dr. S. C. Jain)
On the basis of is issued by the	Quality Checked and To Director of the Organiz	ation - 8, Modi H	b by the Authorized signatory, t leights, OppAll India	Radio (	Dy. Station, Rat	Quality u Road,	Manager Ranchi, Jharkhund	884	Director
( <del>)</del>								-	

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

Ranchi-834002, Jharkhand, India



## Institute for Environmental Management

Accredited byJharkhand State Pollution Control Board, JSPCB<br/>National Accreditation Board for Testing Laboratory (NABL) vide TC-11515Certified ByISO 9001:2015 (QMS) & ISO 45001:2018



### Test Report

ULK NO .:		C	1		5	1	5	2	3	0	0	0		0	0	1	8	9	0
Disciplin	e: Chemical					Grou	up: At	mos	pheric	Pollut	ion		Sub	-Grou	ip: S	tack E	missi	on	
Report Is	sue Date: 02-	01-2	024						Те	st Rep	ort N	<b>o.:</b> F	RN-2	30714	4001	IS11			
Sample I	D: 231230AP0	3002	2						Sa	mple	Descri	ptic	on: S	tack E	mis	sion			
Challan N	No./P.O. No.: 4	1511	0128	80					Ch	allan	No./P	.No	. Dat	<b>e:</b> 13-	-07-2	2023			
Issued to	o:																		
	M/s Tata S	teel	Limi	ited															
	(Formerly 1	ata	Stee	l Lon	g Pro	oduct	ts Lin	nited	d)										
	Gamaharia	Pha	ase-V	, Adi	yapı	ir Ind	ustri	al A	rea,										
	Seraikela-M	har	sawa	an, Jh	arkh	and-8	33210	18							21				
Type of I	ndustry: Iron a	s Ste	el						Cu	stome	er Rep	rese	enta	ive: :	Snw	eta Ki	imari		
Sample	Drawn by: IEN	/ 102	am	0 /000	2 4 41	0.10.		1.4.4	Sa	mplin	g Date	2: 25	5-12-	2023	(10:	10 am	n to 10	J:53 a	im)
Protocol	: CPCB Guidelin	ne (L	ATS/8	30/201	.3-14)	& IS I	Metho	od 11	.255 Se	ries		0							
Field Me	teorological Ir	form	natio	n	A. Te	mp.(°C	c): 25	R.	H. (%):	76	W.C.	: Cle	ear			w.D.:	East	- We	st
Sample F	Receiving Date	: 30-	12-20	)23		estin	g Star	rted:	30-12-	2023			Testi	ng Er	ded	:02-0	1-202	4	
Charles I.		1.	Cim -1			Ge	eneral Pl	nysical	Informa	tion	harris	6		Laure	1		00		
Stack Ide	entification		Single						Stack P	leight	trom	Gro	ouna	Leve	(m)		80		
Emission	n Due to	F	Rehea	ating F	urnac	e			Port H	ole He	light f	rom	Gro	und L	eve	I (m)	22		
Plat Form	m	F	Perma	anent					Inner D	Dimen	sion o	of St	ack (	m)			2		
Stack De	scription	E	BLOOM	MING N	AILL ST	ACK			Type o	f Fuel	Used						BFg	as/LS	SD
Shape of	f Stack	0	Circul	ar					Quanti	ty of I	Fuel								
Construc	ction Material	ſ	Metal						Produc	tion (	apaci	ty							
Samplin	g Port	I	Availa	ble				1	Polluti	on Co	ntrol I	Devi	ice (i	f any)			Non	е	
					n -		Te	est Re	sult										
SI. NO.	Pa	rame	ters	-		Tes	t Met	hods		Un	it	1		Resu	It		N	lorms	**
1.	Flue Gas Tem	perat	ure			IS 11	255 (P	Part-3	)	°C	2			335	5				
2.	Flue Gas Velo	city				IS 11	255 (P	Part-3	)	m/	s			12.	4				
3.	Flue Gas Volu	metri	ic Flow	v Rate		IS 11	255 (P	Part-3	)	Nm <sup>3</sup>	/hr.			6663	4.6				
4.	Particulates N	latte	r (PM)	)		IS 11	.255 (P	Part-1	.)	mg/N	1m <sup>3</sup>			27.	5	-			
5.	Sulphur Dioxi	de (So	O <sub>2</sub> )			IS 11	.255 (P	Part-2	.)	mg/N	1m <sup>3</sup>			77.	8				
6.	Oxides of Nitr	ogen	(NO2)	)		IS 11	.255 (P	Part-7	)	mg/N	Im	-		148	.2				
7.	Carbon Dioxic	le (CC	<b>D</b> <sub>2</sub> )			IS 1	.3270::	1992		% v	/v	-	10000	11.	9				
8.	Carbon Mono	xide	(CO)		-	IS 1	.3270::	1992		pp	m	-	BC	DL(MD	L-0.2	2)			
9.	Oxygen (O <sub>2</sub> )					IS 1	3270:	1992	enort	% v	/v	1	-	11.	5		1		
Env Cor	dition of Lab	Lal	borato	ry is ma	intainir	ng Temp	peratur	e 27±	2°C and	Relativ	e Humic	dity 6	5±5 %	in all	testi	ng area	as per	15	
Abbrouie	tion	19	6:1966	(C).	Detecti	onlim		· Rol	ow Data	ction I	imit								
Norms**	is specified	IVIL	-	mum	Derecti		III, BUL	L. Del	ow Dete		mit								
Remark	0.		-																
Tested E Sample I	By: Neema Kuma Drawn By: Arjur	ari n Bes	sra & te	eam															
Specific Contr	actual Notes		-2-11-	-						0	ality C	her	kod I	N	1	Auth	orized	Sign	atory
1. The labora 2. This repor 3. This repor	atory accepts responsi t shall not be reproduc t is intended for only g	bility fo ced exc juidance should	or conter cept in fu ce and no be com	nt of this re II, without ot for lega	eport. written a I purpose I in writin	approval or for a	of the MI dvertisen 7 days of	D. nent. f its issu	Je	S	hor	Tes	ver la	A C		THE REAL	G	SIGN	atory

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 gm.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. 8, Modi Heights, Opp. All India Radio Station, Ratu Road, Ranchi, Jhan

(Shreya Sonal) (Shreya Sonal) Dy. Quality Manager + Director

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

Ranchi-834002, Jharkhand, India

# Institute for Environmental Management Accredited by Jharkhand State Pollution Control Board, JSPCB



ULR No .:

Т

С

Accredited byJharkhand State Pollution Control Board, JSPCB<br/>National Accreditation Board for Testing Laboratory (NABL) vide TC-11515Certified ByISO 9001:2015 (QMS) & ISO 45001:2018



### **Test Report**

Disciplin	e: Chemical		Group: Atmos	pheric Polluti	on	Sub-Group: Stack E	mission
Report Is	ssue Date: 02-0	1-2024		Test Rep	ort No.:	RN-230714001S12	
Sample I	D: 231230AP06	6001		Sample I	Descripti	on: Stack Emission	
Challan I	No./P.O. No.: 4	511012880		Challan I	No./P.No	Date: 13-07-2023	
Issued to	o: M/s Tata St (Formerly Ta Gamaharia Seraikela-K	eel Limited ata Steel Long Phase-V, Adity harsawan, Jha	Products Limite apur Industrial A rkhand-832108	d) rea,			
Type of I	ndustry: Iron &	Steel	100	Custome	er Repres	sentative: Shweta Ku	mari
Sample	Drawn by: IEM	Team		Sampling	g Date: 2	6-12-2023 (11:10 am	to 11:50 am)
Protocol	: CPCB Guidelin	e (LATS/80/2013	-14) & IS Method 1:	1255 Series			
Field Me	teorological Inf	ormation A	. Temp.(°C): 27 R.	H. (%): 72	W.C.: S	unny W.D.:	NW - SE
Sample F	Receiving Date:	30-12-2023	Testing Started:	30-12-2023		Testing Ended: 02-0	1-2024
	9		General Physica	I Information			
Stack Ide	entification	Common		Stack Height	from G	ound Level (m)	63
Emission	n Due to			Port Hole He	ight from	m Ground Level (m)	22.2
Plat For	m	Permanent		Inner Dimen	sion of S	itack (m)	3.2
Stack De	scription	DRI 4 5 ( WHI	RB)	Type of Fuel	Used		Coal
Shane of	f Stack	Circular		Quantity of	Fuel		
Shape o	i Slack	PCC		Draduction (	Canacity		
Constru	ction iviaterial	RLL		Production	apacity	· · · // · · · · · ·	
Samplin	g Port	Available	Test D	Pollution Co	ntrol De	vice (if any)	ESP
			Test R	esuit			
SI. NO.	Para	ameters	Test Methods	Uni	it	Result	Norms**
1.	Flue Gas Temp	erature	IS 11255 (Part-3	3) °C		108	
2.	Flue Gas Veloci	ty	IS 11255 (Part-3	3) m/	s	5.9	
3.	Flue Gas Volum	netric Flow Rate	IS 11255 (Part-3	3) Nm³/	'nr.	129700.9	
4.	Particulates Ma	atter (PM)	IS 11255 (Part-1	L) mg/N	lm³	31.6	
5.	Sulphur Dioxid	e (SO <sub>2</sub> )	IS 11255 (Part-2	2) mg/N	Im <sup>°</sup>	287.4	
6.	Oxides of Nitro	gen (NO <sub>2</sub> )	IS 11255 (Part-7	7) mg/N	lm³	130.1	
7.	Carbon Dioxide	e (CO <sub>2</sub> )	IS 13270:1992	% v/	/v	12.9	
8.	Carbon Monox	ide (CO)	IS 13270:1992	ppr	n	306	
9.	Oxygen (O <sub>2</sub> )		IS 13270:1992	% v/	/v	10.9	
		Laboratory is main	End of R	eport	Humidity	65+5 % in all testing area	as ner IS
Env. Cor	ndition of Lab.	196:1966(C).	tanning remperature 2/1	z c and kelative	. munimorey	osis win an resting area	us per is
Abbrevia	ation	MDL: Minimum De	etection Limit, BDL: Be	low Detection Li	imit		
Norms**	is specified						
Tested E Sample	<b>3y:</b> Neema Kuma <b>Drawn By:</b> Arjun	ri Besra & team			P		
pecific Contr	actual Notes: -	and the second sec	the second s	Que	ality Che	cked by Autho	rized Signatory
<ol> <li>The labora</li> <li>This report</li> <li>This report</li> <li>Any comption</li> <li>Total liabilities</li> </ol>	atory accepts responsib t shall not be reproduce t is intended for only gu- laint about this report sh lity of Institute for Enviro	ility for content of this repr d except in full, without w idance and not for legal p nould be communicated in nmental Management will	ort. ritten approval of the MD. urpose or for advertisement. writing within 7 days of its iss l be limited to invoiced amount	tonly.	supp Shrava S		S. C. Jain)
o. In case of	Quality Checked and T	echnical data verified by t	the Authorized signatory the re	eport –			. 0. 0. Jain)
issued by the	Director of the Organiz	ation. 8, Modi Heigh	nts, OppAll India Rad	io Station, Ratu	Quality N Road, Ra	nchr, harkhand 8840	Director
	Laborate	ory Site - H.No A	-13, Saket Vihar, Near	Sohrai Bhawa	n, Harmu	Housing Colony,	

Ranchi-834002, Jharkhand, India



Т

С

## Institute for Environmental Management

Accredited byJharkhand State Pollution Control Board, JSPCB<br/>National Accreditation Board for Testing Laboratory (NABL) vide TC-11515Certified ByISO 9001:2015 (QMS) & ISO 45001:2018



### **Test Report**

Discipline	e: Chemical		Group: Atm	osphe	eric Pollution Sub-Group: Stack Emission						
Report Is	sue Date: 02-0	1-2024			Test Rep	ort No.					
Sample I	D: 231230AP06	002			Sample	ample Description: Stack Emission					
Challan N	No./P.O. No.: 4	511012880		Challan No./P.No. Date: 13-07-2023							
Issued to	D:		A DATE OF THE OWNER OF THE OWNER OF		1						
	M/s Tata Ste (Formerly Ta Gamaharia I Seraikela-Ki	eel Limited ata Steel Lon Phase-V, Adit	g Products Limit tyapur Industrial	ed) Area	a,						
Type of I	ndustry: Iron &	Steel	arkinanu-002100	-	Custome	er Renre	sentative: Sh	weta Ku	mari		
Sample	Drawn by: IEM	Team		1	Camplin	a Data:	26-12-2023 (1	2.15 nm	to 12:48 pm)		
Dretecol	CDCP Cuidelin		2 14) & IS Mathad	1125	5 Sorios	g Date.	20-12-2025 (1	2.15 pm	10 12.40 pm		
Protocol	CPCB Guideline	e (LATS/80/201		1125 D U	in series	MC.	Suppy	M/D.			
Field Me	teorological Inf	ormation	A. Temp.(°C): 27	K.H.	(%): 72	w.c.:	Sunny	W.D.:	1 2024		
Sample F	Receiving Date:	30-12-2023	Testing Starte	d: 30	-12-2023		lesting Ende	ed: 02-0	1-2024		
Charle Ide	maification	Common	General Phys	C+	ormation	from	round Lovel (	m)	63		
Stack Ide	entification	Common		50	ack neight	inche for	Ground Level (	(n) (n)	20.2		
Emission	Due to	Keneating F	urnace	10	IT HOLE HE	eignt tro	Steels ()	ver (m)	20.2		
Plat Form	n	Permanent		In	ner Dimen	ision of	Stack (m)		3.2		
Stack De	scription	DRI 2,3 ( WI	HRB)	Ту	pe of Fuel	Used			Waste Heat		
Shape of	fStack	Circular	112	Q	uantity of	Fuel	and the second se				
Construc	ction Material	RCC		Production Capacity							
Samplin	g Port	Available		Pollution Control Device (if any)					ESP		
			Test	Resu	lt				1001		
SI. NO.	Para	ameters	Test Metho	Test Methods Unit Result					Norms**		
1.	Flue Gas Temp	erature	IS 11255 (Par	t-3)	°C	:	122				
2.	Flue Gas Veloci	ty	IS 11255 (Par	t-3)	m/	s	7.0				
3.	Flue Gas Volum	etric Flow Rate	IS 11255 (Par	t-3)	Nm <sup>3</sup> /	/hr.	148468.	2			
4.	Particulates Ma	atter (PM)	IS 11255 (Par	t-1)	mg/N	1m <sup>3</sup>	35.1	1.5			
5.	Sulphur Dioxide	e (SO <sub>2</sub> )	IS 11255 (Par	t-2)	mg/N	1m <sup>3</sup>	327.6				
6.	Oxides of Nitro	gen (NO <sub>2</sub> )	IS 11255 (Par	t-7)	mg/N	1m <sup>3</sup>	55.6				
7.	Carbon Dioxide	(CO <sub>2</sub> )	IS 13270:19	92	% v	/v	12.4				
8.	Carbon Monox	ide (CO)	IS 13270:19	92	ppr	m	385				
9.	Oxygen (O <sub>2</sub> )		IS 13270:19	IS 13270:1992			% v/v 1.33				
		Laboratory is ma	End of	7+ 2°0	and Relative	e Humidit	v 65±5 % in all tes	ting area	as per IS		
Env. Cor	ndition of Lab.	196:1966(C).			. una neraciti	e municite	,				
Abbrevia	ition	MDL: Minimum	Detection Limit, BDL: I	Below	Detection L	imit					
Remark	is specified										
Tested E	v: Neema Kuma	ri .					1				
Sample	Drawn By: Arjun	Besra & team									
0					0	-lite Ch	a lead by	Autho	rized Signatory		
1. The labora	actual notes atory accepts responsibility	ility for content of this re	eport.		Qua	anty Chi	ecked by	Autin	Signatory		
2. This repor	t shall not be reproduce	d except in full, without	written approval of the MD.		C	0 8 <mark>8</mark>	lus	187	SA		
<ol> <li>This report</li> <li>Any comp</li> </ol>	t is intended for only gu laint about this report sh	idance and not for lega hould be communicated	I purpose or for advertisement in writing within 7 days of its	t. issue	Sh	sup	Tot of	131	Ja-		
5. Total liabil	lity of Institute for Enviro	nmental Management	will be limited to invoiced amo	unt only	y. 🧲	Charles		3181			
6. In case of	feedback/ complaints, p	blease send an email at	t <u>qm.iemeco@gmail.com</u>	o ronord	(	(Shreya Sonal)					
is issued by the	Director of the Organiz	ation. 8, Modi Heis	s the Authorized Signatory, the state of the signatory of	adio S	Dy.	Quality Road, R	Manager anchi, Iharkhan	id \$340	Director		

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

Ranchi-834002, Jharkhand, India



### **Institute for Environmental Management**

Accredited byJharkhand State Pollution Control Board, JSPCB<br/>National Accreditation Board for Testing Laboratory (NABL) vide TC-11515Certified ByISO 9001:2015 (QMS) & ISO 45001:2018



### **Test Report**

ULR No.: T		C 1	1	5	1	5	2	3	0	0	1	0	0	0		1	8	8	3
Discipline: Chemica	ıl				Gro	oup: At	tmosp	heric l	Pollut	ion		Su	ıb-Gr	oup	: Sta	ack E	missi	on	
Report Issue Date: 02-01-2024									Test Report No.: RN-230714001S14										
Sample ID: 231230AP08001								Sa	Sample Description: Stack Emission										
Challan No./P.O. N	Challan No./P.O. No.: 4511012880								Challan No./P.No. Date: 13-07-2023										
Issued to:						<u> </u>													
M/s Tat	a Ste	eel Lim	ited																
(Former	ly Ta	ata Stee	el Lo	ng F	roduc	ts Lir	nited	)											
Gamaha	aria F	Phase-	V, Ac	litya	pur In	dustr	ial Ar	ea,											
Seraike	la-Kł	narsaw	an, J	hark	hand	8321	08		122			N.							
Type of Industry: In	on &	Steel					-	Cu	stom	er Rep	ores	sent	ative	: Sh	weta	a Ku	mari		
Sample Drawn by:	IEM	Team		_			Sec. 1	Sa	mplin	g Date	e: 2	27-1	2-202	23 (1	0:45	5 am	to 11	L:25 a	m)
Protocol: CPCB Gui	deline	e (LATS/	80/20	013-1	4) & IS	Meth	od 112	255 Se	ries										
<b>Field Meteorologic</b>	al Inf	ormatio	n	A. 1	Temp.(	°C): 26	R.H	l. (%):	72	W.C	.: SI	unn	У		W	/.D.:	West	t - Eas	t
Sample Receiving D	)ate:	30-12-2	023		Testi	ng Sta	rted: 3	30-12-	2023			Tes	sting	Ende	ed: (	02-0	1-202	4	
					6	General P	hysical	Information	tion				-						
Stack Identification	ו	Comr	mon		Stack	Heigh	nt from	n Ground Level (m) 46.1											
Emission Due to Furnace				Port Hole Height from Ground Level (m) 36															
Plat Form Permanent				Inner	Dime	nsion	of Sta	ck (m	)					5					
Stack Description		SMS	1&2		Type of Fuel Used Electric						trici	icity							
Shape of Stack		Circu	lar		Quantity of Fuel														
Construction Mate	rial	Meta	1		Production Capacity														
construction mate	mar	Inclu		-	Trouverien capacit										Fume Extraction				
Sampling Port		Yes	Yes Pollution Control			Devid	Device (if any)						System						
			-		L	Т	est Res	sult					1						
SI, NO.	Para	meters			Te	st Met	hods	-	Un	it	Т		R	esult		-	N	lorms*	**
1. Flue Gas	Tempe	erature			IS 1	1255 (	Part-3)		°C	:		52							
2. Flue Gas	/eloci	ty			IS 1	1255 (1	Part-3)		m/s 5			5.9	.9						
3. Flue Gas	/olum	netric Flo	w Rat	e	IS 1	1255 (	Part-3)	8	Nm <sup>3</sup> /hr. 37			371	278.	278.9					
4. Particulat	es Ma	atter (PM	)		IS 11255 (Part-1)				mg/M	Vm <sup>3</sup>		20.5			5				
5. Sulphur D	ioxide	e (SO <sub>2</sub> )			IS 1	1255 (1	Part-2)		mg/M	Vm <sup>3</sup>	37.4								
6. Oxides of	Nitro	gen (NO <sub>2</sub>	)		IS 1	1255 (	Part-7)		mg/N	mg/Nm <sup>3</sup> 71.			1.1	1					
7. Carbon D	Carbon Dioxide (CO <sub>2</sub> )			IS	13270:	1992		% v	/v	10.1									
8. Carbon M	Carbon Monoxide (CO)			IS	13270:	0:1992 ppm BDL			BDL(N	NDL-C	)L-0.2)								
9. Oxygen (C	D <sub>2</sub> )		-		IS	13270:	1992		% v	/v			1	1.4					
	-	Laborate	ry is a	naintai		En	d of Re	port	Relativ	e Humir	dity	65+5	5 % in	all tes	ting	area	as per	15	
Env. Condition of L	.ab.	196:196	6(C).	anna	in a ren	peratur		. c and										050	
Abbreviation		MDL: M	inimun	n Dete	ction Li	mit, BD	L: Belo	w Dete	ction L	.imit									
Norms** is specified																			
Tested By: Neema k	lumar	ri									-	-							

Sample Drawn By: Arjun Besra & team

Specific Contractual Notes: -	Quality Checked by Authorized Signatory							
<ol> <li>The laboratory accepts responsibility for content of this report.</li> </ol>	A isonmenter							
2. This report shall not be reproduced except in full, without written approval of the MD.								
3. This report is intended for only guidance and not for legal purpose or for advertisement.	an insorte and a day							
4. Any complaint about this report should be communicated in writing within 7 days of its issue	Shar Aller Aller							
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 gm.iemeco@gmail.com	(Shreya Sonal) (Dr./S. C. Jain)							
On the basis of Quality Checked and Technical data verified by the Authorized signatory, the report	Dy Quality Manager							
is issued by the Director of the Organization -8 Modi Heights Opp -All India Radio Sta	tion Ratu Road, Ranchi, Iharkhand - 834001							
corporate the contract of the second se								

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

Ranchi-834002, Jharkhand, India



----

С

Т

1

1

5

1

### **Institute for Environmental Management**

Accredited byJharkhand State Pollution Control Board, JSPCB<br/>National Accreditation Board for Testing Laboratory (NABL) vide TC-11515Certified ByISO 9001:2015 (QMS) & ISO 45001:2018

3

0

to Della Maria

0



4

1

0

Call Course Charle Englander

0

0

8

8

#### **Test Report**

2

. 1

5

.

Discipline	: Chemical		Group: Atmosp	neric Polluti	on	Sub-Group: Stack E	mission				
Report Is:	sue Date: 02-0	1-2024		Test Rep	est Report No.: RN-230714001S15						
ample I	: 231230AP08	002	Sample	Descrip	tion: Stack Emission						
Challan N	o./P.O. No.: 45	11012880		Challan	Challan No./P.No. Date: 13-07-2023						
sued to	: M/s Tata Ste (Formerly Ta Gamaharia F Seraikela-Kh	eel Limited ta Steel Long Phase-V, Adity arsawan, Jhar	Products Limited apur Industrial Ar rkhand-832108	) ea,		contativo Shuata K	mori				
ype of Ir	ndustry: Iron &	Steel		Custome	er Repr	esentative: Shweta KL	imari				
ample D	Drawn by: IEM	Team		Samplin	g Date:	27-12-2023 (01:16 pm	n to 01:48 pm)				
rotocol:	<b>CPCB</b> Guideline	e (LATS/80/2013-	-14) & IS Method 112	255 Series							
ield Met	eorological Info	ormation A.	Temp.(°C): 26 R.H	. (%): 72	W.C.:	Sunny W.D.:	West - East				
ample R	eceiving Date:	30-12-2023	<b>Testing Started: 3</b>	0-12-2023		Testing Ended: 02-0	1-2024				
			General Physical I	nformation							
tack Ide	ntification	Single	S	tack Height	from (	Ground Level (m)	43				
mission	Due to	Furnace	P	ort Hole He	ight fro	om Ground Level (m)	33.3				
Plat Form		Permanent	h	ner Dimen	sion of	Stack (m)	5				
tack De		CLAC 2		when of Eucl	licod		Electricity				
Stack De	Cteak	Sivis - S		ype of ruel	e of Fuel Used						
shape of	Stack	Circular		luantity of I							
Construc	tion Material	Metal	P	Production Capacity							
Sampling	Port	Yes	P	Pollution Control Device (if any)							
			Test Res	ult							
SI. NO.	Para	meters	Test Methods	Un	it	Result	Norms**				
1.	Flue Gas Tempe	rature	IS 11255 (Part-3)	°C	2	78					
2.	Flue Gas Velocit	T <b>y</b>	IS 11255 (Part-3)	m/	s	7.4					
3.	Flue Gas Volum	etric Flow Rate	IS 11255 (Part-3)	Nm <sup>3</sup> ,	/hr.	430397.1					
4.	Particulates Ma	tter (PM)	IS 11255 (Part-1)	mg/N	۱m³	22					
5.	Sulphur Dioxide	(SO <sub>2</sub> )	IS 11255 (Part-2)	mg/N	1m <sup>3</sup>	55.7					
6.	Oxides of Nitro	gen (NO <sub>2</sub> )	IS 11255 (Part-7)	mg/N	1m <sup>3</sup>	91.4					
7.	Carbon Dioxide	(CO <sub>2</sub> )	IS 13270:1992	% v	/v	2.19					
8.	Carbon Monoxi	de (CO)	IS 13270:1992	ppi	m	18					
9.	Oxygen (O <sub>2</sub> )		IS 13270:1992	0:1992 % v/v 7.1							
		1.1	End of Re	oort	a Humidi		35 995 15				
Env. Con	dition of Lab.	196:1966(C).	aming remperature 2/± 2	c and Kelativ	e numidi	ty obio % in all testing area	as per 13				
Abbrevia	tion	MDL: Minimum De	tection Limit, BDL: Belo	w Detection L	imit						
Norms**	is specified										
Tested P	v: Neema Kumar										
Sample D	Frawn By: Arjun I	Besra & team									
ecific Contra	ctual Notes: -		na ann ann an Christian ann <mark>Anna Ann a</mark>	Qu	ality Ch	ecked by Author	orized Signato				
<ul> <li>The labora</li> <li>This report</li> <li>This report</li> <li>Any compla</li> <li>Total liabilities</li> <li>In case of f</li> </ul>	tory accepts responsibil shall not be reproduced is intended for only gui aint about this report shi y of Institute for Enviror eedback/ complaints, p	ity for content of this report dexcept in full, without wr dance and not for legal pu puld be communicated in immental Management will lease send an email at <u>gr</u>	nly.	Sharys and on the right of the second							
		and a second	the second se	200 B							

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

Ranchi-834002, Jharkhand, India

### Institute for Environmental Management

Jharkhand State Pollution Control Board, JSPCB Accredited by National Accreditation Board for Testing Laboratory (NABL) vide TC-11515 Certified By ISO 9001:2015 (QMS) & ISO 45001:2018



(Dr. S. C. Jain)

Director

**Test Report** 

	the second se	- T	1 1			2 1			1		1		
ULR No.:	: T (	C   1   1	5	1 5	2	3 0	0 0 0	0	2	2 8	1		
Disciplin	e: Chemical		(	Group: Atn	nosphe	ric Polluti	on Sub-	Group	Stack Er	nission			
Report Is	ssue Date: 28-02	2-2024		Test Report No.: RN-230714001S10									
Sample I	D: 240226AP13	002			Sample Description: Stack Emission								
Challan I	No./P.O. No.: 45	11010303				Challan I	No./P.No. Date	:04-07	7-2022				
Issued t	o: M/s Tata Ste (Formerly Ta Gamaharia F Seraikela-Kh	eel Limited ata Steel Lo Phase-V, Ad aarsawan, J	ng Prod lityapur harkhar	lucts Lim Industria 1d-832108	ited) I Area 3	9							
Type of I	Industry: Iron &	Steel			(	Custome	er Representat	ive: S	hweta Ku	ımari			
Sample	Drawn by: IEM	Team				Sampling	g Date: 23-02-2	024 (1	2:40 pm	to 01:13 p	pm)		
Protocol	: CPCB Guideline	e (LATS/80/20	)13-14) &	IS Method	11255	5 Series							
Field Me	teorological Inf	ormation	A. Tem	p.(°C): 22	R.H. (	%): 64	W.C.: Semi Cl	oudy	W.D.:	NW to SE	:		
Sample I	Receiving Date:	26-02-2024	Te	sting Start	ed: 26-	02-2024	Testir	g Ende	d: 28-02	-2024			
				General Phy	sical Info	rmation							
Stack Id	entification	Single		Stack He	ight fro	om Groun	d Level (m)	79.	7				
Emission	n Due to	Boiler		Port Hole	e Heigh	t from Gr	ound Level (m	26.	5				
Plat For	m	Permanen	t	Inner Dimension of Stack (m)					3.6				
Stack De	escription	25 MW	25 MW Type of Fuel Us			sed			Coal				
Shape of	f Stack	Circular		Quantity of Fuel									
Constru	ction Material	RCC	C Production Ca			acity							
Sampling Port		Yes Pollution Cont			Contr	ol Device	(if any)	ESP	14				
	<u> </u>	1		Tes	t Result								
SI, NO.	Para	meters	s T		ods	Uni	t	Result		Norms	**		
1.	Flue Gas Tempe	erature	1	S 11255 (Pa	rt-3)	°C		120					
2.	Flue Gas Velocit	ty	. 1	S 11255 (Pa	rt-3)	m/s	5	7.0					
3.	Flue Gas Volum	etric Flow Rate	2	S 11255 (Pa	rt-3)	Nm <sup>3</sup> /	hr. 1	188848.6					
4.	Particulates Ma	tter (PM)	1	S 11255 (Pa	rt-1)	mg/N	m <sup>3</sup>	58.6					
5.	Sulphur Dioxide	e (SO <sub>2</sub> )	1	S 11255 (Pa	rt-2)	mg/N	m <sup>3</sup>	552.4					
6.	Oxides of Nitro	gen (NO <sub>2</sub> )	1	S 11255 (Pa	rt-7)	mg/N	m³	452.3			_		
7.	Carbon Dioxide	(CO <sub>2</sub> )		IS 13270:19	992	%		10.1					
8.	Carbon Monoxi	de (CO)		IS 13270:19	992	%	BDL	(MDL-C	).2)				
9.	Oxygen (O <sub>2</sub> )			IS 13270:19	992	%		10.2					
Env. Cor	ndition of Lab.	aintaining	Temperature	27± 2°C	and Relative	Humidity 65±5 %	n all tes	ting area a	s per 15				
Abbrevia	ation	MDL: Minimum	Detection	Limit, BDL:	Below D	Detection Li	mit						
Norms**	is specified												
Tested E Sample	<b>3y</b> : Neeraj Singh <b>Drawn By</b> : Rahul	Singh & team											
10.0	- A A							anmer	Tan		-1		
1. The labora	actual Notes: - atory accepts responsibil	ity for content of this	report.				Checked by	-	Autoor	izea Sign	atory		

- 2. This report shall not be reproduced except in full, without written approval of the MD.
- 3. This report is intended for only guidance and not for legal purpose or for advertisement.
- 4. Any complaint about this report should be communicated in writing within 7 days of its issue
- 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 gm iemeco@gmail.com
- (Tauqeer Ahmad) 6. In case of feedback/ complaints, please send an email of granding the Authonized signalory, the teportation, Ratu Road, Ranchi, Mai On the basis of Quality Checked and Technical data vehiced by the Authonized signalory, the teportation, Ratu Road, Ranchi, Mai Technical Manager

is issued by the Director of the Organization site - H.No. - A-13, Saket Vihar, Near Sohrai Bhawan, Harmu H

Ranchi-834002, Jharkhand, India
# Accredited by Jharkhand State Pollution Control Board, JSPCB



.....

Accredited byJharkhand State Pollution Control Board, JSPCB<br/>National Accreditation Board for Testing Laboratory (NABL) vide TC-11515Certified ByISO 9001:2015 (QMS) & ISO 45001:2018



0

# Test Report

ULK NO .:			5	1	5	2	3	0	0	0	0 0	2	2 8	5	
Discipline	e: Chemical			Grou	up: At	mosph	eric P	olluti	on	S	ub-Group:	: Stack	Emission		
Report Is	sue Date: 02-0	3-2024					Tes	t Rep	ort No	.: RN	-2307140	01S15			
Sample II	D: 240229AP07	001					San	nple I	Descrip	ption	: Stack Em	ission			
Challan N	o./P.O. No.: 45	511012880					Challan No./P.No. Date: 13-07-2023								
Issued to	): M/s Tata St	eel Limited													
	(Formerly Ta	ata Steel Lo	na Pro	oduct	ts Lin	nited)									
	Gamaharia I	Phase-V. Ac	litvapı	ur Ind	lustri	al Are	a.								
	Seraikela-Kl	narsawan, J	harkh	and-8	33210	8									
Type of I	ndustry: Iron &	Steel					Cus	tome	r Repr	resen	tative: Sh	weta K	(umari		
Sample I	Drawn by: IEM	Team					San	nplin	g Date	: 27-0	)2-2024 (1	0:30 a	m to 11:03 a	am)	
Protocol	CPCB Guideline	d 1125	5 Ser	ies											
Field Met	teorological Inf	ormation	A. Te	mp.(°C	:): 19	R.H.	(%): 6	2	W.C.:	: Sem	i Cloudy	W.D	.: North to S	South	
Sample Receiving Date: 29-02-2024 Testing Started: 2								024		Te	sting Ende	d: 02-	-03-2024		
sample h	ceering bate.	23 02 2024		Ge	eneral Ph	hysical Inf	ormati	on			Sting Linut		00 2024		
Stack Identification Common								ight f	rom G	roun	d Level (m	)	63		
Emission	Emission Due to kilp							Hol	aht fro	mG	ound Love	) (m)	32		
Diet Fr		Austable				Por		eneg	ion of	Cheal			2.2		
Plat Forn	Plat Form Available Inner							nens	ion or s	Stack	(m)		3.2		
Stack De	scription	WHRB (1&40 TPH) DRI-1 Type of Fuel Used								Coal					
Shape of	Stack	Circular	Quantity of Fuel												
Construc	tion Material	RCC		Production Capacity											
Sampling	g Port	Available				Poll	ution	Con	trol De	evice	(if any)		ESP		
					Te	est Resu	lt								
SI. NO.	Para	ameters		Tes	t Meth	nods		Uni	it		Result		Norms	**	
1.	Flue Gas Tempe	erature		IS 11	255 (P	art-3)		°C			155				
2.	Flue Gas Veloci	ty		IS 11	255 (P	art-3)		m/	s						
3.	Flue Gas Volum	netric Flow Rat	e	IS 11	255 (P	art-3)		Nm <sup>3</sup> /	'nr.						
4.	Particulates Ma	atter (PM)		IS 11	255 (P	art-1)		mg/N	lm <sup>3</sup>		33.4				
5.	Sulphur Dioxide	e (SO <sub>2</sub> )		IS 11	255 (P	art-2)		mg/N	lm³		342.5				
6.	Oxides of Nitro	gen (NO <sub>2</sub> )		IS 11	255 (P	art-7)		mg/N	lm³		82.4				
7.	Carbon Dioxide	(CO <sub>2</sub> )		IS 1	.3270:1	1992	_	% v/	/v						
8.	Carbon Monox	ide (CO)		IS 1	.3270:1	1992	_	ppm							
9.	Oxygen (O <sub>2</sub> )			IS 1	.3270:1	1992	% v/v								
F	diate	Laboratory is r	naintaini	ng Tem	Enc	e 27± 2°C	and R	elative	Humidi	ity 65±	5 % in all tes	ting are	a as per 1S		
Env. Con	dition of Lab.	196:1966(C).					-								
Abbrevia Norms**	tion is specified	MDL: Minimur	n Detect	ion Lim	int, BDL	Below	Detec	tion L	imit						
Remark	ie opeenieu			***				_							
Tested B	y: Neeraj Singh									_					
Sample [	Drawn By: Rahul	Singh & team													
		20.													
pecific Contra 1 The labora	tory accents responsibility	lity for content of this	s report				_		Check	ed by		Auth	norized Signa	atory	
2. This report	shall not be reproduce	d except in full, with	out written a	approval	of the MD	).				. /	CNILOUTINE,	nial a	s - C MY		
3. This report	is intended for only gui	dance and not for le	gal purpose ted in writin	e or for a	dvertisem 7 days of	its issue		Ti	Ama	91	8/ 000	12	PE	0	
5. Total liabili	ty of Institute for Enviro	nmental Manageme	nt will be lin	nited to ir	ivoiced a	mount only				11	1	9			
6. In case of	feedback/ complaints, p	lease send an emai	at om iem	eco@gm	ail.com	Radio	tation	(Ta	auqeer	Ahm			V. S. C. Jai	n)	
In the basis of	Director of the Organize	ecnnical data verified	by the Au	unorized &	signatory,	mereport	auon	Tec	chnical	Man	ager and	1.1	Director		
issued by the	Dirotor or ale Right	sry Site - H.No.	- A-13,	Saket	Vihar, I	Near Sol	hrai B	hawar	i, Harm	Hor	un constant	*			

Ranchi-834002, Jharkhand, India

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

#### **Ambient Air Quality Monitoring**

				Parameters											
Sampling location	Month	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 (ug/m3)	Benzo(a)pyrene (ng/m3)	Arsenic (ng/m3)	Nickel (ng/m3)
	Oct-23	RN-230714001A1	03.10.2023	24.2	53.7	94.8	28.1	BDL(MDL 1.8)	23.9	0.3	43.2	BDL(MDL-0.06)	BDL(MDL-0.18)	BDL(MDL-2)	BDL(MDL-4)
Plant North Side	Oct-23	RN-230714001A7	10.10.2023	25.3	54.7	194.5	59.6	BDL(MDL 1.8)	21.2	0.2	41.7	BDL(MDL-0.06)	BDL(MDL-0.18)	BDL(MDL-2)	BDL(MDL-4)
Boundary	Oct-23	RN-230714001A13	16.10.2023	19.2	65.7	248.6	68.4	BDL(MDL 1.8)	24.1	0.2	39.2	BDL(MDL-0.06)	BDL(MDL-0.18)	BDL(MDL-2)	BDL(MDL-4)
	Oct-23	RN-230714001A19	25.10.2023	26.2	68.0	123.8	53.2	BDL(MDL 1.8)	31.1	0.3	49.5	BDL(MDL-0.06)	BDL(MDL-0.18)	BDL(MDL-2)	BDL(MDL-4)
	Oct-23	RN-230714001A2	03.10.2023	24.9	54.1	98.5	47.9	BDL(MDL 1.8)	25.7	0.2	56.1	BDL(MDL-0.06)	BDL(MDL-0.18)	BDL(MDL-2)	BDL(MDL-4)
Plant West Side	Oct-23	RN-230714001A8	10.10.2023	17.4	48.6	148.9	57.6	BDL(MDL 1.8)	35.0	0.2	59.8	BDL(MDL-0.06)	BDL(MDL-0.18)	BDL(MDL-2)	BDL(MDL-4)
Boundary	Oct-23	RN-230714001A14	16.10.2023	26.5	49.3	251.7	56.6	BDL(MDL 1.8)	33.1	0.2	72.5	BDL(MDL-0.06)	BDL(MDL-0.18)	BDL(MDL-2)	BDL(MDL-4)
	Oct-23	RN-230714001A20	25.10.2023	20.7	50.8	118.3	34.6	BDL(MDL 1.8)	37.0	0.2	66.2	BDL(MDL-0.06)	BDL(MDL-0.18)	BDL(MDL-2)	BDL(MDL-4)
	Oct-23	RN-230714001A3	03.10.2023	27.7	52.1	86.1	40.5	BDL(MDL 1.8)	24.7	0.1	37.0	BDL(MDL-0.06)	BDL(MDL-0.18)	BDL(MDL-2)	BDL(MDL-4)
Plant East Side	Oct-23	RN-230714001A9	10.10.2023	21.3	55.1	112.7	25.6	BDL(MDL 1.8)	27.1	0.1	49.8	BDL(MDL-0.06)	BDL(MDL-0.18)	BDL(MDL-2)	BDL(MDL-4)
Boundary	Oct-23	RN-230714001A15	16.10.2023	16.5	47.8	142.4	54.2	BDL(MDL 1.8)	33.6	0.2	34.7	BDL(MDL-0.06)	BDL(MDL-0.18)	BDL(MDL-2)	BDL(MDL-4)
	Oct-23	RN-230714001A21	25.10.2023	17.2	58.9	105.6	45.4	BDL(MDL 1.8)	27.6	0.2	42.2	BDL(MDL-0.06)	BDL(MDL-0.18)	BDL(MDL-2)	BDL(MDL-4)
	Oct-23	RN-230714001A4	03.10.2023	25.7	56.8	76.7	32.2	BDL(MDL 1.8)	27.8	0.3	38.5	BDL(MDL-0.06)	BDL(MDL-0.18)	BDL(MDL-2)	BDL(MDL-4)
Plant South Side	Oct-23	RN-230714001A10	10.10.2023	25.7	43.1	117.7	34.3	BDL(MDL 1.8)	38.4	0.3	66.7	BDL(MDL-0.06)	BDL(MDL-0.18)	BDL(MDL-2)	BDL(MDL-4)
Boundary	Oct-23	RN-230714001A16	16.10.2023	28.5	49.4	145.6	38.6	BDL(MDL 1.8)	34.3	0.3	58.0	BDL(MDL-0.06)	BDL(MDL-0.18)	BDL(MDL-2)	BDL(MDL-4)
	Oct-23	RN-230714001A22	25.10.2023	30.6	49.5	116.7	42.0	BDL(MDL 1.8)	29.6	0.3	72.9	BDL(MDL-0.06)	BDL(MDL-0.18)	BDL(MDL-2)	BDL(MDL-4)
	Nov-23	RN-230714001A1	01.11.2023	20.4	19.0	89.4	39.2	BDL(MDL 1.8)	18.2	0.2	35.8	BDL(MDL-0.06)	BDL(MDL-0.18)	BDL(MDL-2)	BDL(MDL-4)
Plant North Side	Nov-23	RN-230714001A7	07.11.2023	22.8	24.7	152.0	56.0	BDL(MDL 1.8)	16.5	0.2	36.9	BDL(MDL-0.06)	BDL(MDL-0.18)	BDL(MDL-2)	BDL(MDL-4)
Boundary	Nov-23	RN-230714001A13	14.11.2023	24.9	20.3	96.4	35.8	BDL(MDL 1.8)	19.4	0.2	32.8	BDL(MDL-0.06)	BDL(MDL-0.18)	BDL(MDL-2)	BDL(MDL-4)
	Nov-23	RN-230714001A19	22.11.2023	25.7	26.7	170.6	50.3	BDL(MDL 1.8)	21.3	0.2	43.8	BDL(MDL-0.06)	BDL(MDL-0.18)	BDL(MDL-2)	BDL(MDL-4)
	Nov-23	RN-230714001A2	01.11.2023	21.5	20.9	178.0	51.3	BDL(MDL 1.8)	25.0	0.2	55.0	BDL(MDL-0.06)	BDL(MDL-0.18)	BDL(MDL-2)	BDL(MDL-4)
Plant West Side	Nov-23	RN-230714001A8	07.11.2023	18.7	16.6	172.0	58.0	BDL(MDL 1.8)	28.6	0.2	61.8	BDL(MDL-0.06)	BDL(MDL-0.18)	BDL(MDL-2)	BDL(MDL-4)
Boundary	Nov-23	RN-230714001A14	14.11.2023	22.0	22.8	93.2	49.0	BDL(MDL 1.8)	25.8	0.2	65.3	BDL(MDL-0.06)	BDL(MDL-0.18)	BDL(MDL-2)	BDL(MDL-4)
	Nov-23	RN-230714001A20	22.11.2023	20.7	17.9	192.0	58.0	BDL(MDL 1.8)	30.5	0.2	60.3	BDL(MDL-0.06)	BDL(MDL-0.18)	BDL(MDL-2)	BDL(MDL-4)
	Nov-23	RN-230714001A3	01.11.2023	21.4	23.9	182.0	58.3	BDL(MDL 1.8)	21.5	0.1	36.0	BDL(MDL-0.06)	BDL(MDL-0.18)	BDL(MDL-2)	BDL(MDL-4)
Plant East Side	Nov-23	RN-230714001A9	07.11.2023	19.9	16.2	172.0	55.0	BDL(MDL 1.8)	25.8	0.1	42.6	BDL(MDL-0.06)	BDL(MDL-0.18)	BDL(MDL-2)	BDL(MDL-4)
Boundary	Nov-23	RN-230714001A15	14.11.2023	15.4	20.3	98.8	48.3	BDL(MDL 1.8)	28.8	0.2	30.7	BDL(MDL-0.06)	BDL(MDL-0.18)	BDL(MDL-2)	BDL(MDL-4)
	Nov-23	RN-230714001A21	22.11.2023	16.8	22.5	158.3	58.0	BDL(MDL 1.8)	24.7	0.2	35.8	BDL(MDL-0.06)	BDL(MDL-0.18)	BDL(MDL-2)	BDL(MDL-4)
	Nov-23	RN-230714001A4	01.11.2023	20.4	19.0	91.2	39.8	BDL(MDL 1.8)	29.7	0.3	42.7	BDL(MDL-0.06)	BDL(MDL-0.18)	BDL(MDL-2)	BDL(MDL-4)
Plant South Side	Nov-23	RN-230714001A10	07.11.2023	24.9	22.8	162.0	48.0	BDL(MDL 1.8)	32.6	0.3	58.9	BDL(MDL-0.06)	BDL(MDL-0.18)	BDL(MDL-2)	BDL(MDL-4)
Boundary	Nov-23	RN-230714001A16	14.11.2023	21.4	26.0	172.0	57.6	BDL(MDL 1.8)	27.8	0.3	52.5	BDL(MDL-0.06)	BDL(MDL-0.18)	BDL(MDL-2)	BDL(MDL-4)
	Nov-23	RN-230714001A22	22.11.2023	25.8	26.6	97.3	49.4	BDL(MDL 1.8)	30.5	0.3	59.8	BDL(MDL-0.06)	BDL(MDL-0.18)	BDL(MDL-2)	BDL(MDL-4)
	Dec-23	RN-230714001A1	08.12.2023	17.8	20.1	86.8	25.1	BDL(MDL 1.8)	15.6	0.2	33.2	BDL(MDL-0.06)	BDL(MDL-0.18)	BDL(MDL-2)	BDL(MDL-4)
Plant North Side	Dec-23	RN-230714001A7	15.12.2023	20.2	23.3	153.7	46.4	BDL(MDL 1.8)	17.7	0.2	34.3	BDL(MDL-0.06)	BDL(MDL-0.18)	BDL(MDL-2)	BDL(MDL-4)
Boundary	Dec-23	RN-230714001A13	22.12.2023	22.3	24.3	93.8	34.8	BDL(MDL 1.8)	16.8	0.2	30.2	BDL(MDL-0.06)	BDL(MDL-0.18)	BDL(MDL-2)	BDL(MDL-4)
	Dec-23	RN-230714001A19	27.12.2023	26.6	25.1	185.2	55.1	BDL(MDL 1.8)	18.7	0.2	41.2	BDL(MDL-0.06)	BDL(MDL-0.18)	BDL(MDL-2)	BDL(MDL-4)
	Dec-23	RN-230714001A2	08.12.2023	18.9	21.3	205.7	26.8	BDL(MDL 1.8)	22.4	0.2	52.4	BDL(MDL-0.06)	BDL(MDL-0.18)	BDL(MDL-2)	BDL(MDL-4)
Plant West Side	Dec-23	RN-230714001A8	15.12.2023	16.1	27.2	99.7	30.8	BDL(MDL 1.8)	26.0	0.2	53.5	BDL(MDL-0.06)	BDL(MDL-0.18)	BDL(MDL-2)	BDL(MDL-4)
Boundary	Dec-23	RN-230714001A14	22.12.2023	19.4	28.8	156.5	46.4	BDL(MDL 1.8)	23.2	0.2	62.7	BDL(MDL-0.06)	BDL(MDL-0.18)	BDL(MDL-2)	BDL(MDL-4)
	Dec-23	RN-230714001A20	27.12.2023	18.1	21.6	107.0	36.8	BDL(MDL 1.8)	27.9	0.2	59.6	BDL(MDL-0.06)	BDL(MDL-0.18)	BDL(MDL-2)	BDL(MDL-4)
	Dec-23	RN-230714001A3	08.12.2023	18.8	21.7	96.3	30.3	BDL(MDL 1.8)	18.9	0.1	33.4	BDL(MDL-0.06)	BDL(MDL-0.18)	BDL(MDL-2)	BDL(MDL-4)
Plant East Side	Dec-23	RN-230714001A9	15.12.2023	17.3	22.5	145.6	43.0	BDL(MDL 1.8)	28.4	0.1	40.0	BDL(MDL-0.06)	BDL(MDL-0.18)	BDL(MDL-2)	BDL(MDL-4)
Boundary	Dec-23	RN-230714001A15	22.12.2023	11.3	23.9	187.7	57.1	BDL(MDL 1.8)	26.2	0.2	28.1	BDL(MDL-0.06)	BDL(MDL-0.18)	BDL(MDL-2)	BDL(MDL-4)
							-				-				

	Dec-23	RN-230714001A21	27.12.2023	14.2	24.4	110.1	36.0	BDL(MDL 1.8)	22.1	0.1	33.6	BDL(MDL-0.06)	BDL(MDL-0.18)	BDL(MDL-2)	BDL(MDL-4)
	Dec-23	RN-230714001A4	08.12.2023	19.6	25.6	98.4	25.3	BDL(MDL 1.8)	27.1	0.2	40.1	BDL(MDL-0.06)	BDL(MDL-0.18)	BDL(MDL-2)	BDL(MDL-4)
Plant South Side	Dec-23	RN-230714001A10	15.12.2023	22.3	24.3	106.3	35.2	BDL(MDL 1.8)	30.0	0.3	56.3	BDL(MDL-0.06)	BDL(MDL-0.18)	BDL(MDL-2)	BDL(MDL-4)
Boundary	Dec-23	RN-230714001A16	22.12.2023	18.8	26.2	132.5	39.3	BDL(MDL 1.8)	25.2	0.3	47.3	BDL(MDL-0.06)	BDL(MDL-0.18)	BDL(MDL-2)	BDL(MDL-4)
	Dec-23	RN-230714001A22	27.12.2023	23.2	27.3	157.2	48.3	BDL(MDL 1.8)	28.6	0.3	57.2	BDL(MDL-0.06)	BDL(MDL-0.18)	BDL(MDL-2)	BDL(MDL-4)
Plant North Side	Jan-24	RN-230714001A1	03.01.2024	15.4	17.7	84.4	22.7	BDL(MDL 1.8)	13.2	0.2	31.3	BDL(MDL-0.06)	BDL(MDL-0.18)	BDL(MDL-2)	BDL(MDL-4)
Boundary	Jan-24	RN-230714001A7	09.01.2024	17.8	20.9	151.3	44.0	BDL(MDL 1.8)	15.3	0.2	31.9	BDL(MDL-0.06)	BDL(MDL-0.18)	BDL(MDL-2)	BDL(MDL-4)
Plant West Side	Jan-24	RN-230714001A2	03.01.2024	15.3	18.3	203.3	24.4	BDL(MDL 1.8)	20.0	0.2	50.0	BDL(MDL-0.06)	BDL(MDL-0.18)	BDL(MDL-2)	BDL(MDL-4)
Boundary	Jan-24	RN-230714001A8	09.01.2024	16.4	19.3	93.9	27.9	BDL(MDL 1.8)	16.5	0.1	31.0	BDL(MDL-0.06)	BDL(MDL-0.18)	BDL(MDL-2)	BDL(MDL-4)
Plant East Side Boundary	Jan-24	RN-230714001A3	03.01.2024	14.9	20.1	143.2	40.6	BDL(MDL 1.8)	26.0	0.2	37.6	BDL(MDL-0.06)	BDL(MDL-0.18)	BDL(MDL-2)	BDL(MDL-4)
Plant South Side	Jan-24	RN-230714001A4	03.01.2024	17.2	23.2	96.0	22.9	BDL(MDL 1.8)	23.6	0.3	37.7	BDL(MDL-0.06)	BDL(MDL-0.18)	BDL(MDL-2)	BDL(MDL-4)
Boundary	Jan-24	RN-230714001A9	09.01.2024	18.7	21.9	103.9	32.8	BDL(MDL 1.8)	27.6	0.3	53.9	BDL(MDL-0.06)	BDL(MDL-0.18)	BDL(MDL-2)	BDL(MDL-4)
	Feb-24	RN-230714001A1	15.02.2021	21.4	42.6	105.3	35.6	BDL(MDL 1.8)	18.6	0.2	36.8	BDL(MDL-0.06)	BDL(MDL-0.18)	BDL(MDL-2)	BDL(MDL-4)
Plant North Side Boundary	Feb-24	RN-230714001A7	22.02.2024	24.6	48.1	95.4	36.7	BDL(MDL 1.8)	19.7	0.2	32.6	BDL(MDL-0.06)	BDL(MDL-0.18)	BDL(MDL-2)	BDL(MDL-4)
	Feb-24	RN-230714001A13	26.02.2024	23.4	46.7	173.6	69.2	BDL(MDL 1.8)	17.2	0.2	34.1	BDL(MDL-0.06)	BDL(MDL-0.18)	BDL(MDL-2)	BDL(MDL-4)
	Feb-24	RN-230714001A2	15.02.2021	18.3	36.2	288.4	82.6	BDL(MDL 1.8)	27.8	0.2	51.7	BDL(MDL-0.06)	BDL(MDL-0.18)	BDL(MDL-2)	BDL(MDL-4)
Plant West Side Boundary	Feb-24	RN-230714001A8	22.02.2024	23.6	46.9	312.0	90.5	BDL(MDL 1.8)	29.4	0.2	59.3	BDL(MDL-0.06)	BDL(MDL-0.18)	BDL(MDL-2)	BDL(MDL-4)
	Feb-24	RN-230714001A14	26.02.2024	20.4	40.5	99.4	52.2	BDL(MDL 1.8)	25.6	0.2	55.3	BDL(MDL-0.06)	BDL(MDL-0.18)	BDL(MDL-2)	BDL(MDL-4)
	Feb-24	RN-230714001A3	15.02.2021	15.8	32.4	98.4	31.5	BDL(MDL 1.8)	27.1	0.1	40.0	BDL(MDL-0.06)	BDL(MDL-0.18)	BDL(MDL-2)	BDL(MDL-4)
Plant East Side Boundary	Feb-24	RN-230714001A9	22.02.2024	14.7	29.3	184.5	52.6	BDL(MDL 1.8)	28.4	0.2	33.5	BDL(MDL-0.06)	BDL(MDL-0.18)	BDL(MDL-2)	BDL(MDL-4)
-	Feb-24	RN-230714001A15	26.02.2024	16.4	32.7	170.3	62.2	BDL(MDL 1.8)	25.1	0.1	38.2	BDL(MDL-0.06)	BDL(MDL-0.18)	BDL(MDL-2)	BDL(MDL-4)
	Feb-24	RN-230714001A4	15.02.2021	24.8	48.3	142.7	47.5	BDL(MDL 1.8)	32.4	0.3	52.7	BDL(MDL-0.06)	BDL(MDL-0.18)	BDL(MDL-2)	BDL(MDL-4)
Boundary	Feb-24	RN-230714001A10	22.02.2024	21.5	42.3	186.4	65.3	BDL(MDL 1.8)	28.4	0.3	49.2	BDL(MDL-0.06)	BDL(MDL-0.18)	BDL(MDL-2)	BDL(MDL-4)
	Feb-24	RN-230714001A16	26.02.2024	26.4	47.2	96.3	35.7	BDL(MDL 1.8)	31.4	0.3	55.2	BDL(MDL-0.06)	BDL(MDL-0.18)	BDL(MDL-2)	BDL(MDL-4)
	Mar-24	RN-230714001A1	05.03.2024	20.3	42.1	98.3	24.5	BDL(MDL 1.8)	17.9	0.3	35.2	BDL(MDL-0.06)	BDL(MDL-0.18)	BDL(MDL-2)	BDL(MDL-4)
Plant North Side	Mar-24	RN-230714001A7	12.03.2024	23.7	43.1	113.3	38.9	BDL(MDL 1.8)	20.4	0.2	39.4	BDL(MDL-0.06)	BDL(MDL-0.18)	BDL(MDL-2)	BDL(MDL-4)
Boundary	Mar-24	RN-230714001A13	20.03.2024	28.4	50.2	97.3	46.9	BDL(MDL 1.8)	21.7	0.3	34.6	BDL(MDL-0.06)	BDL(MDL-0.18)	BDL(MDL-2)	BDL(MDL-4)
	Mar-24	RN-230714001A19	29.03.2024	27.1	48.2	164.2	52.7	BDL(MDL 1.8)	20.4	0.3	38.1	BDL(MDL-0.06)	BDL(MDL-0.18)	BDL(MDL-2)	BDL(MDL-4)
	Mar-24	RN-230714001A2	05.03.2024	23.6	38.6	108.6	55.6	BDL(MDL 1.8)	28.3	0.2	54.1	BDL(MDL-0.06)	BDL(MDL-0.18)	BDL(MDL-2)	BDL(MDL-4)
Plant West Side	Mar-24	RN-230714001A8	12.03.2024	20.5	32.5	223.6	75.6	BDL(MDL 1.8)	29.4	0.3	53.6	BDL(MDL-0.06)	BDL(MDL-0.18)	BDL(MDL-2)	BDL(MDL-4)
Boundary	Mar-24	RN-230714001A14	20.03.2024	25.8	44.7	298.3	84.2	BDL(MDL 1.8)	32.5	0.3	61.2	BDL(MDL-0.06)	BDL(MDL-0.18)	BDL(MDL-2)	BDL(MDL-4)
	Mar-24	RN-230714001A20	29.03.2024	23.6	38.6	151.5	55.2	BDL(MDL 1.8)	28.1	0.2	57.2	BDL(MDL-0.06)	BDL(MDL-0.18)	BDL(MDL-2)	BDL(MDL-4)
	Mar-24	RN-230714001A3	05.03.2024	20.3	36.4	91.3	32.4	BDL(MDL 1.8)	20.5	0.2	35.9	BDL(MDL-0.06)	BDL(MDL-0.18)	BDL(MDL-2)	BDL(MDL-4)
Plant East Side	Mar-24	RN-230714001A9	12.03.2024	18.6	30.5	107.3	33.4	BDL(MDL 1.8)	25.6	0.2	39.2	BDL(MDL-0.06)	BDL(MDL-0.18)	BDL(MDL-2)	BDL(MDL-4)
Boundary	Mar-24	RN-230714001A15	20.03.2024	16.3	28.2	175.9	59.3	BDL(MDL 1.8)	26.1	0.2	36.4	BDL(MDL-0.06)	BDL(MDL-0.18)	BDL(MDL-2)	BDL(MDL-4)
	Mar-24	RN-230714001A21	29.03.2024	20.7	34.5	166.4	64.1	BDL(MDL 1.8)	29.3	0.1	33.2	BDL(MDL-0.06)	BDL(MDL-0.18)	BDL(MDL-2)	BDL(MDL-4)
	Mar-24	RN-230714001A4	05.03.2024	21.3	48.1	115.3	27.6	BDL(MDL 1.8)	29.7	0.3	41.3	BDL(MDL-0.06)	BDL(MDL-0.18)	BDL(MDL-2)	BDL(MDL-4)
Plant South Side	Mar-24	RN-230714001A10	12.03.2024	26.4	50.2	152.3	49.1	BDL(MDL 1.8)	34.6	0.2	54.7	BDL(MDL-0.06)	BDL(MDL-0.18)	BDL(MDL-2)	BDL(MDL-4)
Boundary	Mar-24	RN-230714001A16	20.03.2024	23.5	48.3	165.7	67.2	BDL(MDL 1.8)	30.2	0.2	52.1	BDL(MDL-0.06)	BDL(MDL-0.18)	BDL(MDL-2)	BDL(MDL-4)
	Mar-24	RN-230714001A22	29.03.2024	28.9	49.2	99.4	38.1	BDL(MDL 1.8)	34.5	0.3	59.3	BDL(MDL-0.06)	BDL(MDL-0.18)	BDL(MDL-2)	BDL(MDL-4)



# Institute for Environmental Management Accredited by Jharkhand State Pollution Control Board, JSPCB

Accredited byJharkhand State Pollution Control Board, JSPCB<br/>National Accreditation Board for Testing Laboratory (NABL) vide TC-11515Certified ByISO 9001:2015 (QMS) & ISO 45001:2018



#### **Test Report**

											-							
ULR No	<b>D.:</b> T	C	1	1	5	1	5	2	3	0	0	0	0	0	1	8	.3	E
Discipl	ine: Chemical				Gro	up: A	tmo	spheric	Pollu	ution	-	S	ub-Gr	oup: A	mbie	nt Air	1	L
Report	Issue Date: 13-12	2-2023	3					Test R	epor	t No.:	RN-2	23071	4001A	1				
Sample	ID: 231211AP11	001						Sampl	e Des	script	ion: A	Ambie	nt Air					
Challar	n No./P.O. No.: 45	511012	2880					Challan No./ P.No. Date: 13-07-2023								- 77s		
Issued	to:			14			_											
	M/s Tata Stee	el Lim	ited															
	(Formerly Tat	a Ste	el Lor	ng Pr	oduct	ts Lin	nited	d)										
	Gamaharia P	hase-	V, Ad	ityapı	ur Ind	lustria	al A	rea,										
_	Seraikela-Kha	arsaw	an, Jl	harkh	and-8	33210	8											
Type of Industry: Iron & Steel								Customer Representative: Shweta Kumari										
Sample	e Drawn by: IEM T	eam	_					Sampl	ing D	ate: C	8-12	-2023	to 09-	12-20	23			
Protoco	ol: CPCB Guidelin	e(NAA	QMS	/36/2	012-1	13) & 1	IS M	lethod !	5182	Serie	s							
Sampli	ng Location: STAT	ION-1	PLAN	NT NO	RTH S	SIDE B	IUU	NDARY										
Field M	leteorological Inf	ormat	ion	A. T	emp.(	°C): 2	5	R.H.(%	R.H.(%): 65 W.C.: Cloudy						W.D.: NW to SE			
Sample	Receiving Date:	11-12-	-2023		Tes	sting S	Star	ted: 11-	12-20	023		Test	ng En	ded: 1	3-12-	2023		
				5			-Tes	t Result	s		-							-
SI. No.	Paramete	ers			Te	st Me	thoo	i		Ur	nit			Resul	t		Norm	IS**
1.	Particulate Matter	(PM10)	)	IS 51	82 Pa	rt 23:2	2006	RA 201	7	µg/	/m <sup>3</sup>			86.81			100	D
2.	Particulate Matter	(PM2.5	5)	1	S 518	2 Part	24: 2	2019		µg/	m <sup>3</sup>			25.07	,		60	1
3.	Sulphure Dioxide	(SO <sub>2</sub> )		IS 5182 Part 02: 2001			RA 201	7	µq/	m <sup>3</sup>		17		17.82		80		
4.	Nitrogen Dioxide	$(NO_2)$		IS 5182 Part 06: 2006		RA 201	7	µq/	m <sup>3</sup>	20		20.13	20.13		.13		80	-
5.	Ammonia (NH <sub>3</sub> )			IS 5182 Part 25: 2			2018		µg/	m <sup>3</sup>	33		33 15			400	)	
6.	Ozone (O <sub>3</sub> )			IS 5182 Part 09: 19			1974		µg/m <sup>3</sup>			15.62				180	)	
7.	Arsenic (As)			USEPA 10 3 2. 19				999		ng/	m <sup>3</sup>	BDI (MDI-2)						-

Env C	andition of Lab	Laboratory is maintaining Temperature	27± 2°C and Re	lative Humidity 65±5 %	in all
		End of Report			
9.	Nickel (Ni)	IS 5182 Part 26: 2020	ng/m <sup>3</sup>	BDL (MDL-4)	
8.	Lead (Pb)	IS 5182 Part 22: 2004	μg/m <sup>3</sup>	0.22	1.0
7.	Arsenic (As)	USEPA IO 3.2: 1999	ng/m³	BDL (MDL-2)	

Env.Condition of Lab.	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 Except Parameter PM10 & PM2.5
Tested Bu: Nooma Kuma	

Tested By: Neema Kumari

Sample Drawn By: Arjun Besra & Team

Specific Contractual Notes: -	Quality Checked by Authorized Signatory								
<ol> <li>The laboratory accepts responsibility for content of this report.</li> <li>This report shall not be reproduced except in full without written approval of the MD.</li> </ol>									
3. This report is intended for only guidance and not for legal purpose or for advertisement.	1) months and the								
<ol> <li>Any complaint about this report should be communicated in writing within 7 days of its issue</li> <li>Total liability of Institute for Environmental Management will be limited to invoiced amount only</li> </ol>	Str A le la le lo								
<ol> <li>For the analysis of the state of Environmental wandgement will be inneed to involced amount only.</li> <li>In case of feedback/ complaints, please send an email at <u>gm.iemeco@gmail.com</u></li> </ol>	(Shreya Sonal) (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. Quality Manager Radio Director								

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



Jharkhand State Pollution Control Board, JSPCB

Certified by

ISO 9001:2015 (Quality Management System ) ISO 45001:2018 (Occupational Health & Safety Management System )

### **Test Report**

Discipli	ine: Chemical	Group: Atm	ospheric Polluti	on	Sub-Group	: Ambient Ai	r				
Report	Issue Date: 13-12-2023		Test Report N	lo.: RN-2	30714001A1						
Sample	ID: 231211AP11001		Sample Descr	ription: A	mbient Air						
Challan	No./P.O. No.: 4511012880		Challan No./	P.No. Da	te: 13-07-2023	l					
Issued	to:										
	M/s Tata Steel Limited										
	(Formerly Tata Steel Lo	ng Products Limite	Products Limited)								
Gamaharia Phase-V, Adityapur Industrial Area, Seraikela-Kharsawan, Jharkhand-832108											
Type of	f Industry: Iron & Steel		Customer Re	presentat	tive: Shweta K	umari					
Sample	Drawn by: IEM Team		Sampling Date: 08-12-2023 to 09-12-2023								
Protoco	ol: CPCB Guideline(NAAQM	5/36/2012-13) & IS M	Method 5182 Se	eries							
Sampli	ng Location: STATION-1 PLA	NT NORTH SIDE BOL	JNDARY								
Field M	leteorological Information	A. Temp.(°C): 25	R.H.(%): 65	W.C.:	Cloudy	W.D.: NW	to SE				
Sample	Receiving Date: 11-12-2023	3 Testing Sta	rted: 11-12-202	.3	Testing Ende	d: 13-12-202	3				
	-	Те	st Results								
SI. No.	Parameters	Test Metho	d	Unit	Re	sult	Limits				
1.	Benzene (C <sub>6</sub> H <sub>6</sub> )	IS 5182 Part 11:	2006	µg/m <sup>3</sup>	BDL (M	DL- 0.06)					
2.	Benzo (a) Pyrene (Bap)	(Bap) IS 5182 Part 12:		ng/m <sup>3</sup>	BDL (MDL0.18)						

3.	Carbon Monoxid	e	IEM/SOP/Air-01:2022 mg/m <sup>3</sup> BDL(MDL 1.8)								
			End of Repor	t							
Env.C	ondition of Lab.	Laboratory testing are	y is maintaining Temperatur ea as per IS 196:1966(C).	e 27± 2°C and Re	lative Humidity 65±5 %	in all					
Abbre	viation	MDL: Mini	mum Detection Limit, BDL:B	elow Detection L	imit						
Norms	s** is Specified	* is Specified National Ambient Air Quality Standards (NAAQS), 2009.									
Remai	rk	N/A									

Tested By: Neema Kumari

Sample Drawn By: Arjun Besra & Team

Particulate Phase Only

Specific Contractual Notes: -	Quality Checked by Authorized Signator	y
<ol> <li>The laboratory accepts responsibility for content of this report.</li> </ol>	Children Cha	
<ol><li>This report shall not be reproduced except in full, without written approval of the MD.</li></ol>		
<ol><li>This report is intended for only guidance and not for legal purpose or for advertisement.</li></ol>	Chryper 13	
4. Any complaint about this report should be communicated in writing within 7 days of its issue		
5. Total liability of Institute for Environmental Management will be limited to invoiced amount only.	(Chroup Chron) Star (Stor & C Join)	
6. In case of feedback/ complaints, please send an email at <u>gm.iemeco@gmail.com</u>	(Shreya Sphay the All All S. C. Jain)	
On the basis of Quality Checked and Technical data verified by the Authorized signatory, the report	Dy Quality Manager Director	
is issued by the Director of the Organization.	By: duality manager and a Director	



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 - 8407804254, 8407804251, Email - iem2012@rediffmail.com



Certified By

# Accredited by Jharkhand State Pollution Control Board, JSPCB

by Jharkhand State Pollution Control Board, JSPCB National Accreditation Board for Testing Laboratory (NABL) vide TC-11515 ISO 9001:2015 (QMS) & ISO 45001:2018



#### **Test Report**

ULR No	<b>).:</b>	Т		С	1	1	5	1	5	2	3	0	0	0	0	0	1	8	.3	8	
Discipli	i <b>ne:</b> Chem	ical					Gro	up: A	tmo	spheri	c Poll	ution		Su	b-Gr	oup:	Ambie	ent Air			
Report	Issue Dat	e: 13-	12-	202	3					Test I	Repo	rt No.	: RN-2	30714	001A	3					
Sample	ID: 2312	1AP1	10	03						Samp	le De	escrip	tion: A	mbier	nt Air						
Challar	No./P.O.	No.: 4	451	101	2880					Chall	an No	o./ P.I	No. Da	te: 13-	07-20	023					
Issued	to:																				
	M/S I	ata S	tee	el Li	mite	d	Drad		1.1	المحال											
	Gama	eriy i haria	DI	a 51		ong	Prod	ucts		litea)	-										
	Serail	ela-M	(ha	arsa	wan.	Jhar	khan	d-83	210	8	a,										
Type of	Industry	Iron 8	2 9	tool						Custo	mor	Popr	contai	iver C	huot	Kup	aari				
Sample	Drawn b	IFM	To	am					-	Customer Representative: Shweta Kumari											
Protoco	DI CPCB G	uideli	nel	NΔ/	Sampling Date: 08-12-2023 to 09-12-2023																
Sampli	ng Locatio	n: STA	ATI	ON-	R PI A	NT FA	ST SID	FBO		ARY	5102	Jern									
Field M	eteorolog	ical Ir	fo	rmat	tion	A.T	emp.(	°C): 2	5	R.H.(	(1: 65		w.c.	Clou	dv		WD		n SF		
Sample	Receiving	Date	: 1	1-12	-2023		Te	sting	Star	ted: 11	-12-2	2023		Testi	ng En	ded:	13-12	-2023			
							1		-Tes	t Resu	Its							2020	-		
SI. No.	F	arame	eter	s	-	-	Te	st Me	thoo	1		Ľ	Init	-		Resu	lt	1	Norm	15**	
1.	Particulat	e Matt	er (	PM10	)	IS 51	82 Pa	rt 23:2	2006	RA 201	17	ug/m <sup>3</sup>					7		10	0	
2.	Particulat	e Matt	er (	PM <sub>2</sub>	5)	1	S 518	2 Part	24: 3	2019		μ	g/m <sup>3</sup>			30.2	7		60	)	
3.	Sulphure	Dioxid	e (	SO <sub>2</sub> )	¢.	IS 51	82 Pa	rt 02: 1	2001	RA 20	17	μç	g/m <sup>3</sup>	-		18.7	5		80	)	
4.	Nitrogen	Dioxide	e (N	1O <sub>2</sub> )		IS 51	82 Pa	rt 06: 1	2006	RA 20	17	μg	g/m <sup>3</sup>			21.6	5		80	)	
5.	Ammonia	(NH <sub>3</sub> )					S 518	2 Part	25: 3	2018		μg	g/m <sup>3</sup>			33.3	5		40	0	
6.	Ozone (C	)3)					S 518	2 Part	09:	1974		hõ	g/m <sup>3</sup>		-	18.9	4		18	0	
7.	Arsenic (	As)					USEP	A IO 3	.2: 1999 ng/m <sup>3</sup> BDL (MDL-2)								1				
8.	Lead (Pb	)				IS 5182 Part 22:			22: 2	2004		μg	g/m <sup>3</sup>	n <sup>3</sup>		0.12	2		1.0	)	
9.	Nickel (N	i)			1		S 518	2 Part	26: 2	2020		ng	J/m <sup>3</sup>		BD	L (M	)L-4)		522	8	
									End	of Rep	ort										
Env.Co	ndition of	Lab.	1	Labo testi	orator ng ar	y is m ea as	ainta per IS	ining 196:	Ten 196	nperati 6(C).	ure 2	7± 2º	C and	Relati	ve Hu	midi	ty 65±	:5 % ii	n all		
Abbrev	iation			MDL	: Min	imum	Detec	tion	Limi	t, BDL	:Belo	w Det	tection	Limit							
Norms*	* is Speci	fied	1	Natio	onal Ar	nbient	Air Qu	ality S	tanda	ards (NA	AAQS)	, 2009			-						

**Remark** Sample Comply with prescribed specification Except Parameter PM<sub>10</sub> & PM<sub>2.5</sub>

Tested By: Neema Kumari

Sample Drawn By: Arjun Besra & Team

Specific Contractual Notes: -	Quality Checked by Authorized Signatory							
<ol> <li>The laboratory accepts responsibility for content of this report.</li> <li>This report shall not be reproduced except in full, without written approval of the MD.</li> <li>This report is intended for only guidance and not for legal purpose or for advertisement.</li> <li>Any complaint about this report should be communicated in writing within 7 days of its issue</li> <li>Total liability of Institute for Environmental Management will be limited to invoiced amount only.</li> <li>In case of feedback/ complaints, please send an email at on jemeco@amail.com</li> </ol>	(Shreya Sonal)							
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. Quality Manager Director							
	(iand)							

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



Jharkhand State Pollution Control Board, JSPCB

Certified by

ISO 9001:2015 (Quality Management System )

ISO 45001:2018 (Occupational Health & Safety Management System )

#### **Test Report**

Discipli	ne: Chemical			Group: Atm	Atmospheric Pollution Sub-Group: Ambient Air								
Report	Issue Date: 13-1	2-2023			Test Report No.: RN-230714001A3								
Sample	ID: 231211AP1	1003			Sample Description: Ambient Air								
Challar	No./P.O. No.: 4	511012880		Sector Mediates	Challan No./	P.No. Da	ate: 13-07-2023	3					
Issued	to:												
	M/s Tata St	eel Limite	d										
	(Formerly T	ata Steel L	ong P	roducts Li	mited)	1							
	Gamaharia	Phase-V, A	Adityap	our Industr	ial Area,								
	Seraikela-K	harsawan,	, Jhark	hand-8321	08								
Type of	Industry: Iron &	Steel			Customer Re	presenta	tive: Shweta K	umari					
Sample	Drawn by: IEM	Team			Sampling Date: 08-12-2023 to 09-12-2023								
Protoco	ol: CPCB Guidelin	e(NAAQMS	5/36/20	12-13) & IS I	Method 5182 Se	eries							
Sampli	ng Location: STA	TION-3 PLA	NT EAST	SIDE BOUN	DARY								
Field M	eteorological Inf	formation	A. Ter	mp.(°C): 25	R.H.(%): 65	W.C.:	Cloudy	W.D.: NW	to SE				
Sample	<b>Receiving Date:</b>	11-12-2023	3	<b>Testing Sta</b>	rted: 11-12-202	1-12-2023 Testing Ended: 13-12-2023							
				Te	st Results								
SI. No.	Paramet	ters	1	Test Metho	d	Unit	Re	sult	Limits				
1.	Benzene (C <sub>6</sub> H <sub>6</sub> )		IS	5182 Part 11:	2006	µg/m <sup>3</sup>	BDL (M	DL- 0.06)	-S.A				
2.	Benzo (a) Pyrene Particulate Phase	e (Bap) e Only	IS	5182 Part 12:	2004	ng/m <sup>3</sup>	BDL (N	1DL0.18)	-				
3. Carbon Monoxide IEM/SOP/Air-0				:2022	mg/m <sup>3</sup>	BDL(N	1DL 1.8)						
				Enc	of Report								
Env.Co	ndition of Lab.	Laborator testing ar	ry is ma ea as pe	intaining Te er IS 196:19	mperature 27± 66(C).	2°C and	Relative Humi	dity 65±5 %	in all				
Abbreviation MDL: Minimum Detection Lir				etection Lin	it, BDL:Below	Detectio	n Limit						

Norms** is Specified	National Ambient Air Quality Standards (NAAQS), 2009.						
Remark	N/A						

Tested By: Neema Kumari

Sample Drawn By: Arjun Besra & Team

Specific Contractual Notes: -	Quality Checked by	Authorized Signatory			
<ol> <li>The laboratory accepts responsibility for content of this report.</li> <li>This report shall not be reproduced except in full, without written approval of the MD.</li> <li>This report is intended for only guidance and not for legal purpose or for advertisement.</li> <li>Any complaint about this report should be communicated in writing within 7 days of its issue</li> <li>Total liability of Institute for Environmental Management will be limited to invoiced amount only</li> </ol>	Shrapen	) FF			
6. In case of feedback/ complaints, please send an email at gm.iemeco@gmail.com	(Shreya Sonal)	(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. Quality Manager	Director			
	i ciaita				



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 - 8407804254, 8407804251, Email - iem2012@rediffmail.com





Accredited byJharkhand State Pollution Control Board, JSPCB<br/>National Accreditation Board for Testing Laboratory (NABL) vide TC-11515Certified ByISO 9001:2015 (QMS) & ISO 45001:2018



#### Test Report

ULR No	p.: T	C	1	1	5	1	5	2	3	0	0	0	0	0	1	8	.3	9
Discipli	ine: Chemical				Gro	oup: At	mo	hospheric Pollution Sub-Group: Ambient Air										
Report	Issue Date: 13	-12-202	23					Test Report No.: RN-230714001A4										
Sample	ID: 231211AP	11004						Sample Description: Ambient Air										
Challar	No./P.O. No.:	451101	12880	N				Challa	n No	/ P.N	o. Da	<b>te:</b> 13	-07-2	023				
	M/s Tata S (Formerly Gamaharia Seraikela-	Steel L Tata S a Phas Khars:	imite Steel L Se-V, A awan,	d .ong Adity Jhai	Prod apur rkhar	lucts I Indus nd-832	Lim stria	nited) al Area 8	a,									
Type of	f Industry: Iron	& Steel	1					Customer Representative: Shweta Kumari										
Sample Drawn by: IEM Team						Samp	ling D	ate: (	08-12	-2023	to 09-	12-20	)23					
Protoco	ol: CPCB Guide	ine(NA	AQMS	6/36/2	2012-:	13) & I	SM	ethod	5182	Serie	s					4		
Sampli	ng Location: ST	ATION	4 PLA	NT SO	UTHS	SIDE BO	JUN	DARY	111		1							
Field M	leteorological I	nforma	ation	A. T	emp.	(°C): 25	5	R.H.(%	6): 65	1	N.C.:	Clou	ıdy		W.D.:	NW te	W to SE	
Sample	Receiving Dat	<b>e:</b> 11-12	2-2023		Te	sting S	tart	rted: 11-12-2023 Testing Ended: 13-12-2023										
				10			Tes	t Resu	lts	- A	1.0							
SI. No.	Param	eters			Te	est Met	hod			U	nit			Resu	lt		Norm	1S**
1.	Particulate Ma	tter (PM-	10)	IS 5	182 Pa	art 23:20	006	RA 201	7	hð	/m <sup>3</sup>			98.4	3		10	0
2.	Particulate Ma	tter (PM;	2.5)	IS 5182 Part 24:			24: 2	2019		μg	/m <sup>3</sup>		25.2		.29		60	)
3.	Sulphure Dioxi	de (SO <sub>2</sub>	)	IS 5182 Part 02: 200*			001	RA 201	17	µg/m <sup>3</sup>			19.5		.58		80	)
4.	Nitrogen Dioxi	de (NO <sub>2</sub> )	)	IS 51	182 Pa	rt 06: 2	006	RA 201	17	μg	/m <sup>3</sup>	25.61			1	80		)
5.	Ammonia (NH;	3)			IS 518	2 Part	25: 2	2018		μg	/m <sup>3</sup>			40.0	5		40	0
6	$O_{7000} = (O_{2})$				15 518	IS 5192 Dart 00:				110	ug/m <sup>3</sup>				27.07			

7.	Arsenic (As)	USEPA IO 3.2: 1999	ng/m <sup>3</sup>	BDL (MDL-2)				
8.	Lead (Pb)	IS 5182 Part 22: 2004	µg/m <sup>3</sup>	0.24	1.0			
9.	Nickel (Ni)	IS 5182 Part 26: 2020	ng/m <sup>3</sup>	BDL (MDL-4)				
		End of Report			w			
Env.C	ondition of Lab.	Laboratory is maintaining Temperature testing area as per IS 196:1966(C).	27± 2°C and Re	lative Humidity 65±5 %	in all			
The second second								

	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 Except Parameter PM10 & PM2.5	
T I D NI		

Tested By: Neema Kumari

Sample Drawn By: Arjun Besra & Team

	ALC NO ALC								
Specific Contractual Notes: -	Quality Checked by Authorized Signatory								
<ol> <li>The laboratory accepts responsibility for content of this report.</li> </ol>									
2. This report shall not be reproduced except in full, without written approval of the MD.									
3. This report is intended for only guidance and not for legal purpose or for advertisement.	01 months and a los Cat								
4. Any complaint about this report should be communicated in writing within 7 days of its issue	Sho A TELER MEREL								
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 <u>gm.iemeco@gmail.com</u>	(Shreya Sonal)								
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. Quality Manager Alandm Director								

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



Jharkhand State Pollution Control Board, JSPCB

Certified by

ISO 9001:2015 (Quality Management System ) ISO 45001:2018 (Occupational Health & Safety Management System )

### **Test Report**

Discipli	ne: Chemical	Group: Atm	ospheric Polluti	on	Sub-Grou	: Ambient A	ir
Report	Issue Date: 13-12-2023		Test Report N	No.: RN-2	230714001A4		
Sample	ID: 231211AP11004		Sample Desci	ription: A	Ambient Air		
Challan	No./P.O. No.: 4511012880		Challan No./	P.No. Da	te: 13-07-2023	3	
lssued	to: M/s Tata Steel Limite (Formerly Tata Steel L Gamaharia Phase-V, A Seraikela-Kharsawan,	d ong Products Li Adityapur Industr Jharkhand-8321	mited) ial Area, 08				
Type of	Industry: Iron & Steel		Customer Re	presenta	tive: Shweta K	umari	
Sample	Drawn by: IEM Team		Sampling Dat	e: 08-12	-2023 to 09-12	-2023	
Protoco	ol: CPCB Guideline(NAAQMS	/36/2012-13) & IS	Method 5182 Se	eries			
Sampli	ng Location: STATION-4 PLA	NT SOUTH SIDE BOL	INDARY				
Field M	eteorological Information	A. Temp.(°C): 25	R.H.(%): 65	W.C.:	Cloudy	W.D.: NW	to SE
Sample	Receiving Date: 11-12-2023	Testing Sta	rted: 11-12-202	.3	<b>Testing Ende</b>	d: 13-12-202	3
		Te	st Results				- 1. C.
SI. No.	Parameters	Test Metho	bd	Unit	Re	sult	Limits
1.	Benzene (C <sub>6</sub> H <sub>6</sub> )	IS 5182 Part 11	: 2006	µg/m <sup>3</sup>	BDL (M	DL- 0.06)	. A. Chin
2.	Benzo (a) Pyrene (Bap) Particulate Phase Only IS 5182 Part 12		: 2004	ng/m <sup>3</sup>	BDL (N	1DL0.18)	
3.	Carbon Monoxide	IEM/SOP/Air-01	:2022	mg/m <sup>3</sup>	BDL(N	1DL 1.8)	
	Martin and a second	En	d of Poport		the second s		

<b>Env.Condition of Lab.</b> Laboratory is maintaining Temperature 27± 2°C and Relative Humidity 65±5 % in 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	N/A						

Tested By: Neema Kumari

Sample Drawn By: Arjun Besra & Team

Specific Contractual Notes: -	Quality Checked by Month Authorized Signatory
<ol> <li>The laboratory accepts responsibility for content of this report.</li> <li>This report shall not be reproduced except in full, without written approval of the MD.</li> <li>This report is intended for only guidance and not for legal purpose or for advertisement.</li> <li>Any complaint about this report should be communicated in writing within 7 days of its issue</li> <li>Total liability of Institute for Environmental Management will be limited to invoiced amount only.</li> </ol>	Shrupper (
6. In case of feedback/ complaints, please send an email at gm.iemeco@gmail.com	(Shreya Sonal) (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. Quality Manager Roach Director



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 - 8407804254, 8407804251, Email - iem2012@rediffmail.com





Accredited byJharkhand State Pollution Control Board, JSPCB<br/>National Accreditation Board for Testing Laboratory (NABL) vide TC-11515Certified ByISO 9001:2015 (QMS) & ISO 45001:2018



#### **Test Report**

ULR No	).:	T	С	1	1	5	1	5	2	3	0	0		0	0	0		1	8	4	3
Discipli	ne: Chemical					Gro	up: A	tmos	ospheric Pollution Sub-Group: Ambient Air												
Report	Issue Date: 20	0-12-	2023	3					Test Report No.: RN-230714001A8												
Sample	ID: 231218A	P170	02						Samp	le De	scrip	tion: A	Amb	bien	t Air						
Challan	No./P.O. No.	: 451	1101	2880					Chall	an No	./ P.I	No. Da	ite:	13-0	07-20	023					
Issued	to: M/s Tata (Formerly Gamahar	Ste / Tat ia P	el Li ta St hase	mite teel L e-V, A	d .ong Aditya	Prod apur	ucts Indu	Lim stria	ited) I Are	a,											
<b>T</b>	Seraikela	-Kha	arsa	wan,	Jhar	khar	id-83	210	B		Doore	to	*1		wet	- K					
Type of	Draustry: Iron	1 & S	teel	2152					Custo	ling	kepre	1E 12	20	22 +	a 16	1 2 2	na	2			1100-0
Sample	Drawn by: IE				126/2	012 1	2) 9	IS NA	samp	5101	Sorie	13-12	-20	25 0	0 10.	12-2	.02	5		-	
Sampli	on: CPCB Guide	TATI		DIA	NT W/	CT CI	DERC		ARV	5102	Serie	25									1000000000
Field M	leteorological	Info	rmat	tion		emn	°C). 2	7	RH (	×1.87	1	w c ·	C	lear			W	· D ·	South	to No	orth
Sample	Receiving Da	te 1	8-12	-2023	_ <u></u>	Te	sting	Start	ted: 18-12-2023 Testing Ended: 20-12-2023										Jiui		
Jampie	necciving ba		0 12	2023	-	1.0		-Test	Resu	lts		-				ucu.	20		2020		
SI. No.	Para	mete	rs		-	Te	st Me	thod	od Unit Result									Norn	ns**		
1.	Particulate Ma	atter	(PM <sub>10</sub>	)	IS 51	82 Pa	rt 23:	2006	RA 20	17	μg	g/m <sup>3</sup>		99.74						10	00
2.	Particulate Ma	atter	(PM <sub>2.</sub>	5)		IS 5182 Part 24: 2019					µg/m <sup>3</sup>					30.78			6	0	
3.	Sulphure Dio	xide (	SO <sub>2</sub> )		IS 51	82 Pa	rt 02:	2001	RA 20	17	µg/m <sup>3</sup>				16.0	16.05			8	0	
4.	Nitrogen Diox	ide (l	NO <sub>2</sub> )		IS 51	82 Pa	art 06: 2006 RA 2017				µg/m <sup>3</sup>				27.2	27.23			8	0	
5.	Ammonia (NH	H <sub>3</sub> )				IS 518	2 Par	25: 2	2018		μ	g/m <sup>3</sup>				53.4	45			40	0
6.	Ozone (O <sub>3</sub> )			3		IS 518	2 Par	t <b>09</b> : 1	1974		μç	g/m <sup>3</sup>				26.0	04			18	10
7.	Arsenic (As)				2012	USEP	AIO	3.2: 1	999		ng	g/m <sup>3</sup>		BDL (MDL-2)						1.00	<b>7</b> 0
8.	Lead (Pb)					S 518	2 Parl	22: 2	2004		hð	g/m <sup>3</sup>				0.2	3			1.	0
9.	Nickel (Ni)					S 518	2 Par	26: 2	2020		ng	g/m <sup>3</sup>	2	BDL (MDL-4)							-
								End	of Rep	ort	-										
Env.Co	ndition of Lat	<b>b</b> .	Labo testi	ng ar	y is n ea as	nainta per 19	ining 196	Tem 1960	perat 6(C).	ure 2	7± 2°	C and	Rel	lativ	ve Hu	mid	ity	65±	5 % ii	n all	
Abbrev	iation		MDL	: Min	imum	Dete	tion	Limi	nit, BDL:Below Detection Limit												
Bomer	s specified		Natio	nal Ar	noient	AIF Qu	anty S	anda	d ana	AAQS	, 2009	Vecart	Day		ator	DM.	0.	DM-			
Teeted	By: Neema Ku	mari	Sam	pie co	mpry	with	prese	Tibe	u spec	meat	TON E	xcept	ral	am	eter	P 1VI 10	o de	r 1412	.5		

Sample Drawn By: Arjun Besra & Team

Specific Contractual Notes: -	Quality Checked by Authorized Signatory								
<ol> <li>The laboratory accepts responsibility for content of this report.</li> <li>This report shall not be reproduced except in full without written approval of the MD.</li> </ol>									
<ol> <li>This report shall not be reproduced except in full, whiled whiten approval of the MD.</li> <li>This report is intended for only guidance and not for legal purpose or for advertisement.</li> <li>Any complaint about this report should be communicated in writing within 7 days of its issue</li> </ol>	Shrupson and the								
<ol> <li>Total liability of Institute for Environmental Management will be limited to invoiced amount only.</li> <li>In case of feedback/ complaints, please send an email at <u>gm.iemeco@gmail.com</u></li> </ol>	(Shreya Sonal)								
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. Quality Manager								

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



Jharkhand State Pollution Control Board, JSPCB

Certified by

ISO 9001:2015 (Quality Management System ) ISO 45001:2018 (Occupational Health & Safety Management System )

### **Test Report**

Discipline: Chemical Gro			Group: Atm	mospheric Pollution Sub-Group: Ambient Air				ir	
Report Issue Date: 20-12-2023				Test Report N	o.: RN-2	230714001A8			
Sample ID: 231218AP17002				Sample Descri	iption: A	Ambient Air			
Challan	No./P.O. No.: 4	511012880		Challan No./ F	No. Da	te: 13-07-202	3		
lssued	to: M/s Tata St (Formerly T Gamaharia Seraikela-K	eel Limited ata Steel L Phase-V, A harsawan,	d ong Products Lin dityapur Industr Jharkhand-8321	mited) ial Area, 08	1				
Type of	f Industry: Iron &	Steel		Customer Rep	resenta	tive: Shweta k	umari		
Sample	Drawn by: IEM	Team		Sampling Date	e: 15-12	-2023 to 16-12	-2023		
Protoco	ol: CPCB Guidelin	e(NAAQMS	/36/2012-13) & IS I	Method 5182 Se	ries				
Sampli	ng Location: STA	TION-2 PLAN	NT WEST SIDE BOUN	IDARY	0				
Field M	leteorological Int	formation	A. Temp.(°C): 27	R.H.(%): 82	W.C.:	Clear	W.D.: Sou	th to North	
Sample	Receiving Date:	18-12-2023	Testing Sta	started: 18-12-2023 Testing Ended: 20-12-2023					
			Te	st Results					
SI. No.	Paramet	ters	Test Metho	d	Unit	R	esult	Limits	
1.	Benzene (C <sub>6</sub> H <sub>6</sub> )		IS 5182 Part 11	: 2006	µg/m <sup>3</sup>	BDL (N	DL- 0.06)		
2.	Benzo (a) Pyrene Particulate Phase	e (Bap) e Only	IS 5182 Part 12	: 2004	ng/m <sup>3</sup>	BDL (N	1DL0.18)		
3.	Carbon Monoxid	e	:2022	mg/m <sup>3</sup>	BDL(MDL 1.8)				
		5	Ene	d of Report					
Env.Co	ndition of Lab.	Laborator testing ar	y is maintaining Te ea as per IS 196:19	mperature 27± 66(C).	2°C and	Relative Hum	idity 65±5 %	in all	
Abbrev	iation	MDL: Mini	DL: Minimum Detection Limit, BDL:Below Detection Limit						
Norms'	Norms** is Specified		nhient Air Quality Stan	dards (NAAOS) 20	09				

Remark Tested By: Neema Kumari

Sample Drawn By: Arjun Besra & Team

N/A

Specific Contractual Notes: -	Quality Checked by Authorized Signatory
<ol> <li>The laboratory accepts responsibility for content of this report.</li> <li>This report shall not be reproduced except in full, without written approval of the MD.</li> <li>This report is intended for only guidance and not for legal purpose or for advertisement.</li> <li>Any complete the point this report should be communicated in writing within 7 days of its issue.</li> </ol>	Showsone
<ol> <li>Any complaint about this report should be communicated in writing within 7 days or its issue</li> <li>Total liability of Institute for Environmental Management will be limited to invoiced amount only.</li> <li>In case of feedback/ complaints, please send an email at <u>am.iemeco@gmail.com</u></li> </ol>	(Shreya Sonal) (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. Quality Manager



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 - 8407804254, 8407804251, Email - iem2012@rediffmail.com

|--|

SN	Unit	Stack attached to	APC
1		DRI based WHRB-1	ESP
2		DRI based WHRB-2	ESP
3		DRI based WHRB-3	ESP
4		DRI based WHRB-4	ESP
5	CPP	DRI based WHRB-5	ESP
6		25 MW_CPP	ESP
7		30 MW_CPP	ESP
8		40 TPH_CPP	ESP
9		SINTER PLANT PROCESS	ESP
10	Sinter	SINTER PLANT DEDUSTING	ESP
11	Plant	FLUX CRUSHER_SINTER PLANT	BAG-FILTER
12		FLUX SCREEN_SINTER PLANT	BAG-FILTER
13		PELLET PLANT PROCESS	ESP
14	Pellet	PCI_PELLET PLANT	BAG-FILTER
15	Plant	DRYER_PELLET PLANT	BAG-FILTER
16		TG BUILDING_PELLET PLANT	BAG-FILTER
17		SMS-1&2_FES	BAG-FILTER
18		LRF-1 & 3	BAG-FILTER
19	SMS	SMS-3 _FES	BAG-FILTER
20	_	RMHS-2_SMS-2	BAG-FILTER
21		RMHS-3_SMS-3	BAG-FILTER
22		MBF-1_CAST HOUSE	BAG-FILTER
23	_	MBF-1_STOCK HOUSE (1)	BAG-FILTER
24		MBF-1_STOCK HOUSE (2)	BAG-FILTER
25	_	MBF-1_GROUND HOPPER	BAG-FILTER
26	MBF	MBF-2_CAST HOUSE	BAG-FILTER
27		MBF-2_STOCK HOUSE	BAG-FILTER
28		MBF-2_PCI	BAG-FILTER
29		MBF-2_RMHS	BAG-FILTER
30		MBF-2_DRY GCP	BAG-FILTER
31		DE-1_DRI-1 PRODUCT CIRCUIT	BAG-FILTER
32		DE-1A_DRI-1,2,3 PRODUCT CIRCUIT	BAG-FILTER
33		DE-2_DRI-1,2,3 PSB	BAG-FILTER
34		DE-2A_DRI-1,2,3 PSB	BAG-FILTER
35	ואם	DE-3_DRI-4 & 5 PRODUCT CIRCUIT	BAG-FILTER
36		DE-4_ DRI-4 & 5 PSB	BAG-FILTER
37		DE-5 _ DRI-3 PRODUCT CIRCUIT	BAG-FILTER
38		DE-6 _ DRI-2 PRODUCT CIRCUIT	BAG-FILTER
39		DE-7_ INTERMIDIATE BIN DRI-1,2,3	BAG-FILTER
40		DE-8_ DRI-1,2,3 PSB	BAG-FILTER

#### Sinter Plant Process ESP



#### Stock House Bag Filter of Blast Furnace



Covered shed with concreted floor for storage



Mechanized Housekeeping & internal roads wetting through Water Tanker



Dust suppression systems installed across the plant



#### Annexure-4

	Plantation at TSG, JSR						
Year	Name of plant	No of plants					
Up to 2015	Casis Siamia,Largetoniya,Jackfruit,kadam	2556					
2015-2016	Gulmohar,Acacia auriculiformis,Karanj	2534					
2016-2017	Mahogany,karanj,plumeria alba ,Gulmohar 3134						
2017-2018 Cassia gluca ,Mahogany ,peltophourm ,Mango 1770							
2018-2019	2018-2019 Pipal,bargad,molshree,ashoka,mahogany 19905						
2019-2020	Mahogany, Gulmohar,Kadam ,Peltophourm 1911						
2020-2021	Kadam , mahogany,alestonia 2421						
2021-2022 Mahogany, Gulmohar, Kadam , Peltophourm		3259					
2022-2023 Mahogany, Gulmohar, Kadam , Peltophourm ashoka		4748					
2023-2024	Gulmohar, Kadam, Peltophourm, Mahogany	19895					
		62133					

#### Green Belt developed inside the Plant







Annexure - 5



# Institute for Environmental Management

Jharkhand State Pollution Control Board, JSPCB Accredited by

Certified by

ISO 9001:2015 (Quality Management System ) ISO 45001:2018 (Occupational Health & Safety Management System )

### **Test Report**

Discipline	: Chemical	ospheric Polluti	on	Sub-G	roup: Work Env	vironment	
Report Iss	ue Date: 20-12-2023	Test Report N	lo.: RN-	230714001	FE01		
Sample ID	: 231218AP12001		Sample Desci	iption:	Work Zone	Air	
Challan N	o./P.O. No.: 4511012880		Challan No./	P.No. D	ate: 13-07-2	2023	
Type of In	M/s Tata Steel Limited (Formerly Tata Steel Lo Gamaharia Phase-V, Ad Seraikela-Kharsawan, J dustry: Iron & Steel	ng Products Limito lityapur Industrial Jharkhand-832108	ed) Area, Customer Re	presen	tative: Shw	veta Kumari	
Sample D	rawn by: IEM Team		Sampling Date: 11-12-2023				
Protocol:	CPCB Guideline(NAAQMS	/36/2012-13) & IS N	Aethod 5182 Ser	ies			
Sampling	Location: Sinter Plant Nea	ar Linear Cooler Are	а	1.5			-
Field Meteorological Information A. Temp.(°C): 26			R.H.(%): 70	W.C.	Clear	Clear W.D.: West to Ea	
Sample Receiving Date: 18-12-2023 Testing St			rted: 18-12-202	3	Testing E	nded: 20-12-20	23
	-	Te	est Results				
CI No.	Bassantasa	Test Ma	4		11	Desult	

SI. No.	Parameters	Test Method	Unit	Result	Norms**
1.	Particulate Matter (PM10)	IS 5182 Part 23:2006 RA 2017	µg/m <sup>3</sup>	1679.55	
2.	Sulphure Dioxide (SO <sub>2</sub> )	IS 5182 Part-02: 2001 RA 2017	µg/m <sup>3</sup>	43.39	
3.	Nitrogen Dioxide (NO <sub>2</sub> )	IS 5182 Part-06: 2006 RA 2017	µg/m³	78.55	
4.	Carbon Monoxide (CO)	IEM/SOP/2022/01	mg/m3	BDL(MDL-1.8)	
		Fnd of Report			

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	-				
Remark					

Tested By: Neema Kumari

ISO 9001:2015

Specific Contractual Notes: -	Quality Checked by Authorized Signatory				
<ol> <li>The laboratory accepts responsibility for content of this report.</li> <li>This report shall not be reproduced except in full, without written approval of the MD.</li> </ol>	A COLORISING -COL				
<ol> <li>This report is intended for only guidance and not for legal purpose or for advertisement.</li> <li>Any complaint about this report should be communicated in writing within 7 days of its issue</li> <li>Total liability of Institute for Environmental Management will be limited to invoiced amount only.</li> </ol>	Shryson Sta				
<ol><li>In case of feedback/ complaints, please send an email at <u>gm.iemeco@gmail.com</u></li></ol>	(Shreya Sonal)				
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. Quality Manager, Director				
Corporate office - A-8, Modi Heights, OppAll India Radio Stati Laboratory Site - H.No. – A-13, Saket Vihar, Near Sohra	ion, Ratu Road, Ranchi, Jharkhand - 834001				
SO 9001:2015 Ranchi-834002, Jharkhand	d, India				





Jharkhand State Pollution Control Board, JSPCB Accredited by

Certified by

ISO 9001:2015 (Quality Management System ) ISO 45001:2018 (Occupational Health & Safety Management System )

# **Test Report**

Discipline: Chemical	Group: Atm	ospheric Pollutic	on	Sub-Gro	up: Work Environment	
Report Issue Date: 20-12-2023	Test Report N	o.: RN-230	714001FE	02		
Sample ID: 231218AP12002		Sample Descr	i <b>ption:</b> Wo	rk Zone Ai	r	
Challan No./P.O. No.: 4511012880		Challan No./ F	.No. Date	13-07-20	23	
Issued to: M/s Tata Steel Limited (Formerly Tata Steel Lor Gamaharia Phase-V, Ad Seraikela-Kharsawan, J	ng Products Limite ityapur Industrial / harkhand-832108	ed) Area,	Ť			
Type of Industry: Iron & Steel		Customer Re	presentati	ve: Shwet	a Kumari	
Sample Drawn by: IEM Team	Sample Drawn by: IEM Team Sampling Date: 11-12-2023					
Protocol: CPCB Guideline(NAAQMS/	/36/2012-13) & IS N	lethod 5182 Ser	ies			
Sampling Location: Sinter Plant Nea	r Crusher Area	•	5			
Field Meteorological Information A. Temp.(°C): 26 R.H.(%): 70 W.C.: Clear W.D.: West to Eas						
Sample Receiving Date: 18-12-2023 Testing Started: 18-12-2023 Testing Ended: 20-12-2023						
	Te	st Results				

SI. No.	Parameters	Test Method	Unit	Result	Norms**
1.	Particulate Matter (PM <sub>10</sub> )	IS 5182 Part 23:2006 RA 2017	µg/m <sup>3</sup>	1726.31	1
2.	Sulphure Dioxide (SO <sub>2</sub> )	IS 5182 Part-02: 2001 RA 2017	µg/m <sup>3</sup>	37.99	
3.	Nitrogen Dioxide (NO <sub>2</sub> )	IS 5182 Part-06: 2006 RA 2017	µg/m <sup>3</sup>	65.58	
4.	Carbon Monoxide (CO)	IEM/SOP/2022/01	mg/m3	BDL(MDL-1.8)	
		End of Report	1.05		

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	-				
Remark					

Tested By: Neema Kumari

ISO 9001:2015

Sample Drawn By: Arjun Besra & Team

<ol> <li>The laboratory accepts responsibility for content of this report.</li> <li>This report shall not be reproduced except in full, without written approval of the MD.</li> </ol>	A CHERON
<ol> <li>This report is intended for only guidance and not for legal purpose or for advertisement.</li> <li>Any complaint about this report should be communicated in writing within 7 days of its issue</li> <li>Total liability of Institute for Environmental Management will be limited to invoiced amount only.</li> <li>In case of feedback/ complaints, please send an email at <u>gm.iemeco@gmail.com</u></li> </ol>	(Shreya Sonal)
On the basis of Quality Checked and Technical data verified by the Authorized signatory, the report is issued by the Director of the Organization.	y. Quality Manager Andri Director



Ranchi-834002, Jharkhand, India Ph - 8407804254, 8407804251, Email - iem2012@rediffmail.com



Jharkhand State Pollution Control Board, JSPCB

Certified by

ISO 9001:2015 (Quality Management System )

ISO 45001:2018 (Occupational Health & Safety Management System )

### **Test Report**

Disciplin	ne: Chemical	ospheric Pollutio	on	Sub-Gi	r <b>oup:</b> Work Env	vironment	
Report I	ssue Date: 20-12-2023	Test Report N	o.: RN-2	30714001	FE03		
Sample	ID: 231218AP14001	Sample Description: Work Zone Air					
Challan	No./P.O. No.: 4511012880	0 Challan No./ P.No. Date: 13-07-2023					
issued t	M/s Tata Steel Limited (Formerly Tata Steel Lo Gamaharia Phase-V, Ad Seraikela-Kharsawan, J	ng Products Limite lityapur Industrial / lharkhand-832108	ed) Area,				
Type of	Industry: Iron & Steel		Customer Re	presenta	ative: Shw	eta Kumari	
Sample	Drawn by: IEM Team	and a second	Sampling Dat	e: 12-12-	2023		
Protocol	I: CPCB Guideline(NAAQMS,	/36/2012-13) & IS N	2-13) & IS Method 5182 Series				
Samplin	g Location: PELLET PLANT N	IEAR OFFICE AREA					
Field Meteorological Information A. Temp.(°C): 25			R.H.(%): 78	W.C.: 5	C.: Sunny W.D.: West to East		est to East
Sample Receiving Date: 18-12-2023 Testing St			rted: 18-12-202	3	Testing E	nded: 20-12-20	23
		Te	est Results				
CI N.					2.02	<b>D</b>	

SI. No.	Parameters	Test Method	Unit	Result	Norms**
1.	Particulate Matter (PM10)	IS 5182 Part 23:2006 RA 2017	µg/m <sup>3</sup>	934.34	
2.	Sulphure Dioxide (SO <sub>2</sub> )	IS 5182 Part-02: 2001 RA 2017	µg/m <sup>3</sup>	31.57	-
3.	Nitrogen Dioxide (NO <sub>2</sub> )	IS 5182 Part-06: 2006 RA 2017	µg/m <sup>3</sup>	57.28	
4.	Carbon Monoxide (CO)	IEM/SOP/2022/01	mg/m3	BDL(MDL-1.8)	
		End of Report			

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	
Remark	

Tested By: Neema Kumari

Sample Drawn By: Arjun Besra & Team

Specific Contractual Notes: -	Quality Checked by conneAuthorized Signatory
<ol> <li>The laboratory accepts responsibility for content of this report.</li> <li>This report shall not be reproduced except in full, without written approval of the MD.</li> <li>This report is intended for only guidance and not for legal purpose or for advertisement.</li> <li>Any complaint about this report should be communicated in writing within 7 days of its issue</li> <li>Total liability of Institute for Environmental Management will be limited to invoiced amount only.</li> <li>In case of feedback/ complaints, please send an email at <u>gm.iemeco@gmail.com</u></li> </ol>	Shrysonal (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. Quality Manager * Ranchi Director
Corporate office - A-8, Modi Heights, OppAll India Radio Stati	ion, Ratu Road, Ranchi, Jharkhand - 834001
Claboratory Sile - H.NO. – A-15, Saket Vinar, Near Sonra Ranchi-834002, Jharkhand	d, India

Ph - 8407804254, 8407804251, Email - iem2012@rediffmail.com







Accredited by Jharkhand State Pollution Control Board, JSPCB

Certified by

ISO 9001:2015 (Quality Management System ) ISO 45001:2018 (Occupational Health & Safety Management System )

# Test Report

Discipline: Chemical	Group: Atm	ospheric Pollutic	n	Sub-Gro	oup: Work Environment
Report Issue Date: 20-12-2023	Test Report No.: RN-230714001FE04				
Sample ID: 231218AP14002	Sample Description: Work Zone Air				
Challan No./P.O. No.: 4511012880	Challan No./ F	No. Date	: 13-07-20	023	
Issued to: M/s Tata Steel Limited (Formerly Tata Steel Lor Gamaharia Phase-V, Adi Seraikela-Kharsawan, J	ng Products Limite ityapur Industrial A harkhand-832108	ed) Area,	۳ċ.		
Type of Industry: Iron & Steel Customer Representative: Shu				ve: Shweta	a Kumari
Sample Drawn by: IEM Team Sampling Date			: 12-12-2	023	<b>-</b>
Protocol: CPCB Guideline(NAAQMS/36/2012-13) & IS Method 5182 Series					
Sampling Location: PELLET PLANT N	EAR ESP HOPPER		100		
Field Meteorological Information	R.H.(%): 78	W.C.: S	unny	W.D.: West to East	
Sample Receiving Date: 18-12-2023	rted: 18-12-2023	3 .	<b>Testing En</b>	ded: 20-12-2023	
Test Results					

SI. No.	Parameters	Test Method	Unit	Result	Norms**
1.	Particulate Matter (PM10)	IS 5182 Part 23:2006 RA 2017	µg/m <sup>3</sup>	1168.47	
2.	Sulphure Dioxide (SO <sub>2</sub> )	IS 5182 Part-02: 2001 RA 2017	µg/m <sup>3</sup>	27.94	
3.	Nitrogen Dioxide (NO <sub>2</sub> )	IS 5182 Part-06: 2006 RA 2017	µg/m³	49.03	
4.	Carbon Monoxide (CO)	IEM/SOP/2022/01	mg/m3	BDL(MDL-1.8)	
-		End of Report			

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	
Remark	

Tested By: Neema Kumari

Sample Drawn By: Arjun Besra & Team

Specific Contractual Notes: -	Quality Checked by Authorized Signatory
<ol> <li>The laboratory accepts responsibility for content of this report.</li> <li>This report shall not be reproduced except in full, without written approval of the MD.</li> <li>This report is intended for only guidance and not for legal purpose or for advertisement.</li> <li>Any complaint about this report should be communicated in writing within 7 days of its issue</li> <li>Total liability of Institute for Environmental Management will be limited to invoiced amount only.</li> <li>In case of feedback/ complaints, please send an email at <u>gm.iemeco@gmail.com</u></li> </ol>	(Shreya Sonal)
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. Quality Manager And Director
Corporate office - A-8, Modi Heights, OppAll India Radio Stat	tion, Ratu Road, Ranchi, Jharkhand - 834001
Laboratory Site - H.No. – A-13, Saket Vihar, Near Sohr Ranchi-834002, Jharkhan	ai Bhawan, Harmu Housing Colony, d, India

Ph - 8407804254, 8407804251, Email - iem2012@rediffmail.com



Jharkhand State Pollution Control Board, JSPCB

Certified by

ISO 9001:2015 (Quality Management System ) ISO 45001:2018 (Occupational Health & Safety Management System )

## **Test Report**

Discipline: Chemical	scipline: Chemical Group: Atmosp				Sub-Gr	roup: Work Environment
Report Issue Date: 27-12-2023			Test Report N	lo.: RN-2	230714001	FE05
Sample ID: 231225AP12001			Sample Description: Work Zone Air			
Challan No./P.O. No.: 4511012880 Challan No./ P.No. Date: 13-07-2023				2023		
M/s Tata Steel Limited (Formerly Tata Steel Lo Gamaharia Phase-V, Ad Seraikela-Kharsawan, J	ng Produc ityapur In harkhand	cts Limite dustrial -832108	ed) Area,			
Type of Industry: Iron & Steel			Customer Representative: Shweta Kumari			
Sample Drawn by: IEM Team			Sampling Date: 13-12-2023			
Protocol: CPCB Guideline(NAAQMS/36/2012-13) & IS Method 5182 Series						
Sampling Location: MBF-2 NEAR CA	ST HOUSE	PLATFOR	M	1.5		
Field Meteorological Information A. Temp.(°C): 24			R.H.(%): 80	W.C.:	Clear	W.D.: North to South
Sample Receiving Date: 25-12-2023 Testing Sta			rted: 25-12-202	3	Testing E	nded: 27-12-2023
		Te	st Results			

iculate Matter (PM <sub>10</sub> )	IS 5182 Part 23:2006 RA 2017	110/003		
		µg/m	874.15	
phure Dioxide (SO <sub>2</sub> )	IS 5182 Part-02: 2001 RA 2017	µg/m <sup>3</sup>	24.59	
ogen Dioxide (NO <sub>2</sub> )	IS 5182 Part-06: 2006 RA 2017	µg/m <sup>3</sup>	53.97	
Lead (Pb)	IS 5182 Part-22	µg/m <sup>3</sup>	0.07	
bon Monoxide (CO)	IEM/SOP/2022/01	mg/m3	BDL(MDL-1.8)	
ł	Lead (Pb) oon Monoxide (CO)	Lead (Pb)     IS 5182 Part-22       bon Monoxide (CO)     IEM/SOP/2022/01	Lead (Pb)         IS 5182 Part-22         µg/m³           pon Monoxide (CO)         IEM/SOP/2022/01         mg/m3	Lead (Pb)         IS 5182 Part-22         µg/m³         0.07           Don Monoxide (CO)         IEM/SOP/2022/01         mg/m3         BDL(MDL-1.8)

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	
Remark	

Tested By: Neema Kumari

Specific Contractual Notes: -	Quality Checked by	Authorized Signatory
<ol> <li>The laboratory accepts responsibility for content of this report.</li> <li>This report shall not be reproduced except in full, without written approval of the MD.</li> <li>This report is intended for only guidance and not for legal purpose or for advertisement.</li> <li>Any complaint about this report should be communicated in writing within 7 days of its issue</li> <li>Total liability of Institute for Environmental Management will be limited to invoiced amount only.</li> <li>In case of feedback/ complaints, please send an email at <u>gm.iemeco@gmail.com</u></li> </ol>	Shrupsonal)	(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. Quality Manager	Director
Corporate office - A-8, Modi Heights, OppAll India Radio Stat Laboratory Site - H.No. – A-13, Saket Vihar, Near Sohra Ranchi-834002, Jharkhan SO 9001:2015 Ph - 8407804254, 8407804251, Email - ie	tion, Ratu Road, Ranchi, Jharkha ai Bhawan, Harmu Housing Cole d, India m2012@rediffmail.com	and - 834001



Accredited by Jharkhand State Pollution Control Board, JSPCB

Certified by

ISO 9001:2015 (Quality Management System ) ISO 45001:2018 (Occupational Health & Safety Management System )

# **Test Report**

Discipline: Chemical		Group: Atm	ospheric Polluti	on	Sub-Gr	oup: Work Environment	
Report Issue Date: 27-12-2023			Test Report N	lo.: RN-	I-230714001FE06		
Sample ID: 231225AP13001 Sample Description: Work Zone Air			Air				
Challan No./P.O. No.: 4511012880			Challan No./	P.No. Da	ate: 13-07-2	023	
Issued to: M/s Tata Steel Limited (Formerly Tata Steel Lo Gamaharia Phase-V, Ad Seraikela-Kharsawan, J	ng Proc lityapur lharkha	ducts Limite Industrial nd-832108	ed) Area,				
Type of Industry: Iron & Steel	Type of Industry: Iron & Steel Customer Representative: Shweta Kumari					eta Kumari	
Sample Drawn by: IEM Team			Sampling Dat	e: 19-12	-2023		
Protocol: CPCB Guideline(NAAQMS,	/36/201	2-13) & IS N	lethod 5182 Ser	ies			
Sampling Location: MBF-1 NEAR CA	ST HOU	SE PLATFOR	M				
Field Meteorological Information	eorological Information A. Temp.(°C): 22 R.H.(%): 82 W.C.: Sunny W.D.: SW - NE					W.D.: SW - NE	
Sample Receiving Date: 25-12-2023	3	<b>Testing Sta</b>	rted: 25-12-202	3	Testing En	ded: 27-12-2023	
		Te	st Results		Part of the local division of the local divi		

SI. No.	Parameters	Test Method	Unit	Result	Norms**
1.	Particulate Matter (PM10)	IS 5182 Part 23:2006 RA 2017	µg/m <sup>3</sup>	984.28	No 1
2.	Sulphure Dioxide (SO <sub>2</sub> )	IS 5182 Part-02: 2001 RA 2017	µg/m <sup>3</sup>	33.57	
3.	Nitrogen Dioxide (NO <sub>2</sub> )	IS 5182 Part-06: 2006 RA 2017	µg/m <sup>3</sup>	69.09	
4.	Lead (Pb)	IS 5182 Part-22	µg/m <sup>3</sup>	0.09	
5.	Carbon Monoxide (CO)	IEM/SOP/2022/01	mg/m3	BDL(MDL-1.8)	
		End of Poport			

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	-	
Remark		

Tested By: Neema Kumari

Specific Contractual Notes: -	Quality Checked by Authorized Signatory		
<ol> <li>The laboratory accepts responsibility for content of this report.</li> <li>This report shall not be reproduced except in full, without written approval of the MD.</li> <li>This report is intended for only guidance and not for legal purpose or for advertisement.</li> <li>Any complaint about this report should be communicated in writing within 7 days of its issue</li> <li>Total liability of Institute for Environmental Management will be limited to invoiced amount only.</li> <li>In case of feedback/ complaints, please send an email at gm.iemeco@gmail.com</li> </ol>	(Shreya Sonal) (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. Quality Manager Andri Director		
Corporate office - A-8, Modi Heights, OppAll India Radio Stati Laboratory Site - H.No. – A-13, Saket Vihar, Near Sohra Ranchi-834002, Jharkhanc 50 9001:2015 Fh - 8407804254, 8407804251, Email - jer	ion, Ratu Road, Ranchi, Jharkhand - 834001 i Bhawan, Harmu Housing Colony, d, India m2012@rediffmail.com		



Accredited by Jharkhand State Pollution Control Board, JSPCB

Certified by

ISO 9001:2015 (Quality Management System ) ISO 45001:2018 (Occupational Health & Safety Management System )

### **Test Report**

Discipline: Chemical	Group: Atm	Group: Atmospheric Pollution Sub-Group: Work Environment			
Report Issue Date: 27-12-2023 Test Report No.: RN-230714001FE07					
Sample ID: 231225AP13002 Sample Description: Work Zone Air				Zone Air	
Challan No./P.O. No.: 4511012880		Challan No./	P.No. Date: 13	3-07-2023	
M/s Tata Steel Limited (Formerly Tata Steel Lo Gamaharia Phase-V, Ad Seraikela-Kharsawan, J	ng Products Limite lityapur Industrial lharkhand-832108	ed) Area,		Shuata Kumari	
Type of Industry: Iron & Steel		Customer Re	epresentative	. Silweta Kuman	
Sample Drawn by: IEM Team		Sampling Dat	e: 19-12-2023		
Protocol: CPCB Guideline(NAAQMS,	/36/2012-13) & IS N	Aethod 5182 Sei	ries		
Sampling Location: MBF-1 NEAR RN	ИНS				
<b>Field Meteorological Information</b>	A. Temp.(°C): 22	R.H.(%): 82	W.C.: Sunn	y W.D.: SW - NE	
Sample Receiving Date: 25-12-2023	rted: 25-12-202	3 Test	ing Ended: 27-12-2023		
	Te	est Results			

SI. No.	Parameters	Test Method	Unit	Result	Norms**
1.	Particulate Matter (PM10)	IS 5182 Part 23:2006 RA 2017	µg/m <sup>3</sup>	1435.39	S
2.	Sulphure Dioxide (SO <sub>2</sub> )	IS 5182 Part-02: 2001 RA 2017	µg/m <sup>3</sup>	27.85	
3.	Nitrogen Dioxide (NO <sub>2</sub> )	IS 5182 Part-06: 2006 RA 2017	µg/m <sup>3</sup>	61.88	
4.	Lead (Pb)	IS 5182 Part-22	µg/m <sup>3</sup>	0.07	
5.	Carbon Monoxide (CO)	IEM/SOP/2022/01	mg/m3	BDL(MDL-1.8)	
		End of Report	For Horsey here with the		

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	
Remark	

Tested By: Neema Kumari

Specific Contractual Notes: -         1. The laboratory accepts responsibility for content of this report.         2. This report shall not be reproduced except in full, without written approval of the MD.         3. This report is intended for only guidance and not for legal purpose or for advertisement.         4. Any complaint about this report should be communicated in writing within 7 days of its issue         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 <u>gm.iemeco@gmail.com</u> On the basis of Quality Checked and Technical data verified by the Authorized signatory, the report is issued by the Director of the Oranization.	Quality Checked by Authorized Signatory Sharpson (Shreya Sonal) (Dr. S. C. Jain) Dy. Quality Manager Director
Corporate office - A-8, Modi Heights, OppAll India Radio Stati	on, Ratu Road, Ranchi, Jharkhand - 834001
Laboratory Site - H.No. – A-13, Saket Vihar, Near Sohrai	Bhawan, Harmu Housing Colony,
Ranchi-834002, Jharkhand	I, India
Ph - 8407804254, 8407804251, Email - ier	n2012@rediffmail.com



Jharkhand State Pollution Control Board, JSPCB

Certified by

ISO 9001:2015 (Quality Management System) ISO 45001:2018 (Occupational Health & Safety Management System )

### **Test Report**

Disciplin	ne: Chemical	Group: Atm	ospheric Polluti	on	Sub-Group	Work Env	rironment
Report	Report Issue Date: 02-01-2024 Test Report No.:			lo.: RN-2307	RN-230714001FE08		
Sample ID: 231230AP04001 Sample Description: Work Zone Air							
Challan	No./P.O. No.: 4511012880		Challan No./	P.No. Date: 1	3-07-2023		
Issued	to: M/s Tata Steel Limite (Formerly Tata Steel I Gamaharia Phase-V, / Seraikela-Kharsawan	d Long Products Lin Adityapur Industr , Jharkhand-8321	mited) ial Area, 08				
Type of	Industry: Iron & Steel	199	Customer Re	presentative	: Shweta K	lumari	
Sample	Drawn by: IEM Team	M Team Sampling Date: 25-12-2023					
Protoco	I: CPCB Guideline(NAAQMS	/36/2012-13) & IS N	lethod 5182 Ser	ies			
Samplin	g Location: : WRM NEAR M	ILL STAND					
Field Me	eteorological Information	A. Temp.(°C): 25	<b>R.H.(%):</b> 76	W.C.: Clea	ear W.D.: East - West		ist - West
Sample	Receiving Date: 30-12-2023	3 Testing Sta	rted: 30-12-202	3 Tes	Testing Ended: 02-01-2024		
		Te	est Results				
SI. No.	Parameters	Test Method		Unit		Result	Norms**
1.	Particulate Matter (PM10)	IS 5182 Part 23:2	2006 RA 2017	µg/m <sup>3</sup>		919.36	
2.	Sulphure Dioxide (SO <sub>2</sub> )	IS 5182 Part-02: 2001 RA 2017		µg/m <sup>3</sup>		20.24	

End	of	Repo	ort

µg/m<sup>3</sup>

mg/m3

50.09

BDL(MDL-1.8)

----

IS 5182 Part-06: 2006 RA 2017

IEM/SOP/2022/01

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	
Remark	

Tested By: Neema Kumari

3.

4.

Sample Drawn By: Arjun Besra & Team

Nitrogen Dioxide (NO<sub>2</sub>)

Carbon Monoxide (CO)

Specific Contractual Notes: -	Quality Checked by Authorized Signatory
<ol> <li>The laboratory accepts responsibility for content of this report.</li> <li>This report shall not be reproduced except in full, without without without without without with a report is intended for only guidance and not for legal put.</li> <li>Any complaint about this report should be communicated in 5. Total liability of Institute for Environmental Management will</li> <li>In case of feedback/ complaints, please send an email at gr</li> </ol>	approval of the MD. e or for advertisement. ng within 7 days of its issue mited to invoiced amount only. (Shreya Sonal) (Dr. S. C. Jain)
On the basis of Quality Checked and Technical data verified by th is issued by the Director of the Organization.	thorized signatory, the report Dy. Quality Manager
Corporate office - A-8, Modi Heigh	DppAll India Radio Station, Ratu Road, Ranchi, Jharkhand - 834001 , Saket Vihar, Near Sohrai Bhawan, Harmu Housing Colony,
ISO 9001:2015 Ph - 84078042	nchi-834002, Jharkhand, India 8407804251, Email - iem2012@rediffmail.com



Accredited by Jharkhand State Pollution Control Board, JSPCB

Certified by

ISO 9001:2015 (Quality Management System ) ISO 45001:2018 (Occupational Health & Safety Management System )

### **Test Report**

Disciplin	ne: Chemical		Group: Atm	ospheric Pollutio	on	Sub-Gro	oup: Work Env	ironment
Report Issue Date: 02-01-2024			Test Report No.: RN-230714001FE09					
Sample	ID: 231230AP04002			Sample Descr	iption: Wo	rk Zone A	ir	
Challan	No./P.O. No.: 4511012880			Challan No./	P.No. Date	: 13-07-20	)23	
Issued t	o: M/s Tata Steel Limite (Formerly Tata Steel L Gamaharia Phase-V, A Seraikela-Kharsawan,	d .ong P Aditya Jhark	Products Lin pur Industr chand-8321	mited) ial Area, 08				
Type of	Industry: Iron & Steel		10	Customer Re	presentati	ive: Shwe	ta Kumari	
Sample	Drawn by: IEM Team			Sampling Date: 25-12-2023				
Protoco	I: CPCB Guideline(NAAQMS	/36/20	12-13) & IS N	lethod 5182 Ser	ies			B
Samplin	g Location: : BLOOMING M	ILL NEA	R REHEATING	G FURNACE				
Field Me	eteorological Information	A. Te	mp.(°C): 25	R.H.(%): 76	W.C.: Cl	ear	<b>W.D.:</b> Ea	st - West
Sample	Receiving Date: 30-12-2023	1	<b>Testing Sta</b>	rted: 30-12-202	3 Т	esting En	ded: 02-01-202	24
			Te	st Results				
SI. No.	Parameters		Test Me	thod	Un	it	Result	Norms**
1.	Particulate Matter (PM10)	IS	5182 Part 23:2	2006 RA 2017	µg/r	n <sup>3</sup>	1097.67	-
2.	Sulphure Dioxide (SO <sub>2</sub> )	IS 5182 Part-02: 2001 RA 2017		µg/r	n <sup>3</sup>	25.47		

3.	Nitrogen Dioxi	tide (NO <sub>2</sub> ) IS 5182 Part-06: 2006 RA 2017		µg/m³	48.05		
4.	Carbon Monoxide (CO)		IEM/SOP/2022/01	mg/m3	BDL(MDL-1.8)		
1	1		End of Report				
Env. Co	ondition of Lab.	Laborator testing are	y is maintaining Temperature 27± 2 ea as per IS 196:1966(C).	2°C and Relative	Humidity 65±5 % i	n all	
Abbrev	riation	MDL: Mini	mum Detection Limit, BDL: Below D	Detection Limit		14	
Norms*	** is Specified						
Remark	(						

Tested By: Neema Kumari

ISO 9001:2015

Sample Drawn By: Arjun Besra & Team

Specific Contractual Notes: -         1. The laboratory accepts responsibility for content of this report.         2. This report shall not be reproduced except in full, without written approval of the MD.         3. This report is intended for only guidance and not for legal purpose or for advertisement.         4. Any complaint about this report should be communicated in writing within 7 days of its issue         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 gm.jemeco@gmail.com	Quality Checked by Authorized Signatory
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. Quality Manager Director
Corporate office - A-8, Modi Heights, OppAll India Radio Stati	ion, Ratu Road, Ranchi, Jharkhand - 834001



Ranchi~834002, Jharkhand, India Ph - 8407804254, 8407804251, Email - iem2012@rediffmail.com



Accredited by Jharkhand State Pollution Control Board, JSPCB

Certified by

ISO 9001:2015 (Quality Management System ) ISO 45001:2018 (Occupational Health & Safety Management System )

## **Test Report**

Discipline: Chemical Group: Atmo			ospheric Polluti	on	Sub-Gr	oup: Work Environment	
Report Issue Date: 02-01-2024			Test Report No.: RN-230714001FE10				
Sample ID: 231230AP05001			Sample Descr	iption: \	Work Zone A	\ir	
Challan No./P.O. No.: 4511012880			Challan No./	P.No. Da	ate: 13-07-2	023	
Issued to: M/s Tata Steel Limited (Formerly Tata Steel L Gamaharia Phase-V, A Seraikela-Kharsawan,	d ong Pro Adityapu Jharkha	ducts Lii r Industr ind-8321	mited) ial Area, 08		-		
Type of Industry: Iron & Steel			Customer Re	present	tative: Shwe	ta Kumari	
Sample Drawn by: IEM Team			Sampling Date: 26-12-2023				
Protocol: CPCB Guideline(NAAQMS)	/36/2012-	13) & IS N	lethod 5182 Ser	ies		4-21	
Sampling Location: DRI 1,2 & 3 NEAF	RPSB						
Field Meteorological Information A. Temp.(°C): 27			R.H.(%): 72	W.C.:	Sunny	W.D.: West - East	
Sample Receiving Date: 30-12-2023	T T	esting Sta	rted: 30-12-202	3	Testing En	ded: 02-01-2024	
		То	et Poculte				

SI. No.	Parameters	Test Method	Unit	Result	Norms**
1.	Suspended Particulate Matter (SPM)	IS 5182 Part 04	µg/m³	1428.58	
2.	Sulphure Dioxide (SO <sub>2</sub> )	IS 5182 Part-02: 2001 RA 2017	µg/m <sup>3</sup>	24.55	
3.	Nitrogen Dioxide (NO <sub>2</sub> )	IS 5182 Part-06: 2006 RA 2017	µg/m <sup>3</sup>	44.09	
4.	Carbon Monoxide (CO)	IEM/SOP/2022/01	mg/m3	BDL(MDL-1.8)	
	and the second	End of Donort			

	End of hepoil
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	
Remark	

Tested By: Neema Kumari

Specific Contractual Notes: -	Quality Checked by Aut	horized Signatory
<ol> <li>The laboratory accepts responsibility for content or rule report.</li> <li>This report shall not be reproduced except in full, without written approval of the MD.</li> <li>This report is intended for only guidance and not for legal purpose or for advertisement.</li> <li>Any complaint about this report should be communicated in writing within 7 days of its issue</li> <li>Total liability of Institute for Environmental Management will be limited to invoiced amount only.</li> <li>In case of feedback/ complaints, please send an email at om iemeco@amail.com</li> </ol>	Shrup of a land	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. Quality Manager	Director
Corporate office - A-8, Modi Heights, OppAll India Radio Stat Laboratory Site - H.No. – A-13, Saket Vihar, Near Sohra Ranchi-834002, Jharkham Ph - 8407804254, 8407804251, Email - ie	ion, Ratu Road, Ranchi, Jharkhand - 834 ai Bhawan, Harmu Housing Colony, d, India m2012@rediffmail.com	4001 UNUTY REAL OF COMPANY ISO 45001:2018



Jharkhand State Pollution Control Board, JSPCB

Certified by

ISO 9001:2015 (Quality Management System ) ISO 45001:2018 (Occupational Health & Safety Management System )

### **Test Report**

Discipline: Chemical	line: Chemical Group: Atmo			Sub-Gr	oup: Work Environment
Report Issue Date: 02-01-2024	Test Report No.: RN-230714001FE11				
Sample ID: 231230AP05002		Sample Desci	iption: \	Nork Zone A	lir
Challan No./P.O. No.: 4511012880		Challan No./	P.No. Da	te: 13-07-20	023
M/s Tata Steel Limited (Formerly Tata Steel L Gamaharia Phase-V, A Seraikela-Kharsawan,	d ong Products Li dityapur Industr Jharkhand-8321	mited) rial Area, 08			
Type of Industry: Iron & Steel		Customer Re	present	ative: Shwe	ta Kumari
Sample Drawn by: IEM Team		Sampling Date: 26-12-2023			
Protocol: CPCB Guideline(NAAQMS/	/36/2012-13) & IS N	Aethod 5182 Ser	ies		
Sampling Location: : DRI 4,5 NEAR R	MHS				
Field Meteorological Information	A. Temp.(°C): 27	R.H.(%): 72	W.C.:	Sunny	W.D.: West - East
Sample Receiving Date: 30-12-2023	Testing Sta	rted: 30-12-202	3	Testing En	ded: 02-01-2024
	Te			With the second s	

SI. No.	Parameters	Test Method	Unit	Result	Norms**
1.	Suspended Particulate Matter (SPM)	IS 5182 Part 04	µg/m <sup>3</sup>	1539.5	
2.	Sulphure Dioxide (SO <sub>2</sub> )	IS 5182 Part-02: 2001 RA 2017	µg/m <sup>3</sup>	23.21	
3.	Nitrogen Dioxide (NO <sub>2</sub> )	IS 5182 Part-06: 2006 RA 2017	µg/m <sup>3</sup>	48.76	
4.	Carbon Monoxide (CO)	IEM/SOP/2022/01	mg/m3	BDL(MDL-1.8)	
		End of Poport	No. 31 Sector 1 Constants	and the second	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	-	
Remark		

Tested By: Neema Kumari

Specific Contractual Notes: -         1. The laboratory accepts responsibility for content of this report.         2. This report shall not be reproduced except in full, without written approval of the MD.         3. This report is intended for only guidance and not for legal purpose or for advertisement.         4. Any complaint about this report should be communicated in writing within 7 days of its issue         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 gm.iemeco@gmail.com	Quality Checked by Authorized Signatory
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. Quality Manager
Corporate office - A-8, Modi Heights, OppAll India Radio Stat Laboratory Site - H.No. – A-13, Saket Vihar, Near Sohra Ranchi-834002, Jharkhand SO 9001:2015 Ph - 8407804254, 8407804251, Email - ie	ion, Ratu Road, Ranchi, Jharkhand - 834001 ai Bhawan, Harmu Housing Colony, d, India m2012@rediffmail.com





Jharkhand State Pollution Control Board, JSPCB

Certified by

ISO 9001:2015 (Quality Management System ) ISO 45001:2018 (Occupational Health & Safety Management System )

### **Test Report**

Discipline: Chemical	Group: Atm	ospheric Polluti	on	Sub-Gr	oup: Work Environment
Report Issue Date: 02-01-2024	Test Report N	lo.: RN-2	230714001F	E12	
Sample ID: 231230AP05003	Sample Desc	ription: \	Nork Zone A	Air	
Challan No./P.O. No.: 4511012880		Challan No./	P.No. Da	te: 13-07-2	023
M/s Tata Steel Limited (Formerly Tata Steel L Gamaharia Phase-V, A Seraikela-Kharsawan,	a ong Products Li Adityapur Industr Jharkhand-8321	mited) rial Area, 08			
Type of Industry: Iron & Steel		Customer Representative: Shweta Kumari			
Sample Drawn by: IEM Team		Sampling Date: 26-12-2023			
Protocol: CPCB Guideline(NAAQMS/	/36/2012-13) & IS N	Aethod 5182 Sei	ries		
Sampling Location: : DRI 4,5 NEAR E	SP HOPPER				
Field Meteorological Information	A. Temp.(°C): 27	R.H.(%): 72	W.C.:	Sunny	W.D.: West - East
Sample Receiving Date: 30-12-2023	Testing Sta	rted: 30-12-202	23	Testing En	ded: 02-01-2024
	Te	est Results		1. A	and the second secon

SI. No.	Parameters	Test Method	Unit	Result	Norms**
1.	Suspended Particulate Matter (SPM)	IS 5182 Part 04	µg/m <sup>3</sup>	1598.36	
2.	Sulphure Dioxide (SO <sub>2</sub> )	IS 5182 Part-02: 2001 RA 2017	µg/m <sup>3</sup>	29.16	
3.	Nitrogen Dioxide (NO <sub>2</sub> )	IS 5182 Part-06: 2006 RA 2017	µg/m <sup>3</sup>	61.82	
4.	Carbon Monoxide (CO)	IEM/SOP/2022/01	mg/m3	BDL(MDL-1.8)	

End	of Re	port
-----	-------	------

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	
Remark	

Tested By: Neema Kumari

Specific Contractual Notes: -	Quality Checked by Authorized Signatory
<ol> <li>The laboratory accepts responsibility for content of this report.</li> <li>This report shall not be reproduced except in full, without written approval of the MD.</li> <li>This report is intended for only guidance and not for legal purpose or for advertisement.</li> <li>Any complaint about this report should be communicated in writing within 7 days of its issue</li> <li>Total liability of Institute for Environmental Management will be limited to invoiced amount only.</li> <li>In case of feedback/ complaints, please send an email at <u>gm.iemeco@gmail.com</u></li> </ol>	(Shreya Sonal) (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. Quality Manager
Corporate office - A-8, Modi Heights, OppAll India Radio Stati Laboratory Site - H.No. – A-13, Saket Vihar, Near Sohrai Ranchi-834002, Jharkhand Ph - 8407804254, 8407804251, Email - ier	on, Ratu Road, Ranchi, Jharkhand - 834001 i Bhawan, Harmu Housing Colony, l, India n2012@rediffmail.com



Accredited by Jharkhand State Pollution Control Board, JSPCB

Certified by

ISO 9001:2015 (Quality Management System ) ISO 45001:2018 (Occupational Health & Safety Management System )

#### **Test Report**

Disciplin	e: Chemical	Group: Atm	ospheric Pollution Sub-Group: Work Environment				
Report Is	ssue Date: 02-01-2024		Test Report N	o.: RN-230714001FE13			
Sample I	e ID: 231230AP05004 Sample Descrip			iption: Work Zo	ne Air		
Challan I	No./P.O. No.: 4511012880		Challan No./ I	P.No. Date: 13-0	7-2023		
Issued to	o: M/s Tata Steel Limited (Formerly Tata Steel L Gamaharia Phase-V, A Seraikela-Kharsawan,	d ong Products Lin dityapur Industr Jharkhand-8321	mited) ial Area, 08				
Type of Industry: Iron & Steel			Customer Re	presentative: S	hweta Kumari		
Sample Drawn by: IEM Team			Sampling Date	e: 26-12-2023			
Protocol	: CPCB Guideline(NAAQMS)	/36/2012-13) & IS N	1ethod 5182 Ser	ies			
Sampling	g Location: : DRI 4,5 NEAR F	SB DISPATCH ROOM	N				
Field Me	eteorological Information	A. Temp.(°C): 27	R.H.(%): 72	W.C.: Sunny	<b>W.D.:</b> We	st - East	
Sample I	Receiving Date: 30-12-2023	Testing Sta	rted: 30-12-202	3 Testin	g Ended: 02-01-202	4	
		Te	est Results				
SI. No.	Parameters	Test Me	thod	Unit	Result	Norms**	
1.	Suspended Particulate Matter (SPM)	IS 5182 F	Part 04	µg/m <sup>3</sup>	1389.31		
2.	Sulphure Dioxide (SO <sub>2</sub> )	IS 5182 Part-02:	2001 RA 2017	µg/m <sup>3</sup>	23.57		
3.	Nitrogen Dioxide (NO <sub>2</sub> )	IS 5182 Part-06:	2006 RA 2017	µg/m <sup>3</sup>	51.19		
4.	Carbon Monoxide (CO)	IEM/SOP/2	2022/01	mg/m3	BDL(MDL-1.8)		
		En	d of Report			199	

Remark	
Norms** is Specified	-
Abbreviation	MDL: Minimum Detection Limit, BDL: Below Detection Limit
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).

Tested By: Neema Kumari

ISO 9001:2015

Sample Drawn By: Arjun Besra & Team

1. The laboratory accepts responsibility for content of this report.	
<ol> <li>This report shall not be reproduced except in full, without written approval of the MD.</li> <li>This report is intended for only guidance and not for legal purpose or for advertisement.</li> <li>Any complaint about this report should be communicated in writing within 7 days of its issue</li> <li>Total liability of Institute for Environmental Management will be limited to invoiced amount only.</li> <li>In case of feedback/ complaints, please send an email at <u>gm.iemeco@gmail.com</u></li> </ol>	(Shreya Sonal) (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. Quality Manager Ref Director



Ranchi-834002, Jharkhand, India Ph - 8407804254, 8407804251, Email - iem2012@rediffmail.com

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



Accredited by Jharkhand State Pollution Control Board, JSPCB

Certified by

ISO 9001:2015 (Quality Management System ) ISO 45001:2018 (Occupational Health & Safety Management System )

### **Test Report**

	ol 1 1		-	1		610		
Disciplin	ne: Chemical		Group: Atm	ospheric Polluti	on	Sub-G	roup: Work Env	ironment
Report I	Issue Date: 02-01-2024			Test Report No.: RN-230714001FE14				
Sample ID: 231230AP07001			Sample Descr	iption: V	Vork Zone	Air		
Challan No./P.O. No.: 4511012880			Challan No./	P.No. Da	te: 13-07-2	2023		
Issued 1	to:							
	M/s Tata Steel Limite (Formerly Tata Steel I Gamaharia Phase-V, / Seraikela-Kharsawan	d _ong F Aditya , Jharl	Products Lin pur Industr khand-8321	mited) ial Area, 08				
Type of	Industry: Iron & Steel		200	Customer Re	present	ative: Shw	eta Kumari	
Sample	Drawn by: IEM Team			Sampling Date: 27-12-2023				
Protoco	I: CPCB Guideline(NAAQMS	/36/20	12-13) & IS M	lethod 5182 Ser	ies			
Samplin	g Location: : SMS 1 & 2 NEA	AR EAF	PLATFORM					
Field Me	eteorological Information	A. Te	mp.(°C): 26	R.H.(%): 72	W.C.:	Sunny	W.D.: We	est - East
Sample	Receiving Date: 30-12-2023	3	Testing Sta	rted: 30-12-202	3	<b>Testing E</b>	nded: 02-01-20	24
			Te	st Results				
SI. No.	Parameters		Test Me	thod	L	Jnit	Result	Norms**
1.	Particulate Matter (PM <sub>10</sub> )	IS	5182 Part 23:2	2006 RA 2017	hi	g/m <sup>3</sup>	1228.47	
2.	Sulphure Dioxide (SO <sub>2</sub> )	IS	5182 Part-02: 3	2001 RA 2017	L	a/m <sup>3</sup>	21.24	

IS 5182 Part-06: 2006 RA 2017

IS 5182 Part-22

IEM/SOP/2022/01

testing area as per IS 196:1966(C).

----End of Report----

MDL: Minimum Detection Limit, BDL: Below Detection Limit

Laboratory is maintaining Temperature 27± 2°C and Relative Humidity 65±5 % in all

µg/m<sup>3</sup>

µg/m<sup>3</sup>

mg/m3

54.89

0.08

BDL(MDL-1.8)

----

----

----

Tested By: Neema Kumari

Env. Condition of Lab.

Norms\*\* is Specified

Abbreviation

Remark

3.

4.

5.

Sample Drawn By: Arjun Besra & Team

Nitrogen Dioxide (NO<sub>2</sub>)

Lead (Pb)

Carbon Monoxide (CO)

--

--

Specific Contractual Notes: -	Quality Checked by	Authorized Signatory
<ol> <li>The laboratory accepts responsibility for content of this report.</li> <li>This report shall not be reproduced except in full, without written approval of the MD.</li> <li>This report is intended for only guidance and not for legal purpose or for advertisement.</li> <li>Any complaint about this report should be communicated in writing within 7 days of its iss</li> <li>Total liability of Institute for Environmental Management will be limited to invoiced amount</li> <li>In case of feedback/ complaints, please send an email at <u>gm.iemeco@gmail.com</u></li> </ol>	sue it only. (Shreya Sonal)	(Dr. S. C. Jain)
On the basis of Quality Checked and Technical data verified by the Authorized signatory, the r is issued by the Director of the Organization.	Dy. Quality Manager	Director
Corporate office - A-8, Modi Heights, OppAll India Ra	dio Station, Ratu Road, Ranchi, Jharkh	and - 834001
Laboratory Site - H.No A-13, Saket Vihar, Nea Ranchi-834002, Jh ISO 9001:2015 Ph - 8407804254, 8407804251, Er	ar Sohrai Bhawan, Harmu Housing Co arkhand, India nail - iem2012@rediffmail.com	lony, 000000000000000000000000000000000000



Jharkhand State Pollution Control Board, JSPCB

Certified by

ISO 9001:2015 (Quality Management System )

ISO 45001:2018 (Occupational Health & Safety Management System )

### **Test Report**

Discipli	ne: Chemical	Group: Atm	ospheric Polluti	on	Sub-G	roup: Work Env	ironment	
Report	Issue Date: 02-01-2024		Test Report No.: RN-230714001FE15					
Sample	ID: 231230AP07002	Sample Descr	ription: W	ork Zone	Air			
Challan	No./P.O. No.: 4511012880	: 4511012880 Challan No./ P.No. Date: 13-07-2023						
Issued	to: M/s Tata Steel Limite (Formerly Tata Steel L Gamaharia Phase-V, A Seraikela-Kharsawan,	d Long Products Li Adityapur Industr , Jharkhand-8321	mited) rial Area, 08					
Type of	Industry: Iron & Steel	199	Customer Re	presenta	tive: Shw	veta Kumari		
Sample	Drawn by: IEM Team		Sampling Dat	e: 27-12-2	2023			
Protoco	I: CPCB Guideline(NAAQMS	/36/2012-13) & IS N	Aethod 5182 Ser	ries				
Samplin	ng Location: : SMS-1 & 2 NE	AR GROUND HOPPE	R	-		1		
Field M	eteorological Information	A. Temp.(°C): 26	R.H.(%): 72	W.C.: 5	unny	W.D.: We	W.D.: West - East	
Sample	Receiving Date: 30-12-2023	3 Testing Sta	rted: 30-12-202	3	Testing E	nded: 02-01-202	24	
		Te	est Results				No. 10 - 20 - 10 - 10 - 10 - 10 - 10 - 10 -	
SI. No.	Parameters	Test Me	ethod	U	nit	Result	Norms**	
1	Particulate Matter (PM)	IS 5182 Part 23	2006 RA 2017	110	/m <sup>3</sup>	1477 28		

1.	Particulate Matter (PM10)	IS 5182 Part 23:2006 RA 2017	µg/m <sup>3</sup>	1477.28		
2.	Sulphure Dioxide (SO <sub>2</sub> )	IS 5182 Part-02: 2001 RA 2017	µg/m <sup>3</sup>	21.57		
3.	Nitrogen Dioxide (NO <sub>2</sub> )	IS 5182 Part-06: 2006 RA 2017	µg/m <sup>3</sup>	46.81	-	
4.	Lead (Pb)	IS 5182 Part-22	µg/m <sup>3</sup>	0.08	-	
5.	Carbon Monoxide (CO)	IEM/SOP/2022/01	mg/m3	BDL(MDL-1.8)		
	and a difference of the standard of the second standard	End of Report		-		

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	
Remark	

Tested By: Neema Kumari

ISO 9001:2015

Specific Contractual Notes: -	Quality Checked by Authorized Signatory
<ol> <li>The laboratory accepts responsibility for content of this report.</li> <li>This report shall not be reproduced except in full, without written approval of the MD.</li> <li>This report is intended for only guidance and not for legal purpose or for advertisement.</li> <li>Any complaint about this report should be communicated in writing within 7 days of its issue</li> <li>Total liability of Institute for Environmental Management will be limited to invoiced amount only.</li> <li>In case of feedback/ complaints, please send an email at om jemeco@omail.com</li> </ol>	Sharpen (Shreya Sonal)
On the basis of Quality Checked and Technical data verified by the Authorized signatory, the report s issued by the Director of the Organization.	Dy. Quality Manager
s issued by the Director of the Organization.	tion Ratu Road Ranchi Ibarkhand - 834001





Accredited by Jharkhand State Pollution Control Board, JSPCB

Certified by

ISO 9001:2015 (Quality Management System ) ISO 45001:2018 (Occupational Health & Safety Management System )

## Test Report

Discipline: Chemical	Group: Atm	ospheric Pollutio	on	Sub-Grou	<b>ip:</b> Work Env	ironment
Report Issue Date: 02-01-2024	Test Report No.: RN-230714001FE16					
Sample ID: 231230AP07003		Sample Descr	iption: W	/ork Zone Air		
Challan No./P.O. No.: 4511012880 Challan No./ P.No. Date: 13-07-2023						
Issued to: M/s Tata Steel Limited (Formerly Tata Steel Lo Gamaharia Phase-V, A Seraikela-Kharsawan, J	ong Products Lir dityapur Industr Jharkhand-8321	mited) ial Area, 08				
Type of Industry: Iron & Steel		Customer Rep	presentat	ive: Shweta	Kumari	
Sample Drawn by: IEM Team		Sampling Dat	e: 27-12-	2023		
Protocol: CPCB Guideline(NAAQMS/3	36/2012-13) & IS N	lethod 5182 Ser	ies			1
Sampling Location: SMS-3 NEAR GRO	OUND HOPPER					
Field Meteorological Information	A. Temp.(°C): 26	R.H.(%): 72	W.C.: 5	W.C.: Sunny W.D.: West - Eas		est - East
Sample Receiving Date: 30-12-2023	Testing Sta	rted: 30-12-202	3	<b>Testing End</b>	ed: 02-01-20	24
	Te	st Results	a general Victoria e Alto			-
SI. No. Parameters	Test Method Unit Result				Norms**	

SI. NO.	Farameters	restimetriou	Unit	Result	Nonins
1.	Particulate Matter (PM10)	IS 5182 Part 23:2006 RA 2017	µg/m <sup>3</sup>	1586.17	
2.	Sulphure Dioxide (SO <sub>2</sub> )	IS 5182 Part-02: 2001 RA 2017	µg/m <sup>3</sup>	27.24	
3.	Nitrogen Dioxide (NO <sub>2</sub> )	IS 5182 Part-06: 2006 RA 2017	µg/m <sup>3</sup>	53.81	
4.	Lead (Pb)	IS 5182 Part-22	µg/m <sup>3</sup>	0.09	
5.	Carbon Monoxide (CO)	IEM/SOP/2022/01	mg/m3	BDL(MDL-1.8)	
		End of Report	and the second		

	End of hepoirt					
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						
Remark						

Tested By: Neema Kumari

Sample Drawn By: Arjun Besra & Team

Specific Contractual Notes: -	Quality Checked by Authorized Signatory
<ol> <li>The laboratory accepts responsibility for content of this report.</li> <li>This report shall not be reproduced except in full, without written approval of the MD.</li> <li>This report is intended for only guidance and not for legal purpose or for advertisement.</li> <li>Any complaint about this report should be communicated in writing within 7 days of its issue</li> <li>Total liability of Institute for Environmental Management will be limited to invoiced amount only.</li> <li>In case of feedback/ complaints, please send an email at <u>gm.iemeco@gmail.com</u></li> </ol>	(Shreya Sonal)
On the basis of Quality Checked and Technical data verified by the Authorized signatory, the report s issued by the Director of the Organization.	Dy. Quality Manager * Render Director



prporate 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 - 8407804254, 8407804251, Email - iem2012@rediffmail.com





# Institute for Environmental Management Accredited by Jharkhand State Pollution Control Board, JSPCB

Certified by

ISO 9001:2015 (Quality Management System )

ISO 45001:2018 (Occupational Health & Safety Management System )

### **Test Report**

Discipline	e: Chemical	Group: Atm	ospheric Pollutio	Pollution Sub-Group: Work Environment		
Report Issue Date: 02-01-2024 Test Report No.: RN-230714001FE17						
Sample I	D: 231230AP07004		Sample Descr	iption: Work Zon	e Air	
Challan N	No./P.O. No.: 4511012880		Challan No./	P.No. Date: 13-07	-2023	
issued to	o: M/s Tata Steel Limite (Formerly Tata Steel L Gamaharia Phase-V, A Seraikela-Kharsawan,	d ong Products Lin Adityapur Industr Jharkhand-8321	mited) ial Area, 08	S. S. S.	Ca	
Type of I	ndustry: Iron & Steel		Customer Rep	presentative: Shv	veta Kumari	
Sample D	Drawn by: IEM Team		Sampling Dat	e: 27-12-2023		
Protocol:	: CPCB Guideline(NAAQMS,	/36/2012-13) & IS N	lethod 5182 Ser	ies		
Sampling	g Location: SMS-3 EAF PLAT	FORM		-		
Field Met	teorological Information	A. Temp.(°C): 26	<b>R.H.(%):</b> 72	W.C.: Sunny	W.D.: We	st - East
Sample R	Receiving Date: 30-12-2023	Testing Sta	rted: 30-12-202	3 Testing	Ended: 02-01-202	4
		Te	st Results			
SI. No.	Parameters	Test Me	thod	Unit	Result	Norms**
1.	Particulate Matter (PM10)	IS 5182 Part 23:2	2006 RA 2017	µg/m <sup>3</sup>	1279.21	
2.	Sulphure Dioxide (SO <sub>2</sub> )	IS 5182 Part-02: 1	2001 RA 2017	µg/m <sup>3</sup>	24.98	
3.	Nitrogen Dioxide (NO <sub>2</sub> )	IS 5182 Part-06:	2006 RA 2017	µg/m <sup>3</sup>	48.03	
4.	Lead (Pb)	IS 5182 F	art-22	µg/m <sup>3</sup>	0.09	<u>- 10</u>
5.	Carbon Monoxide (CO)	IEM/SOP/2	2022/01	mg/m3	BDL(MDL-1.8)	
		En	of Report			

Abbreviation	MDL: Minimum Detection Limit, BDL: Below Detection Limit
Norms** is Specified	

Remark

Tested By: Neema Kumari

Sample Drawn By: Arjun Besra & Team

---

Specific Contractual Notes: -	Quality Checked by Authorized Signatory
<ol> <li>The laboratory accepts responsibility for content of this report.</li> <li>This report shall not be reproduced except in full, without written approval of the MD.</li> <li>This report is intended for only guidance and not for legal purpose or for advertisement.</li> <li>Any complaint about this report should be communicated in writing within 7 days of its issue</li> <li>Total liability of Institute for Environmental Management will be limited to invoiced amount only.</li> <li>In case of feedback/ complaints, please send an email at am ismeco@mmail.com</li> </ol>	Shreys Sonalt
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. Quality Manager, Director
Corporate office - A-8, Modi Heights, OppAll India Radio Sta	tion, Ratu Road, Ranchi, Jharkhand - 834001
Laboratory Site - H.No. – A-13, Saket Vihar, Near Sohr Ranchi-834002, Jharkhan	ai Bhawan, Harmu Housing Colony, d, India ISO 45001:201

Ph - 8407804254, 8407804251, Email - iem2012@rediffmail.com



# Institute for Environmental Management Accredited by Jharkhand State Pollution Control Board, JSPCB

Certified by

ISO 9001:2015 (Quality Management System ) ISO 45001:2018 (Occupational Health & Safety Management System )

# **Test Report**

Discipline: Chemical Group: Atmospheric Pollution Sub-Group: Work Environm						ironment		
Report Issue Date: 02-01-2024				Test Report No.: RN-230714001FE18				
Sample	ID: 231230AP10001			Sample Descr	iption: Work	Zone Air		
Challan	No./P.O. No.: 4511012880			Challan No./ I	P.No. Date: 1	13-07-2023		
Issued	to: M/s Tata Steel Limite (Formerly Tata Steel L Gamaharia Phase-V, A Seraikela-Kharsawan,	d .ong P Adityap Jhark	roducts Lir our Industri hand-8321	nited) ial Area, 08				
Type of	Industry: Iron & Steel		- 5	Customer Re	presentativ	e: Shweta Ku	umari	
Sample	Drawn by: IEM Team			Sampling Date	e: 28-12-202	3		
Protoco	I: CPCB Guideline(NAAQMS,	/36/201	12-13) & IS M	lethod 5182 Ser	ies			Character State
Samplin	g Location: COKE OVEN NEA	AR DISP	ATCH AREA	·	A			<u>.</u>
Field M	eteorological Information	A. Ter	mp.(°C): 25	R.H.(%): 76	W.C.: Sun	ny	W.D.: SV	V - NE
Sample	Receiving Date: 30-12-2023	1	<b>Testing Sta</b>	rted: 30-12-202	3 Tes	sting Ended:	02-01-20	24
			Те	st Results				
SI. No.	Parameters	28	Test Me	thod	Unit	F	lesult	Norms**
1.	Particulate Matter (PM <sub>10</sub> )	IS 5182 Part 23:2006 RA 2017			µg/m <sup>3</sup>	1	785.16	

2.	2. Sulphure Dioxide (SO <sub>2</sub> ) IS 518		IS 5182 Part-02: 2001 RA 2017	µg/m <sup>3</sup>	27.05	
3.	Nitrogen Dioxi	Nitrogen Dioxide (NO <sub>2</sub> ) IS 5182 Part-06: 2006 RA 2017 µg/r		µg/m³	49.06	
4.	4. Carbon Monoxide (CO)		IEM/SOP/2022/01	mg/m3	BDL(MDL-1.8)	<u></u>
5	1		End of Report			3
Env. Co	ondition of Lab.	Laborator testing ar	y is maintaining Temperature 27± 2 ea as per IS 196:1966(C).	°C and Relative	e Humidity 65±5 % i	n all

Env. Condition of Lab.	testing area as per IS 196:1966(C).
Abbreviation	MDL: Minimum Detection Limit, BDL: Below Detection Limit
Norms** is Specified	-
Remark	-

Tested By: Neema Kumari

Specific Contractual Notes: -	Quality Checked by	Authorized Signatory
<ol> <li>The laboratory accepts responsibility for content of this report.</li> <li>This report shall not be reproduced except in full, without written approval of the MD.</li> <li>This report is intended for only guidance and not for legal purpose or for advertisement.</li> <li>Any complaint about this report should be communicated in writing within 7 days of its issue</li> <li>Total liability of Institute for Environmental Management will be limited to invoiced amount only.</li> <li>In case of feedback/ complaints, please send an email at <u>gm.iemeco@gmail.com</u></li> </ol>	Shryeson (Shreya Sonal)	(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. Quality Manager	Director
Corporate office - A-8, Modi Heights, OppAll India Radio Stat	ion, Ratu Road, Ranchi, Jharkh	nand - 834001
Laboratory Site - H.No A-13, Saket Vihar, Near Sohra Ranchi-834002, Jharkhan ISO 9001:2015 Ph - 8407804254, 8407804251, Email - ie	ai Bhawan, Harmu Housing Co d, India m2012@rediffmail.com	blony, outre season of the sea



Jharkhand State Pollution Control Board, JSPCB

Certified by

ISO 9001:2015 (Quality Management System ) ISO 45001:2018 (Occupational Health & Safety Management System )

### **Test Report**

Discipline: Chemical		Group: Atm	ospheric Pollutio	on	Sub-Gr	oup: Work Environment
Report Issue Date: 02-01-2024			Test Report N	o.: RN-2	230714001F	E19
Sample ID: 231230AP10002		Sample Description: Work Zone Air				
Challan No./P.O. No.: 4511012880 Challan No./ P.N		P.No. Da	. Date: 13-07-2023			
M/s Tata Steel Limited (Formerly Tata Steel L Gamaharia Phase-V, A Seraikela-Kharsawan,	d ong P Adityaj Jhark	roducts Lin pur Industr hand-8321	mited) ial Area, 08		r.	
Type of Industry: Iron & Steel			Customer Re	present	ative: Shwe	eta Kumari
Sample Drawn by: IEM Team			Sampling Dat	e: 28-12	-2023	
Protocol: CPCB Guideline(NAAQMS,	/36/201	12-13) & IS N	lethod 5182 Ser	ies		
Sampling Location: COKE OVEN NEA	AR OFFI	CE				
Field Meteorological Information	A. Te	mp.(°C): 25	R.H.(%): 76	W.C.:	Sunny	W.D.: SW - NE
Sample Receiving Date: 30-12-2023	5	<b>Testing Sta</b>	rted: 30-12-202	3	Testing En	ded: 02-01-2024
		Te	st Results			

SI. No.	Parameters	Test Method	Unit	Result	Norms**
1.	Particulate Matter (PM <sub>10</sub> )	IS 5182 Part 23:2006 RA 2017	µg/m <sup>3</sup>	1236.78	
2.	Sulphure Dioxide (SO <sub>2</sub> )	IS 5182 Part-02: 2001 RA 2017	µg/m <sup>3</sup>	33.83	
3.	Nitrogen Dioxide (NO2)	IS 5182 Part-06: 2006 RA 2017	µg/m <sup>3</sup>	64.82	
4.	Carbon Monoxide (CO)	IEM/SOP/2022/01	mg/m3	BDL(MDL-1.8)	

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	
Remark	

Tested By: Neema Kumari

Sample Drawn By: Arjun Besra & Team

Specific Contractual Notes: -	Quality Checked by Come Authorized Signatory
<ol> <li>The laboratory accepts responsibility for content of this report.</li> <li>This report shall not be reproduced except in full, without written approval of the MD.</li> <li>This report is intended for only guidance and not for legal purpose or for advertisement.</li> <li>Any complaint about this report should be communicated in writing within 7 days of its issue</li> <li>Total liability of Institute for Environmental Management will be limited to invoiced amount only.</li> <li>In case of feedback/ complaints, please send an email at gm.iemeco@gmail.com</li> </ol>	(Shreya Sonal) (Dr/S. C. Jain)
In the basis of Quality Checked and Technical data verified by the Authorized signatory, the report is issued by the Director of the Organization.	Dy. Quality Manager + Annota Director



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




# Institute for Environmental Management Accredited by Jharkhand State Pollution Control Board, JSPCB

Certified by

ISO 9001:2015 (Quality Management System ) ISO 45001:2018 (Occupational Health & Safety Management System )

#### **Test Report**

Disciplin	ne: Chemical		Group: Atm	ospheric Pollutio	on	Sub-Group: Work Environment		
Report Issue Date: 02-01-2024			Test Report No.: RN-230714001FE20					
Sample	ID: 231230AP10003			Sample Descr	iption: Wo	rk Zone Ai	r	
Challan	No./P.O. No.: 4511012880			Challan No./	P.No. Date:	13-07-20	23	
Issued t	to: M/s Tata Steel Limite (Formerly Tata Steel L Gamaharia Phase-V, A Seraikela-Kharsawan,	d .ong P Adityaj Jhark	roducts Lin our Industr hand-8321	mited) ial Area, 08	1	₹°°		
Type of	Industry: Iron & Steel			Customer Re	presentati	ve: Shwet	a Kumari	
Sample	Drawn by: IEM Team			Sampling Date: 28-12-2023				
Protoco	I: CPCB Guideline(NAAQMS	/36/20:	12-13) & IS N	lethod 5182 Ser	ies			
Samplin	g Location: 30 MW NEAR C	OAL CR	USHER AREA					
Field Me	eteorological Information	A. Te	mp.(°C): 25	R.H.(%): 76	W.C.: Su	nny	W.D.: SV	V - NE
Sample Receiving Date: 30-12-2023 Testing Sta			<b>Testing Sta</b>	rted: 30-12-202	3 T	esting End	ded: 02-01-202	24
			Те	st Results				
SI. No.	Parameters	180	Test Me	thod	Uni	t	Result	Norms**
1.	Particulate Matter (PM10)	IS	5182 Part 23:2	2006 RA 2017	µg/n	1 <sup>3</sup>	1629.54	10 to 10
2.	Sulphure Dioxide (SO <sub>2</sub> )	IS	5182 Part-02: 2	2001 RA 2017	µg/n	n <sup>3</sup>	25.54	

3.	Nitrogen Dioxide (NO2)           Carbon Monoxide (CO)		IS 5182 Part-06: 2006 RA 2017	µg/m³	51.29				
4.			IEM/SOP/2022/01	mg/m3	BDL(MDL-1.8)				
-			End of Report						
Env. Condition of Lab.		Laboratory testing are	Laboratory is maintaining Temperature 27± 2°C and Relative Humidity 65±5 % in all testing area as per IS 196:1966(C).						
Abbreviation 1		MDL: Minimum Detection Limit, BDL: Below Detection Limit							
Norms** is Specified									
Remark						Ch.			

Tested By: Neema Kumari

Sample Drawn By: Arjun Besra & Team

Specific Contractual Notes: -	Quality Checked by Authorized Signatory
<ol> <li>The laboratory accepts responsibility for content of this report.</li> <li>This report shall not be reproduced except in full, without written approval of the MD.</li> <li>This report is intended for only guidance and not for legal purpose or for advertisement.</li> <li>Any complaint about this report should be communicated in writing within 7 days of its is</li> <li>Total liability of Institute for Environmental Management will be limited to invoiced amou</li> <li>In case of feedback/ complaints, please send an email at <u>gm.iemeco@gmail.com</u></li> </ol>	sue nt only. (Shreya Sonal) (Dr. S. C. Jain)
On the basis of Quality Checked and Technical data verified by the Authorized signatory, the is issued by the Director of the Organization.	report Dy. Quality Manager Director
Corporate office - A-8, Modi Heights, OppAll India Ra	dio Station, Ratu Road, Ranchi, Jharkhand - 834001
Laboratory Site - H.No A-13, Saket Vihar, Nea Ranchi-834002, Jh SO 9001:2015 Ph - 8407804254, 8407804251, Er	arkhand, India nail - iem2012@rediffmail.com



### **Institute for Environmental Management** Accredited by

Jharkhand State Pollution Control Board, JSPCB

Certified by

ISO 9001:2015 (Quality Management System )

ISO 45001:2018 (Occupational Health & Safety Management System )

#### **Test Report**

Disciplin	ne: Chemical	Group: Atn	nospheric Pollutio	n S	ub-Group:	Work Env	ironment
Report I	ssue Date: 02-01-2024	Test Report No.: RN-230714001FE21					
Sample	ID: 231230AP12001		Sample Descri	ption: Work 2	Zone Air		
Challan	No./P.O. No.: 4511012880		Challan No./ P	.No. Date: 13	3-07-2023		
ISSUEU	M/s Tata Steel Limited (Formerly Tata Steel L Gamaharia Phase-V, A Seraikela-Kharsawan,	d ong Products L dityapur Indust Jharkhand-832′	imited) rial Area, 108				
Type of	Industry: Iron & Steel		Customer Rep	presentative	Shweta K	umari	
Sample Drawn by: IEM Team			Sampling Date: 29-12-2023				
Protoco	I: CPCB Guideline(NAAQMS/	'36/2012-13) & IS I	Method 5182 Serie	es			
Samplin	g Location: : SBM NEAR QA	BUILDING UNIT-1					
Field Me	eteorological Information	A. Temp.(°C): 26	<b>R.H.</b> (%): 82	W.C.: Clear		W.D.: No	orth to South
Sample	Receiving Date: 30-12-2023	Testing Sta	arted: 30-12-2023	Test	ing Ended	: 02-01-202	24
		T	est Results				
SI. No.	Parameters	Test M	ethod	Unit		Result	Norms**
1.	Particulate Matter (PM10)	IS 5182 Part 23:	2006 RA 2017	µg/m <sup>3</sup>		247.69	
2.	Sulphure Dioxide (SO <sub>2</sub> )	IS 5182 Part-02:	2001 RA 2017	µg/m <sup>3</sup>		25.72	
3.	Nitrogen Dioxide (NO <sub>2</sub> )	IS 5182 Part-06:	2006 RA 2017	µg/m <sup>3</sup>		45.31	

End of Report					
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	-				
Remark					

mg/m3

BDL(MDL-1.8)

IEM/SOP/2022/01

Tested By: Neema Kumari

4.

Sample Drawn By: Arjun Besra & Team

Carbon Monoxide (CO)

Specific Contractual Notes: -	Quality Checked by Authorized Signatory				
<ol> <li>The laboratory accepts responsibility for content of this report.</li> <li>This report shall not be reproduced except in full, without written approval of the MD.</li> <li>This report is intended for only guidance and not for legal purpose or for advertisement.</li> <li>Any complaint about this report should be communicated in writing within 7 days of its issue</li> <li>Total liability of Institute for Environmental Management will be limited to invoiced amount only.</li> <li>In case of feedback/ complaints, please send an email at <u>gm.iemeco@gmail.com</u></li> </ol>	Shoryson (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. Quality Manager				
Corporate office - A-8, Modi Heights, OppAll India Radio Sta Laboratory Site - H.No. – A-13, Saket Vihar, Near Sohr Ranchi-834002, Jharkhar S0 9001:2015 Ph - 8407804254, 8407804251, Email - id	tion, Ratu Road, Ranchi, Jharkhand - 834001 ai Bhawan, Harmu Housing Colony, ad, India em2012@rediffmail.com				



# Institute for Environmental Management Accredited by Jharkhand State Pollution Control Board, JSPCB

Certified by

ISO 9001:2015 (Quality Management System ) ISO 45001:2018 (Occupational Health & Safety Management System )

#### **Test Report**

Disciplin	ne: Chemical		Group: Atm	ospheric Pollutic	n	Sub-	Group: Work Er	vironment
Report Issue Date: 02-01-2024 Test Report				Test Report N	o.: RN-23	071400	)1FE22	
Sample ID: 231230AP12002				Sample Descri	ption: W	ork Zon	e Air	
Challan	No./P.O. No.: 4511012880		_	Challan No./ F	.No. Date	: 13-07	7-2023	
Issued	to: M/s Tata Steel Limite (Formerly Tata Steel I Gamaharia Phase-V, / Seraikela-Kharsawan	d ₋ong l Aditya , Jhar	Products Lin apur Industr khand-8321	mited) ial Area, 08				
Type of	Industry: Iron & Steel		1.000	Customer Re	presentat	ive: Sh	weta Kumari	
Sample	Drawn by: IEM Team			Sampling Date	: 29-12-2	023		
Protoco	I: CPCB Guideline(NAAQMS	/36/20	012-13) & IS N	1ethod 5182 Seri	es			-
Samplin	g Location: : SBWM NEAR F	URNA	CE AREA UNIT	-1				
Field Me	eteorological Information	A. Te	emp.(°C): 26	R.H.(%): 82	W.C.: C	lear	W.D.: N	orth to Sout
Sample Receiving Date: 30-12-2023 Testing Star			rted: 30-12-2023	3 .	Testing	Ended: 02-01-2	024	
			Te	est Results				
SI. No.	Parameters		Test Method		Ur	nit	Result	Norms
1.	Particulate Matter (PM10)	IS 5182 Part 23:2006 RA 2017		µg/	m <sup>3</sup>	1229.65		
2.	Sulphure Dioxide (SO <sub>2</sub> )	IS 5182 Part-02: 2001 RA		2001 RA 2017	µg/	µg/m <sup>3</sup>		
3.	Nitrogen Dioxide (NO <sub>2</sub> )	IS	IS 5182 Part-06: 2006 RA 201		μg/	m <sup>3</sup>	49.04	
1	Carbon Monoxide (CO)	IEM/SOP/2022/01			ma	m3	BDI (MDI -1 8)	

End o	of Re	por	t
-------	-------	-----	---

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						
Remark						

Tested By: Neema Kumari

Sample Drawn By: Arjun Besra & Team

Specific Contractual Notes: -         1. The laboratory accepts responsibility for content of this report.         2. This report shall not be reproduced except in full, without written approval of the MD.         3. This report is intended for only guidance and not for legal purpose or for advertisement.         4. Any complaint about this report should be communicated in writing within 7 days of its issue         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 <u>gm.iemeco@gmail.com</u> On the basis of Quality Checked and Technical data verified by the Authorized signatory, the report	Quality Checked by Con Authorized Signatory
is issued by the Director of the Organization. Corporate office - A-8, Modi Heights, OppAll India Radio Sta Laboratory Site - H.No. – A-13, Saket Vihar, Near Sohr Ranchi-834002, Jharkhar Ph - 8407804254, 8407804251, Email - in	tion, Ratu Road, Ranchi, Jharkhand - 834001 rai Bhawan, Harmu Housing Colony, nd, India em2012@rediffmail.com





## **Institute for Environmental Management**

Accredited by Jharkhand State Pollution Control Board, JSPCB

Certified by

ISO 9001:2015 (Quality Management System ) ISO 45001:2018 (Occupational Health & Safety Management System )

#### **Test Report**

Disciplin	ne: Chemical	Group: Atmo	ospheric Pollutio	n	Sub-Group: Work Environment		
Report Issue Date: 02-01-2024			Test Report No.: RN-230714001FE23				
Sample	ID: 231230AP12003	Sample Descri	ption: Work	Zone Air			
Challan	No./P.O. No.: 4511012880		Challan No./ P	.No. Date: 1	13-07-2023		
Issued 1	o: M/s Tata Steel Limited (Formerly Tata Steel L Gamaharia Phase-V, A Seraikela-Kharsawan,	l ong Products Lin dityapur Industri Jharkhand-83210	nited) al Area, )8				
Type of	Industry: Iron & Steel		Customer Rep	oresentativ	e: Shweta K	umari	
Sample	Drawn by: IEM Team	Look	Sampling Date: 29-12-2023				
Protoco	I: CPCB Guideline(NAAQMS/	36/2012-13) & IS M	ethod 5182 Serie	es			
Samplin	g Location: : SBWM NEAR Q	UALITY LAB UNIT-2					
Field Me	eteorological Information	A. Temp.(°C): 26	R.H.(%): 82	W.C.: Clea	r	W.D.: No	orth to South
Sample	Receiving Date: 30-12-2023	Testing Star	<b>ted:</b> 30-12-2023	Tes	sting Ended	02-01-20	24
		Te	st Results	and the			
SI. No.	Parameters	Test Met	hod	Unit	1	Result	Norms**
1.	Particulate Matter (PM10)	IS 5182 Part 23:2	006 RA 2017	µg/m <sup>3</sup>		946.28	
2.	Sulphure Dioxide (SO <sub>2</sub> )	IS 5182 Part-02: 2	001 RA 2017	µg/m <sup>3</sup>	100	27.61	-
3.	Nitrogen Dioxide (NO <sub>2</sub> )	IS 5182 Part-06: 2	006 RA 2017	µg/m <sup>3</sup>		55.28	

	End of Report
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	- 1
Remark	

IEM/SOP/2022/01

. . .

BDL(MDL-1.8)

mg/m3

Tested By: Neema Kumari

4.

Sample Drawn By: Arjun Besra & Team

Carbon Monoxide (CO)

Specific Contractual Notes: -         1. The laboratory accepts responsibility for content of this report.         2. This report shall not be reproduced except in full, without written approval of the MD.         3. This report is intended for only guidance and not for legal purpose or for advertisement.         4. Any complaint about this report should be communicated in writing within 7 days of its issue         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 gm.iemeco@gmail.com	Quality Checked by Authorized Signatory Sharyes on all (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. Quality Manager * Provide Director
Corporate office - A-8, Modi Heights, OppAll India Radio Stat Laboratory Site - H.No. – A-13, Saket Vihar, Near Sohra Ranchi-834002, Jharkhan	ion, Ratu Road, Ranchi, Jharkhand - 834001 ai Bhawan, Harmu Housing Colony, d, India



Annexure - 6



Certified By

#### Institute for Environmental Management Accredited by Jharkhand State Pollution Control Board, JSPCB

by Jharkhand State Pollution Control Board, JSPCB National Accreditation Board for Testing Laboratory (NABL) vide TC-11515 ISO 9001:2015 (QMS) & ISO 45001:2018



#### **Test Report**

ULR	No.:	Т	С	1	1	5	1	5	2	3	0	0	0	0	0	1	6	2	7
Discip	oline: Chemi	cal					Grou	ı <b>p:</b> Wa	ter				Sub	Group	: Gro	und W	ater		
Repo	rt Issue Date	: 30-1	1-2023	3						Tes	t Repo	ort No	: RN-2	30714	001GV	V1			
Samp	le ID: 23112	7WA0	1001 8	& 231	127RC01	001				San	nple D	escrip	tion: G	round	Wate	r - Bor	e well		
Challa	an No./P.O.	No.: 45	51101	2880						Cha	illan N	lo./P.N	lo. Dat	e: 13-0	07-202	23			
lssue	ed to: M/s Tai (Forme Gamah Seraike	ta Ste rly Ta aria F ela-Kh	el Lin Ita St Phase Iarsav	nited eel L e-V, A wan,	ong Pro dityapi Jharkh	oduo ur In and	cts) dustri -83210	al Are	ea,	5		6	ę				e.	2	
Туре	of Industry:	Iron &	Steel							Cus	tome	r Repr	esentat	tive: S	nweta	Kuma	ri		
Samp	le Drawn by	IEM	Team			2			-	San	npling	Date:	23-11-	2023					
Proto	col: CPCB Gu	uidelin	e& IS	Metho	od 3025	Part	-01	- 12		-		and in					- are		
Samp	ling Location	n: BAG	ANPD	DA			1.5				1					-			
Samp	le Receiving	date:	27-11	-2023			Testing	starte	ed: 27-1	1-202	23		Testi	ng End	led: 30	0-11-20	023		
				_				T	est Result								1		
SI.	Testeo	l Parar	neters	S	Unit		Me	thod I	No.	-		No	rms**				Res	ults	
NO.	-	1			-	-	10.000	- 10		A	ccept	able	Per	missib	le			70	
1.	PH Value						IS 302	5 (Par	t - 11)		6.5 to	8.5	NO R	elaxat	ion		6.	12	
2.	Conductivi	ty			µs/cm	-	15 302	5 (Part	(-14)								6:	3/	
3.	Turbidity				NIU		15 302	5 (Par	t - 10)		1			5			0	.5	
4.	Colour				Hazen	+	15 302	5 (Par	t - 04)	+	5			15				5	
5.	Odour	1 10					15 302	5 (Par	t - 05)	F	Agreea	ible	Ag	reeabl	e		Agre	eable	
6.	Total Disso	lved S	olids		mg/l	-	15 302	5 (Par	t - 16)		500	)		2000			4.	21	
7.	Calcium (a	s Ca)			mg/l	-	IS 302	5 (Par	t - 40)		/5			200			48	3.9	-
8.	Total Alkal	inity (a	is CaC	03)	mg/l	-	IS 302	5 (Par	t - 23)		200		-	600			18	36	
9.	Total Hard	ness (a	is CaC	03)	mg/l	-	IS 302	25 (Par	t -21)	-	200		-	600			10	54	
10.	Chloride (a	is CI)			mg/l	-	IS 302	5 (Par	t - 32)	-	250			1000		-	25	5.4	_
11.	Sulphate (a	as $SO_4$ )			mg/l	-	IS 302	5 (Par	t - 24)	-	200	<u> </u>	-	400			42	.67	
12.	Magnesiur	n (as N	(lg)	-	mg/l	A	PHA 35	00 Mg	B. 2017	-	30		-	100			10	.21	
13.	Copper		in the	1.1.1.2	mg/l	1	APHA	3111 E	3.2017	_	0.05	5		1.5		B	DL (MD	L - 0.0	)2)
14.	Chromium				mg/l	-	APHA	3111 E	3.2017	_	0.05	5	No R	elaxat	ion	B	DL (MD	-0.0	)4)
15.	Lead				mg/l	-	APHA	3111 E	3.2017	-	0.01	L	No R	elaxat	ion	B	DL (MD	-0.0	)7)
16.	Zinc				mg/l		APHA	3111 E	8.2017	-	5	-	_	15	-		1	.4	
17.	Nickel				mg/l		APHA	3111 E	3.2017		0.3		No R	elaxat	ion	В	DL (M	DL- 0.0	3)
18.	Mercury			5	mg/l		APHA	3112 (	.2017		0.00	1	No R	elaxat	ion	BDI	(MDL	- 0.00	)08)
19.	Arsenic				mg/l		APHA	3114 (	.2017		0.01	L	No R	elaxat	ion	BD	L (MD	L – 0.0	02)
											0.4			-	. Second State				

 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
 IS 10500 :2012

 Remark
 Sample Comply with prescribed specification.

 Tested By: Amisha Kumari
 Image: Amisha Kumari

Sample Drawn By: Arjun Besra & Team

#### Specific Contractual Notes: -

1. The laboratory accepts responsibility for content of this report.

2. This report shall not be reproduced except in full, without written approval of the MD.

3. This report is intended for only guidance and not for legal purpose or for advertisement.

4. Any complaint about this report should be communicated in writing within 7 days of its issue

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 qm.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. Quality Checked by on the Authorized Signatory Should be a state of the state of t

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

# Institute for Environmental Management Accredited by Jharkhand State Pollution Control Board, JSPCB

Certified by

ISO 9001:2015 (Quality Management System ) ISO 45001:2018 (Occupational Health & Safety Management System )

			Test	Report						
Discip	oline: Chemical		Group: Water	-opo	Sub-Group: Grour	nd Water				
Repo	rt Issue Date: 30-11-2023	3		Test Report No.: RN-230714001GW1						
Samp	le ID: 231127WA01001 8	& 231127RC0	1001	Sample Description: Ground Water - Bore well						
Challa	an No./P.O. No.: 451101	2880	100	Challan No	./P.No. Date: 13-07-2023	1				
Type	(Formerly Tata Sto Gamaharia Phase Seraikela-Kharsaw of Industry: Iron & Steel	eel Long Pr -V, Adityap van, Jharkh	oducts) our Industrial Area, and-832108	Customer F	Representative: Shweta K	umari				
Samp	le Drawn by: IEM Team			Sampling D	ate: 23-11-2023	100				
Proto	col: CPCB Guideline& IS I	Method 3025	Part-01			-				
Samp	ling Location: BAGANPDI	DA								
Samp	le Receiving date: 27-11-	-2023	Testing Started: 2	7-11-2023	Testing Ended: 30-	11-2023				
			Test Re	sult						
SI.	Tested Parameter	Unit	Method No.	Norms**						

51.	Tested Parameter	Unit	Method No							
No.	restear anameter official		Metriod No.	Acceptable	Permissible	Results				
1.	Taste		IS 3025 (Part - 07)	Agreeable	Agreeable	Agreeable				
2.	Nitrite Nitrogen	mg/l	IS 3025 (Part - 34)			BDL (MDL 0.1)				
3.	Fluoride (as F)	mg/l	APHA 4500 F D. 2017	1.0	1.5	1.31				
4.	Iron	mg/l	APHA 3111 B.2017	1.0	No Relaxation	0.29				
			END Report							

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	IS 10500 :2012
Remark	Sample Comply with prescribed specification.

Tested By: Amisha Kumari

ISO 9001:2015

Sample Drawn By: Arjun Besra & Team

pecific Contractual Notes: -         The laboratory accepts responsibility for content of this report.         This report shall not be reproduced except in full, without written approval of the MD.	Quality Checked by	Authorized Signatory
<ol> <li>This report is intended for only guidance and not for legal purpose or for advertisement.</li> <li>Any complaint about this report should be communicated in writing within 7 days of its issue</li> <li>Total liability of Institute for Environmental Management will be limited to invoiced amount only.</li> <li>In case of feedback/ complaints, please send an email at <u>om iemeco@gmail.com</u></li> </ol>	(Shreya Sonal)	Dr. S. C. Jain)
n the basis of Quality Checked and Technical data verified by the Authorized signatory, the report issued by the Director of the Organization.	Dy. Quality Manager	Director

ISO 45001:2018

Ranchi-834002, Jharkhand, India Ph - 8407804254, 8407804251, Email - iem2012@rediffmail.com



# Institute for Environmental Management

Accredited byJharkhand State Pollution Control Board, JSPCB<br/>National Accreditation Board for Testing Laboratory (NABL) vide TC-11515Certified ByISO 9001:2015 (QMS) & ISO 45001:2018



#### Test Report

ULR	No.:	Т	С	1	1		5	1	5	2	3	0	0	0	0	0	1	6	2	8
Discip	oline: Chemi	cal			-		(	Grou	p: Wa	ter				Sub	Group	: Gro	und W	ater		
Repo	rt Issue Date	e: 30-1	1-202	3							Te	st Repo	ort No.	: RN-2	30714	001GV	V2	5		
Samp	le ID: 23112	7WA0	1002 8	& 231	127R	C010	002				Sa	mple D	escrip	tion: G	round	Wate	r - Bor	e well		
Challa	an No./P.O.	No.: 4	51101	2880			1		2.2		Ch	allan N	lo./P.N	lo. Dat	e: 13-0	07-202	23			
Issue	ed to: M/s Ta (Forme Gamat Seraike	ta Ste erly Ta aria F ela-Kh	el Lin ata St Phase arsav	nited eel L e-V, A wan,	ong dity Jha	Pro apu rkha	ducts r Indu nd-83	s) ustria 3210	al Are 8	a,			Ċ{	l e				se <sup>ta</sup>		
Туре	of Industry:	Iron &	Steel	1	_		120	-			Cu	stome	r Repr	esenta	tive: S	nweta	Kuma	ri		
Samp	le Drawn by	IEM	Team			-				20	Sa	mpling	Date:	23-11-	2023					1
Proto	col: CPCB G	uidelin	e& IS	Meth	od 30	025 P	art-01		and the	1			in the second					102 - I		
Samp	ling Locatio	n: JHA	RGOVI	NDPL	JR		_											-	1	
Samp	le Receiving	date:	27-11	-2023	1		Te	sting	Starte	ed: 27-1	1-20	023		Testi	ng Enc	led: 3	0-11-2	023		
				_	1				T	est Resul	t		_					-		
SI. No.	Tester	d Para	neter	s	U	nit	39	Me	thod M	lo.	+	Accepta	No	Per	missib	le	1.3	Res	ults	
1.	PH Value						IS	302	5 (Part	- 11)		6.5 to	8.5	No R	elaxat	ion	-	6.	51	
2.	Conductivi	ty			μs	/cm	IS	3025	(Part	- 14)								1	28	
3.	Turbidity	-		-	N	TU	IS	302	5 (Part	- 10)		1			5			1	.1	-
4.	Colour				Ha	zen	IS	302	5 (Part	- 04)		5			15				5	
5.	Odour				-		IS	302	5 (Part	- 05)		Agreea	ble	Ag	reeabl	e		Agre	eable	0
6.	Total Disso	lved S	olids		m	ig/l	IS	302	5 (Part	- 16)		500	)	2	2000			4	6	
7.	Calcium (a	s Ca)			m	g/l	IS	302	5 (Part	- 40)		75			200			6.	41	
8.	Total Alkal	inity (a	s CaC	03)	m	g/l	IS	302	5 (Part	- 23)		200			600	200		4	8	
9.	Total Hard	ness (a	as CaC	03)	m	g/l	15	\$ 302	5 (Par	t -21)		200	)		600			2	6	
10.	Chloride (a	as CI)			m	ig/l	IS	302	5 (Part	- 32)		250	)		1000			1	.2	
11.	Sulphate (	as SO4		1.18	m	g/I	IS	302	5 (Part	- 24)		200	)		400			1.	82	
12.	Magnesiur	n (as N	Ag)		m	g/l	APH	A 350	DO Mg	B. 201	7	30			100			2.	43	
13.	Copper				m	g/l	AF	PHA 3	3111 B	.2017		0.05	5		1.5		BI	DL (MD	L-0.0	)2)
14.	Chromium				m	g/l	AF	PHA 3	3111 B	.2017		0.05	5	No R	elaxat	ion	BI	DL (MD	L-0.0	)4)
15.	Lead	200			m	g/l	AF	PHA 3	3111 B	.2017		0.01		No R	elaxat	ion	B	DL (MD	L-0.0	)7)
16.	Zinc				m	g/I	AF	PHA 3	3111 B	.2017		5			15			1	.1	
17.	Nickel				m	g/l	AF	PHA 3	3111 B	.2017		0.3		No R	elaxat	ion	В	DL (M	DL- 0.0	3)
18.	Mercury		10.00	- 1	m	g/I	AF	PHA 3	112 C	.2017		0.00	1	No R	elaxat	ion	BD	(MDL	- 0.00	008)
19.	Arsenic				m	g/I	AF	PHA 3	3114 C	.2017		0.01		No R	elaxat	ion	BD	L (MD	L - 0.0	02)
20.	Manganes	e	5		m	g/l	AF	PHA 3	111 B	.2017		0.1		No R	elaxat	ion	B	DL (MD	L - 0.0	(80

 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
 IS 10500 :2012

 Remark
 Sample Comply with prescribed specification.

 Tested By: Amisha Kumari
 Image: Amisha Kumari

Sample Drawn By: Arjun Besra & Team

Specific Contractual Notes: -	Quality Checked by Authorized Signatory
<ol> <li>The laboratory accepts responsibility for content of this report.</li> <li>This report shall not be reproduced except in full, without written approval of the MD.</li> <li>This report is intended for only guidance and not for legal purpose of for advertisement.</li> <li>Any complaint about this report should be communicated in writing within 7 days of its issue</li> <li>Total liability of Institute for Environmental Magnement will be limited to invoiced amount only</li> </ol>	Shrey (
<ol> <li>In case of feedback/ complaints, please send an email at qm.iemeco@gmail.com</li> </ol>	(Shreya Sonal) 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. Quality Manager Parofit Director
Corporate office - A-8, Modi Heights, OppAll India Radio Stat	ion, Ratu Road, Ranchi, Jharkhand - 834001
Laboratory Site - H.No A-13, Saket Vihar, Near Sohra	ai Bhawan, Harmu Housing Colony,

Ranchi-834002, Jharkhand, India

#### Institute for Environmental Management Accredited by

Jharkhand State Pollution Control Board, JSPCB

Certified by

ISO 9001:2015 (Quality Management System ) ISO 45001:2018 (Occupational Health & Safety Management System )



1.22

	and the second		Test R	eport			
Discip	line: Chemical		Group: Water		S	ub-Group: Ground	Water
Repo	t Issue Date: 30-11-2023	3		Test Report N	lo.: RN	-230714001GW2	b <sup>r</sup>
Samp	le ID: 231127WA01002 8	& 231127RC0	1002	Sample Desci	ription	: Ground Water - B	lore well
Challa	n No./P.O. No.: 451101	2880		Challan No./I	P.No. D	Date: 13-07-2023	
ISSUE	M/s Tata Steel Lin (Formerly Tata Steel Gamaharia Phase Seraikela-Kharsaw	nited eel Long Pr -V, Adityap /an, Jharkh	oducts) ur Industrial Area, and-832108				
Туре	of Industry: Iron & Steel	1 3 mg		Customer Re	presen	tative: Shweta Kur	mari
Samp	le Drawn by: IEM Team	1	P.S. Contraction	Sampling Dat	e: 23-1	11-2023	
Proto	col: CPCB Guideline& IS I	Method 3025	Part-01				
Samp	ling Location: JHARGOVI	NDPUR	and the second sec				
Samp	le Receiving date: 27-11-	-2023	Testing Started: 27-	11-2023	Te	sting Ended: 30-11	-2023
			Test Resu	lt			
SI.	Tostad Parameter	Unit	Method No		Nor	ms**	Resulte
No.	Testeu Farameter Omt Metriod F		Weulod No.	Accepta	ble	Permissible	Results
1.	Taste		IS 3025 (Part - 07)	Agreeal	ole	Agreeable	Agreeable
2.	Nitrite Nitrogen	mg/l	IS 3025 (Part - 34)			S	BDL (MDL 0.1)

APHA 3111 B.2017 1.0 No Relaxation 0.22 4. Iron mg/l ----END Report----Env. Condition of Laboratory is maintaining Temperature 27± 2°C and Relative Humidity 65±5 % in all testing Lab. area as per IS 196:1966(C). Abbreviation MDL: Minimum Detection Limit, BDL: Below Detection Limit Norms\*\* is Specified IS 10500 :2012 Remark Sample Comply with prescribed specification.

1.0

1.5

APHA 4500 F D. 2017

Tested By: Amisha Kumari

Fluoride (as F)

mg/l

3.

Sample Drawn By: Arjun Besra & Team

Specific Contractual Notes: -	Quality Checkee by Authorized Signatory	
<ol> <li>The laboratory accepts responsibility for content of this report.</li> <li>This report shall not be reproduced except in full, without written approval of the MD.</li> <li>This report is intended for only guidance and not for legal purpose or for advertisement.</li> <li>Any complaint about this report should be communicated in writing within 7 days of its issue</li> <li>Total liability of Institute for Environmental Management will be limited to invoiced amount only</li> </ol>	Sharper and State	
6. In case of feedback/ complaints, please send an email at gm.iemeco@gmail.com	(Shreya Sonal)	
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. Quality Manager	



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 - 8407804254, 8407804251, Email - iem2012@rediffmail.com



# Institute for Environmental Management

Accredited by

by Jharkhand State Pollution Control Board, JSPCB National Accreditation Board for Testing Laboratory (NABL) vide TC-11515 ISO 9001:2015 (QMS) & ISO 45001:2018



#### **Test Report**

			-	4	1.	-	1	-	1.0	-		0	To		0	-	1.	-	~	1	
ULR		C		1	1	5		5	2	3	0	0	0		0	0	1	Net	6	2	9
Discip	bline: Chemical	44.00	22				Grou	<b>ip:</b> Wa	iter	1-			S	ub-G	roup	Gro	und \	wat	er		
Repo	rt Issue Date: 30	-11-20	23			100				Tes	st Repo	ort No	.: RN	-230	0/140	J01G\	N3				
Samp	le ID: 231127W	401003	3 & 2	:31:	127RC	)1003	3			Sar	mple D	escrip	tion	: Gr	ound	Wate	er - Bo	ore	well		
Challa	an No./P.O. No.:	45110	)128	80					-	Ch	allan N	IO./P.	NO. D	ate	:13-(	)/-20	23				
15500	M/s Tata S (Formerly Gamaharia Seraikela-l	teel L Tata A Phas Khars	imit Stee se-V awa	ed IL , A n,	ong P dityaj Jhark	rodu our l hand	icts) ndustr 1-8321(	ial Are	ea,			5	Ę						1		
Туре	of Industry: Iron	& Ste	el				2			Cu	stome	Repr	esen	tati	ve: S	nweta	Kum	ari			
Samp	le Drawn by: IEI	M Tear	m						1	Sar	npling	Date	23-1	1-2	023						
Proto	col: CPCB Guide	line& l	S Me	etho	od 302	5 Par	t-01	-				-									
Samp	ling Location: N	EEMDI	н		2			0.0		-		187					1	-		-	
Samp	le Receiving dat	e: 27-1	11-20	)23			Testin	g Start	ed: 27-	11-20	23		Te	stin	g End	led: 3	0-11-	202	3	See.	
								7	Test Resu	lt							1				
SI. No.	Tested Pa	ramete	ers		Uni	t	M	ethod	No.	-	Accept	Nable	Norms**					ults			
1.	PH Value						IS 302	25 (Par	t - 11)		6.5 to	8.5	No	o Re	laxat	ion			7	.1	
2.	Conductivity				µs/c	m	IS 302	5 (Par	t – 14)			1							66	55	
3.	Turbidity				NTL	J	IS 302	25 (Par	t - 10)		1				5					1	
4.	Colour				Haze	n	IS 302	25 (Par	t - 04)		5		10	1	15		5				1.1
5.	Odour						IS 302	25 (Par	t - 05)		Agreea	ble	Agreeable			Agreeable					
6.	Total Dissolved	Solid	s		mg/	1	IS 302	25 (Par	t - 16)		500	500 2000					402				
7.	Calcium (as Ca	)	- Same	-	mg/	1	IS 302	25 (Par	t - 40)		75			2	200			52.1			
8.	Total Alkalinity	(as Ca	CO3	)	mg/	1	IS 302	25 (Par	t - 23)		200			6	500				23	36	
9.	Total Hardness	as (as Ca	aCO3	)	mg/	1	IS 30	25 (Par	rt -21)		200			e	500				20	)3	
10.	Chloride (as Cl	)	1		mg/	1	IS 302	25 (Par	t - 32)		250	1		1	000				29	).1	
11.	Sulphate (as So	<b>D</b> <sub>4</sub> )			mg/	1	IS 302	25 (Par	t - 24)		200			4	100				43	.44	
12.	Magnesium (a	s Mg)	1		mg/	1 /	APHA 35	500 Mg	g B. 201	17	30			1	00				17.	.74	
13.	Copper				mg/	1	APHA	3111	B.2017		0.05	5		1	1.5		1	BDL	(MD	L-0.0	)2)
14.	Chromium				mg/	1	APHA	3111	B.2017		0.05	5	No	o Re	laxat	ion		BDL	(MD	L-0.0	)4)
15.	Lead	1			mg/	1	APHA	3111	B.2017		0.02	L	No	o Re	laxat	ion		BDL	(MD	L - 0.0	)7)
16.	Zinc				mg/	1	APHA	3111	B.2017		5				15			1.21			
17.	Nickel				mg/	1	APHA	3111	B.2017		0.3		No Relaxation B			BDL	. (MD	)L- 0.0	3)		
18.	Mercury				mg/	1	APHA	3112	C.2017		0.00	1	No Relaxation BDL			DL (	MDL	- 0.00	008)		
19.	Arsenic				mg/	1	APHA	3114 (	C.2017		0.01		No	o Re	laxat	ion	B	DL	(MDI	L – 0.0	02)
20.	Manganese				mg/	1	APHA	3111	8.2017		0.1		No	o Re	laxat	ion	1	BDL	(MD	L - 0.0	)8)
								E	nd Repo	rt											
Env. (	Condition of Lab		Lab 196	ora :19	tory is r 66(C).	nainta	ining Te	mperat	ure 27±	2°C an	d Relati	ve Hur	nidity	65±	5 % in	all te	sting a	irea	as pe	r IS	
Norm	s** is Specified		IS 1	L: N	inimun 0 :2012	) Dete	ction Lin	nit, BDL	: Below	Detect	ion Lim	it			-	-					

Remark

Tested By: Amisha Kumari Sample Drawn By: Arjun Besra & Team

Campie Brain By Pajan Boola a ree

#### Specific Contractual Notes: -1. The laboratory accepts responsibility for content of this report.

2. This report shall not be reproduced except in full, without written approval of the MD.

3. This report is intended for only guidance and not for legal purpose or for advertisement.

- 4. Any complaint about this report should be communicated in writing within 7 days of its issue
- 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 qm.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. Quality Checked by onnen Authorized Signatory Strugger (Shreya Sonal) Dy. Quality Manager \* Name Director

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

Sample Comply with prescribed specification.

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

Ranchi~834002, Jharkhand, India

#### **Institute for Environmental Management** Accredited by

Jharkhand State Pollution Control Board, JSPCB

Certified by

ISO 9001:2015 (Quality Management System ) ISO 45001:2018 (Occupational Health & Safety Management System )

			Test	Report						
Discip	line: Chemical		Group: Water	topo. t	Sub-Group: Ground V	Nater				
Repor	t Issue Date: 30-11-2023	3		Test Report No.: RN-230714001GW3						
Samp	le ID: 231127WA01003 8	& 231127RC0	1003	Sample Description: Ground Water - Bore well						
Challa	n No./P.O. No.: 451101	2880	1	Challan No./P.No. Date: 13-07-2023						
Turne	M/s Tata Steel Lin (Formerly Tata St Gamaharia Phase Seraikela-Kharsay	nited eel Long Pr -V, Adityap wan, Jharkh	oduc <mark>ts)</mark> ur Industrial Area, and-832108	Customer Penro	contative: Shwata Kum	ari				
Samp	le Drawn by: IEM Team			Sampling Date: 23-11-2023						
Proto	col: CPCB Guideline& IS I	Method 3025	Part-01			2				
Samp	ling Location: NEEMDIH		The second s		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1					
Samp	le Receiving date: 27-11	-2023	Testing Started: 2	7-11-2023	Testing Ended: 30-11-	2023				
			Test Re	sult						
SI.	I. Tostad Parameter Unit		Method No		lorms**	Results				
No.	resteu Farameter	ed Parameter Unit	Method No.	Acceptable	Permissible	Results				
		Cardon and a state of the state	Contraction of the second s			and the second se				

1.	Taste		IS 3025 (Part - 07)	Agreeable	Agreeable	Agreeable			
2.	Nitrite Nitrogen	mg/l	IS 3025 (Part - 34)			BDL (MDL 0.1)			
3.	Fluoride (as F) mg/l		APHA 4500 F D. 2017	1.0	1.5	1.48			
4.	Iron	mg/l	APHA 3111 B.2017	1.0	No Relaxation	0.25			
			END Report						
Ema	Candidian of	Labanatan	is maintaining Tomposature	27+ 2°C and Bal	tive Unmidity CE+E	W in all testing			

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	IS 10500 :2012
Remark	Sample Comply with prescribed specification.

Tested By: Amisha Kumari

ISO 9001:2015

Sample Drawn By: Arjun Besra & Team

Specific Contractual Notes: -	Quality Checked by online Authorized Signatory							
<ol> <li>The laboratory accepts responsibility for content of this report.</li> <li>This report shall not be reproduced except in full, without written approval of the MD.</li> <li>This report is intended for only guidance and not for legal purpose or for advertisement.</li> <li>Any complaint about this report should be communicated in writing within 7 days of its issue</li> <li>Total liability of Institute for Environmental Management will be limited to invoiced amount only.</li> <li>In case of feedback/ complaints, please send an email at <u>gm.iemeco@gmail.com</u></li> </ol>	(Shreya Sonal)							
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. Quality Manager Ranchi * Director							







 Accredited by
 Jharkhand State Pollution Control Board, JSPCB

 National Accreditation Board for Testing Laboratory (NABL) vide TC-11515

 Certified By
 ISO 9001:2015 (QMS) & ISO 45001:2018



Test	Re	ро	rt
------	----	----	----

ULR	No.:	T	C	1	1	5	5	1	5	2	3	0	0	0	0	0	1	6	3	0	
Discip	oline: Chemi	ical						Group	: Wat	ter	- 26	2		Sub	-Group	<b>p:</b> Gro	und W	ater			
Repo	rt Issue Date	e: 30-1	1-2023	3							Tes	st Repo	rt No.	: RN-2	30714	001G\	N4				
Samp	le ID: 23112	27WA0	1004 8	231	127R0	201	004				Sar	mple De	escrip	tion: G	iround	Wate	er - Bor	e well			
Challa	an No./P.O.	No.: 4	51101	0303					10		Cha	allan No	D./ P.I	No. Da	te: 04-	-07-20	22				
Issue	ed to: M/s Ta (Forme Gamał Seraike	ta Ste erly Ta naria I ela-Ki	eel Lin ata St Phase narsav	nited eel L -V, A wan,	ong P dityaj Jhark	rod our han	lucts Indund	s) ustria 32108	I Are	a,			÷	Ge.		2 <sup>0</sup>		e d	ġ.		
Type	of Industry:	Iron 8	& Steel						and a loss		Cu	stomer	Repr	esenta	tive: S	hweta	Kuma	ri			
Samp	le Drawn by	: IEM	Team								Sar	mpling	Date:	23-11-	2023	1				÷	
Proto	col: CPCB G	uidelir	ne& IS	Metho	od 302	5 Pa	rt-01		. Second	1	1.0							-			
Samp	ling Locatio	n: JHA	RKHUL	.1					-												
Samp	le Receiving	g date:	27-11	-2023			Te	sting	Starte	ed: 27-1	1-20	23		Testi	ng End	ded: 3	0-11-2	023			
			1					_	Te	est Result	t				-			-			
SI.	SI. Tested Parameters Unit		t		Method No.					No	orms**				Res	ults					
No.	o. Tested Farameters Onit				1				1	Accepta	ble	Per	missib	ole	-			<u> </u>			
1.	PH Value	1					IS	3025	(Part	: - 11)	_	6.5 to 8	.5	No Relaxation			6.8			-	
2.	Conductiv	ity			µs/ci	m	IS	3025	(Part	- 14)	-							264			
3.	Turbidity				NTL	1	IS	5 3025	(Part	: - 10)	-	1		-	5				1		
4.	Colour				Haze	n	IS	5 3025	(Part	: - 04)		5	-		15		5		C-W		
5.	Odour						IS	3025	(Part	: - 05)		Agreeal	ble	Agreeable		e	Agreeable		eable		
6.	Total Disso	olved S	Solids	-	mg/	1	IS	5 3025	(Part	: - 16)		500		2.5	2000		1	9	18		
7.	Calcium (a	is Ca)		1	mg/	1	IS	3025	(Part	: - 40)		75			200	1.91		11	.22		
8.	Total Alka	linity (	as CaC	03)	mg/	1	IS	3025	(Part	: - 23)		200			600	6		4	6		
9.	Total Hard	iness (	as CaC	03)	mg/	1	15	5 3025	5 (Part	t -21)		200			600			3	0		
10.	Chloride (a	as CI)			mg/	1	IS	5 3025	(Part	: - 32)		250			1000			5	.4	1	
11.	Sulphate (	as SO <sub>4</sub>	)		mg/	1	IS	3025	(Part	- 24)		200			400	1.65		10	).5		
12.	Magnesiu	m (as M	Mg)		mg/	1	APH	A 350	0 Mg	B. 2017	7	30		1	100		B	DL (M	DL - 1.0	))	
13.	Copper				mg/	1	AI	PHA 3	111 B	.2017		0.05	1		1.5		BI	DL (MC	L - 0.0	2)	
14.	Chromium	1			mg/	1	A	PHA 3	111 B	.2017		0.05		No F	Relaxat	ion	B	DL (MC	L - 0.0	4)	
15.	Lead				mg/	1	A	PHA 3	111 B	.2017		0.01		No F	Relaxat	ion	B	DL (MC	)L-0.0	7)	
16.	Zinc				mg/	1	A	PHA 3	111 B	.2017		5			15			1	.5		
17.	Nickel				mg/	1	A	PHA 3	111 B	.2017		0.3		No F	lelaxat	ion	В	DL (MI	DL- 0.03	3)	
18.	Mercury	1			mg/	1	A	PHA 3	112 C	.2017	2	0.001		No F	Relaxat	ion	BD	L (MDL	IDL - 0.0008)		
19.	Arsenic		0.00		mg/	1	A	PHA 3	114 C	.2017	0.01 No Relaxation			BDL (MDL - 0.002)							
20.	20. Manganese mg/l APHA 31					111 B	.2017		0.1		No F	lelaxat	ion	B		L-0.0	8)				
		100					a c		Er	nd Repor	t										

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	1\$ 10500 :2012
Remark	Sample Comply with prescribed specification.
Tested By: Amisha Kumari	

Sample Drawn By: Arjun Besra & Team

Specific Contractual Notes: -	Quality Checked by on Authorized Signatory
<ol> <li>The laboratory accepts responsibility for content of this report.</li> <li>This report shall not be reproduced except in full, without written approval of the MD.</li> <li>This report is intended for only guidance and not for legal purpose or for advertisement.</li> <li>Any complaint about this report should be communicated in writing within 7 days of its issue</li> <li>Total liability of Institute for Environmental Management will be limited to invoiced amount only.</li> <li>In case of feedback/ complaints, please send an email at am iemeco@gmail.com</li> </ol>	(Shreya Sobal)
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. Quality Manager Randhi Director
Corporate office - A-8, Modi Heights, OppAll India Radio Statio	on, Ratu Road, Ranchi, Jharkhand - 834001
Laboratory Site - H.No. – A-13, Saket Vihar, Near Sohrai	Bhawan, Harmu Housing Colony,

Ranchi-834002, Jharkhand, India

#### Institute for Environmental Management Accredited by

Jharkhand State Pollution Control Board, JSPCB

Certified by

ISO 9001:2015 (Quality Management System ) ISO 45001:2018 (Occupational Health & Safety Management System )

Sec. Sec.			Test Re	port						
Discip	oline: Chemical		Group: Water		Sub-Group: Ground \	Water				
Repo	rt Issue Date: 30-11-2023	3		Test Report No.: RN-230714001GW4						
Samp	le ID: 231127WA01004 8	231127RC	01004	Sample Description: Ground Water - Bore well						
Challa	an No./P.O. No.: 4511010	0303		Challan No./ P.N	o. Date: 04-07-2022					
	M/s Tata Steel Lin (Formerly Tata Ste Gamaharia Phase Seraikela-Kharsa	nited eel Long Pr -V, Adityap wan, Jhark	oduc <mark>ts)</mark> ur Industrial Area, chand-832108							
Туре	of Industry: Iron & Steel			Customer Representative: Shweta Kumari						
Samp	le Drawn by: IEM Team			Sampling Date: 23-11-2023						
Proto	col: CPCB Guideline& IS I	Method 3025	Part-01							
Samp	ling Location: JHARKHUL	1		J. Altana da						
Samp	le Receiving date: 27-11-	2023	Testing Started: 27-1	1-2023	Testing Ended: 30-11-	2023				
			Test Resul	t						
SI.	· Tested Descurators Unit		Method No.	r i i i i i i i i i i i i i i i i i i i	lorms**	Posulte				
No.	resteu Farameter	Unit	metrioù NO.	Acceptable	Permissible	Results				
1.	Taste		IS 3025 (Part - 07)	Agreeable	Agreeable	Agreeable				

2.Nitrite Nitrogen3.Fluoride (as F)		mg/l	IS 3025 (Part - 34)			BDL (MDL 0.1)						
		mg/l	APHA 4500 F D. 2017	1.0	1.5	0.92						
4.	Iron	mg/l	APHA 3111 B.2017	1.0	No Relaxation	0.23						
			END Report									
Env. Lab.	Condition of	Laboratory is maintaining Temperature 27± 2°C and Relative Humidity 65±5 % in all testing area as per IS 196:1966(C).										
Abb	reviation	MDL: Minimum Detection Limit, BDL: Below Detection Limit										
Norms** is Specified		IS 10500 :2012										
Remark		Sample Comply with prescribed specification										

Tested By: Amisha Kumari

Sample Drawn By: Arjun Besra & Team

Specific Contractual Notes: -	Quality Checked by Rithorized Signatory
<ol> <li>The laboratory accepts responsibility for content of this report.</li> <li>This report shall not be reproduced except in full, without written approval of the MD.</li> <li>This report is intended for only guidance and not for legal purpose or for advertisement.</li> <li>Any complaint about this report should be communicated in writing within 7 days of its issue</li> <li>Total liability of Institute for Environmental Management will be limited to invoiced amount only.</li> <li>In case of feedback/ complaints, please send an email at <u>gm.iemeco@gmail.com</u></li> </ol>	(Shreya Sonal) (Shreya Sonal)
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. Quality Manager Panchi Director





Month	Sampling	Dement No.		ъЦ	TSS	BOD	COD	O&G	NH3	CN	Phenol
wonth	location	Report No.	Sampling on	рп	(mg/l)	(mg/l)	(mg/l)	(mg/1)	(mg/1)	(mg/1)	(mg/l)
Oct-23	ETP OUTLET	RN-230714001WW2	25.10.2023	7.21	23.5	12.2	40.3	3.4	BDL(MDL-0.1)	BDL(MDL-0.02)	BDL(MDL-0.001)
Nov-23	ETP OUTLET	RN-230714001WW2	23.11.2023	7.06	31.0	8.6	50.5	BDL(MDL-4.0)	2.2	BDL(MDL-0.02)	BDL(MDL-0.001)
Dec-23	ETP OUTLET	RN-230714001WW2	28.12.2023	7.28	25.6	10.3	40.0	BDL(MDL-4.0)	1.3	BDL(MDL-0.02)	BDL(MDL-0.001)
Jan-24	ETP OUTLET	RN-230714001WW2	10.01.2024	7.26	29.0	7.0	53.6	BDL(MDL4.0)	2.7	BDL(MDL0.02)	0.2
Feb-24	ETP OUTLET	RN-230714001WW2	26.02.2024	7.50	26.0	5.7	64.0	3.8	4.2	BDL(MDL0.02)	0.2
Mar-24	ETP OUTLET	RN-230714001WW2	29.03.2024	7.40	28.0	6.0	68.0	4.0	5.0	BDL(MDL0.02)	0.3

#### TREATED EFFLUENT QUALITY REPORT

# Institute for Environmental Management



Accredited byJharkhand State Pollution Control Board, JSPCB<br/>National Accreditation Board for Testing Laboratory (NABL) vide TC-11515Certified ByISO 9001:2015 (QMS) & ISO 45001:2018



#### **Test Report**

ULR	No.:	Т	C	1	1	5	1	5	2	3	0	0	0	0	0	1	8	6	7		
Disc	i <b>pline:</b> Chen	nical			G	roup:	Pollu	tion &	Envir	onme	nt		Su	b-Gro	up: V	Vaste	Wate	r			
Rep	ort Issue Da	te: 18	-01-2	024						Te	st Rep	ort No	o.: RN	-2307	14003	LWW2	!				
Sam	ple ID: 240'	115PE	0200	2						Sa	mple I	Descri	ption:	Wast	te Wa	ter (E	ffluen	t)			
Cha	llan No./P.C	). No.:	4511	0128	80					Ch	allan I	No./P	No. D	Date:	13-07	-2023					
Issu	ied to:																				
	M/s	rata S	teel l	Limite	d																
	(Forn	nerly	Tata	Steel	Long	Produ	ucts L	imite	d)												
	Gama	aharia kela-K	Pha	se-V, awan	Adity	apur l	ndust	trial A	rea,												
Тур	Type of Industry: Iron & Steel										mer R	epres	entati	ve: Sl	nweta	Kuma	ari		_		
Sam	Sample Drawn by: IEM Team									Sampling Date: 10-01-2024											
Prot	ocol: CPCB	Guide	line&	IS Me	thod	3025 F	Part-0	1	-												
Sam	pling Locati	on: ET	TP OU	TLET					-										6		
Sam	ple Receivin	ng dat	e: 15	-01-20	)24		Testin	g Star	ted:	d: 15-01-2024 Testing Ended: 18-01-2024											
						-		Te	st Re	sult											
SI. No.		Testeo	d Para	amete	ers			Unit		M	Method No.		Method No.			Norn	ns**		Re	sults	
1.	pH value a	t 25°C	;							IS 30	25 (Pa	art-11	)	5.5-	9.0		7	.26			
2.	Total Susp	ended	Solic	is (TSS	5)			mg/l		IS 30	25 (Pa	art-17	)	10	00			29			
3.	Biochemic	al Oxy	gen [	Demar	nd (BO	D)		mg/l		IS 30	25 (Pa	art-44	)	3	0			7			
4.	Chemical (	Dxyge	n Den	nand (	COD)			mg/l		IS 30	25 (Pa	art-58	)	25	50		5	3.6			
								End	d of Re	eport											
Env	. Condition	of Lab		Labor testin	atory g area	is ma as pe	intain er IS 1	ing To 96:19	emper 066(C	ature).	27± 2	°C an	d Rela	tive H	lumid	ity 65	±5 %	in all			
Abb	reviation			MDL-	Minin	um D	etecti	on Li	mit, B	DL - E	Below	Detec	tion L	imit							
Nor	ns** is Spec	ified		As pe	r the H	nviro	nmen	tal (P	rotec	tion) l	Rule -	1986	<u> </u>		-						
Remark Sample Comply with prescribed specification.																					

Tested By: Neema Kumari

Sample Drawn By: Arjun Besra & Team

Specific Contractual Notes: -	Checked by	Authorized Signatory
<ol> <li>The laboratory accepts responsibility for content of this report.</li> </ol>		
<ol><li>This report shall not be reproduced except in full, without written approval of the MD.</li></ol>	and the second se	areas and a second
<ol><li>This report is intended for only guidance and not for legal purpose or for advertisement.</li></ol>	Time	C C C Be
<ol><li>Any complaint about this report should be communicated in writing within 7 days of its issue</li></ol>	1.00	VS X 9-0
5. Total liability of Institute for Environmental Management will be limited to invoiced amount only.	(1.3/	( ) A 121
6. In case of feedback/ complaints, please send an email at gm.iemeco@gmail.com	(Tauqeer Ahmad)	(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.	Technical Manager	Director

Corporate office - A-8, Modi Heights, Opp.-All India Radio Station, Ratu Road, Ranchi, Jharkhand 2834001

Laboratory Site - H.No. - A-13, Saket Vihar, Near Sohrai Bhawan, Harmu Housing Colony, Ranchi-834002, Jharkhand, India Fh - 8407804253, 8407804251, Email - iem2012@rediffmail.com



# Institute for Environmental Management Accredited by Jharkhand State Pollution Control Board, JSPCB

Certified by

ISO 9001:2015 (Quality Management System ) ISO 45001:2018 (Occupational Health & Safety Management System )



	Test	Report	
Discipline: Chemical	Group: Pollution & En	vironment	Sub-Group: Waste Water
Report Issue Date: 18-01-2024		Test Report	No.: RN-230714001WW2
Sample ID: 240115PE02002		Sample Des	cription: Waste Water (Effluent)
Challan No./P.O. No.: 4511012880		Challan No.	/ P.No. Date: 13-07-2023
Gamaharia Phase-V, Ad Seraikela-Kharsawan, Jl	ng Products Limited) lityapur Industrial Area harkhand-832108	a,	contative Church Kurzeri
Type of Industry: Iron & Steel		Customer Repr	esentative: Snweta Kumari
Sample Drawn by: IEM Team		Sampling Date:	10-01-2024
Protocol: CPCB Guideline& IS Metho	od 3025 Part-01		
Sampling Location: ETP OUTLET	and the second sec		
Sample Receiving date: 15-01-2024	Testing Started	1: 15-01-2024	Testing Ended: 18-01-2024
	Test	Result	

SI. No.	Tested Parameters	Unit	Method No.	Limit	Results
1.	Ammonical Nitrogen as N	mg/l	IS 3025 (Part-34)	50	2.74
2.	Phenols as C <sub>6</sub> H₅OH	mg/l	IS 3025 (Part-43)	1	0.16
3.	Oil & Grease	mg/l	IS 3025 (Part-39)	10	BDL(MDL-4.0)
4.	Cyanide as CN	mg/l	IS 3025 (Part-27)	0.2	BDL(MDL-0.02)

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
Limit is Specified	As per the Environmental (Protection) Rule - 1986
Remark	Sample Comply with prescribed specification.

Tested By: Neema Kumari

Sample Drawn By: Arjun Besra & Team

Specific Contractual Notes: -	Checked by	Authorized Signatory
<ol> <li>The laboratory accepts responsibility for content of this report.</li> <li>This report shall not be reproduced except in full, without written approval of the MD.</li> <li>This report is intended for only guidance and not for legal purpose or for advertisement.</li> <li>Any complaint about this report should be communicated in writing within 7 days of its issue</li> <li>Total liability of Institute for Environmental Management will be limited to invoiced amount only.</li> </ol>	T. Brook	nmar a Stat
6. In case of feedback/ complaints, please send an email at gm.iemeco@gmail.com	(Tauqeer Ahmad)	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.	Technical Manager	Director
Corporate office - A-8, Modi Heights, OppAll India Radio Static Laboratory Site - H.No. – A-13, Saket Vihar, Near Sohrai	on, Ratu Road, Ranchi, Jharkhan Bhawan, Harmu Housing Colo	Ranch nd -834001
ISO 9001:2015 Ranchi-834002, Jharkhand, Ph - 8407804254, 8407804251, Email - iem	, India 12012@rediffmail.com	ISO 45001:2018

Month	Plant E Bour	ast Side 1dary	Plant W Bour	est Side 1dary	Plant No Bour	orth Side ndary	Plant South Side Boundary		
	Day Time	Night Time	Day Time	Night Time	Day Time	Night Time	Day Time	Night Time	
Oct-23	72.4	64.9	61.8	51.2	69.4	53.8	69.4	62.8	
Nov-23	70.4	66.1	62.3	52.4	67.8	50.9	71.2	60.3	
Dec-23	67.9	62.8	58.6	49.9	65.3	47.2	68.7	55.2	
Jan-24	67.9	63.5	68.4	51.4	65.7	49.6	69.2	57.6	
Feb-24	70.6	70.3	71.2	52.3	68.9	50.1	69.1	59.2	
Mar-24	68.1	63.4	59.3	50.2	66.2	48.3	69.2	57.2	

#### **Ambient Noise Monitoring Report**



ULR No .:

**Discipline:** Chemical

Т

С

1

# Institute for Environmental Management

Accredited byJharkhand State Pollution Control Board, JSPCB<br/>National Accreditation Board for Testing Laboratory (NABL) vide TC-11515Certified ByISO 9001:2015 (QMS) & ISO 45001:2018

3

0

0

0

0

Sub-Group: Ambient Noise Levels (Excluding Vibration)



0

8

6

0

1

#### **Test Report**

2

5

Group: Atmospheric Pollution

1

5

1

Report Is	ssue Date: 13-1	12-2023		lest Re	port No.: RN-2	307 1400 111	
Sample I	D: 231211AP1	2001		Sample	<b>Description:</b> A	mbient Nois	e
Challan M	No./P.O. No.: 4	511012880		Challan	No./ P.No. Dat	te: 13-07-20	23
Issued to	o: M/s Tata Ste (Formerly Ta Gamaharia F	eel Limi <mark>te</mark> d ata Steel Long Phase-V, Aditya	Products Limited	d) rea,		r	*
	Seraikela-K	harsawan, Jhai	rkhand-832108				
Type of I	ndustry: Iron &	& Steel	-	Custom	er Representat	tive: Shweta	Kumari
Sample L	Drawn by: IEM	Team		Sampli	ng Date: 08-12-	2023 to 09-1	2-2023
Protocol	: CPCB Guidelin	he & IS Method	9989:1981				and the second second
Sampling	g Location: STA	TION-1 PLANT NO	ORTH SIDE BOUNDA	ARY	Transferration of the local division of the		an and the second s
Field Me	teorological In	formation A.	. Temp.(°C): 25	<b>R.H. (%):</b> 65	W.C.: Cloudy	W	.D.: NW to SE
Sample F	<b>Receiving Date</b>	: 11-12-2023	Testing Starte	d: 11-12-2023	Testing	g Ended: 13-	12-2023
			Te:	st Result			
SI. No	Para	meter	Method	Unit	Day Time	Night Tim	e Norms**
1.	Equivalent So	und Level (Leq)	IS 9989:1981	dB(A)	65.3	47.2	Day - 75 Night - 70
Note: - 1. Day time s 2. Night time 3. Mixed cat 4. dB(A) Leq 5.A "decibel"	shall mean from 6.00 e shall mean from 10 tegories of areas may denotes the time w " is a unit in which m	0 a.m. to 10.00 p.m. 0.00 p.m. to 6.00 a.m. y be declared as one o eighted average of the oise is measured. "A",	Enc of the four above mention e level of sound in decib , in dB(A) Leq, denotes t	oned categories by the frequency weight	the competent authons is relatable to human ting in the measuren	rity. In hearing. hent of noise and	corresponds to frequency
Note: - 1. Day time s 2. Night time 3. Mixed cat 4. dB(A) Leq 5.A "decibel" response cha 6.Leq: It is ar Env. Con	shall mean from 6.00 e shall mean from 10 tegories of areas may denotes the time we " is a unit in which n aracteristics of the h n energy mean of the dition of Lab	0 a.m. to 10.00 p.m. 0.00 p.m. to 6.00 a.m. y be declared as one of eighted average of the oise is measured. "A", uman ear. e noise level, over a sp Laboratory, is p	Enc of the four above mentic e level of sound in decib , in dB(A) Leq, denotes t pecified period.	d of Reports	the competent authon h is relatable to huma ting in the measuren	rity. In hearing. Thent of noise and	corresponds to frequency
Note: - 1. Day time s 2. Night time 3. Mixed cat 4. dB(A) Leq 5.A "decibel" response cha 6.Leq: It is ar Env. Con	shall mean from 6.00 e shall mean from 10 tegories of areas may denotes the time we " is a unit in which m aracteristics of the h n energy mean of the dition of Lab.	D a.m. to 10.00 p.m. 0.00 p.m. to 6.00 a.m. y be declared as one of eighted average of the oise is measured. "A", uman ear. e noise level, over a sp Laboratory is n per IS 196:1960	Enc of the four above mentic e level of sound in decib , in dB(A) Leq, denotes t pecified period. naintaining Temper 6(C).	d of Reports oned categories by t bels on scale A which he frequency weigh rature 27± 2°C	the competent autho h is relatable to huma iting in the measuren and Relative Hum	rity. In hearing. hent of noise and nidity 65±5 %	corresponds to frequency
Note: - 1. Day time s 2. Night time 3. Mixed cat 4. dB(A) Leq 5.A "decibel" response cha 6.Leq: It is ar Env. Con Abbrevia	shall mean from 6.00 e shall mean from 10 tegories of areas may denotes the time we " is a unit in which me aracteristics of the h n energy mean of the dition of Lab.	D a.m. to 10.00 p.m. 0.00 p.m. to 6.00 a.m. y be declared as one of eighted average of the oise is measured. "A", uman ear. e noise level, over a sp Laboratory is n per IS 196:1960 MDL: Minimum	Enc of the four above mention e level of sound in decib , in dB(A) Leq, denotes t pecified period. naintaining Temper 6(C). Detection Limit, B	d of Reports oned categories by t bels on scale A which he frequency weigh rature 27± 2°C DL: Below Dete	the competent authon h is relatable to huma ting in the measuren and Relative Hum ction Limit	rity. In hearing. hent of noise and nidity 65±5 %	corresponds to frequency
Note: - 1. Day time s 2. Night time 3. Mixed cat 4. dB(A) Leq 5.A "decibel" response cha 6.Leq: It is ar Env. Con Abbrevia Norms** Remark	shall mean from 6.00 e shall mean from 10 tegories of areas may denotes the time we " is a unit in which me aracteristics of the h n energy mean of the adition of Lab. tion is specified	D a.m. to 10.00 p.m. 0.00 p.m. to 6.00 a.m. y be declared as one o eighted average of the oise is measured. "A", uman ear. e noise level, over a sp Laboratory is n per IS 196:1960 MDL: Minimum As per Noise Po Sample Comply	Enc of the four above mention e level of sound in decible , in dB(A) Leq, denotes t pecified period. maintaining Temper 6(C). Detection Limit, B collution (Regulation with Prescribed S	d of Reports oned categories by t bels on scale A which he frequency weigh rature 27± 2°C DL: Below Dete n and Control) pecification.	the competent authon h is relatable to human ting in the measuren and Relative Hum ction Limit Rules - 2000	rity. In hearing. hent of noise and nidity 65±5 %	corresponds to frequency
Note: - 1. Day time s 2. Night time 3. Mixed cat 4. dB(A) Leq 5.A "decibel' response cha 6.Leq: It is ar Env. Con Abbrevia Norms** Remark Fested By: Sample Dra	shall mean from 6.00 e shall mean from 10 tegories of areas may denotes the time we " is a unit in which me aracteristics of the he n energy mean of the dition of Lab. tion is specified : Neema Kumari awn By: Arjun B	D a.m. to 10.00 p.m. 0.00 p.m. to 6.00 a.m. y be declared as one of eighted average of the oise is measured. "A", uman ear. e noise level, over a sy Laboratory is n per IS 196:196:1 MDL: Minimum As per Noise Por Sample Comply esra & Team	Enc of the four above mention e level of sound in decible , in dB(A) Leq, denotes t pecified period. naintaining Temper 6(C). Detection Limit, B pollution (Regulation with Prescribed S	oned categories by the bels on scale A which he frequency weigh rature 27± 2°C DL: Below Dete n and Control) pecification.	the competent authon h is relatable to huma ting in the measuren and Relative Hum ction Limit Rules - 2000	rity. In hearing. hent of noise and nidity 65±5 %	corresponds to frequenc
Note: - 1. Day time s 2. Night time 3. Mixed cat 4. dB(A) Leq 5.A "decibel" response cha 6.Leq: It is ar Env. Con Abbrevia Norms** Remark Fested By: Sample Dra	shall mean from 6.00 e shall mean from 10 tegories of areas may denotes the time we " is a unit in which ne aracteristics of the h n energy mean of the dition of Lab. tion is specified : Neema Kumari awn By: Arjun B	D a.m. to 10.00 p.m. 0.00 p.m. to 6.00 a.m. y be declared as one of eighted average of the oise is measured. "A", uman ear. e noise level, over a sp Laboratory is n per IS 196:196: MDL: Minimum As per Noise Po Sample Comply esra & Team	Enc of the four above mention e level of sound in decible , in dB(A) Leq, denotes t pecified period. naintaining Temper 6(C). Detection Limit, B collution (Regulation with Prescribed S	oned categories by the pels on scale A which he frequency weigh rature 27± 2°C DL: Below Detennand Control) pecification.	the competent authon h is relatable to huma iting in the measuren and Relative Hum ction Limit Rules - 2000	rity. In hearing. In tof noise and Inidity 65±5 %	corresponds to frequency
Note: - 1. Day time s 2. Night time 3. Mixed cat 4. dB(A) Leq 5.A "decibel" response cha 6.Leq: It is an Env. Con Abbrevia Norms** Remark Sample Dra cific Contractu	shall mean from 6.00 e shall mean from 10 tegories of areas may denotes the time we " is a unit in which me aracteristics of the h n energy mean of the dition of Lab. tion is specified : Neema Kumari awn By: Arjun B	D a.m. to 10.00 p.m. D.00 p.m. to 6.00 a.m. y be declared as one o eighted average of the oise is measured. "A", uman ear. e noise level, over a sy Laboratory is n per IS 196:1960 MDL: Minimum As per Noise Po Sample Comply esra & Team	Enc of the four above mentic e level of sound in decib , in dB(A) Leq, denotes t pecified period. naintaining Temper 6(C). Detection Limit, B collution (Regulation with Prescribed Sy	oned categories by to bels on scale A which he frequency weigh rature 27± 2°C DL: Below Deten n and Control) pecification.	the competent authon h is relatable to huma ting in the measuren and Relative Hum ction Limit Rules - 2000	nity. n hearing. nent of noise and nidity 65±5 %	corresponds to frequency
Note: - 1. Day time s 2. Night time 3. Mixed cat 4. dB(A) Leq 5.A "decibel" response cha 6.Leq: It is ar Env. Con Abbrevia Norms** Remark Tested By: Sample Dra cific Contractur The laborator This report is Any complain Total liability of In case of fee	shall mean from 6.00 e shall mean from 10 tegories of areas may denotes the time we " is a unit in which mearacteristics of the h n energy mean of the dition of Lab. tion is specified : Neema Kumari awn By: Arjun B sual Notes: - ny accepts responsibility nall not be reproduced intended for only guida t about this report shou of Institute for Environmedback/ complaints, ple	D a.m. to 10.00 p.m. D.00 p.m. to 6.00 a.m. y be declared as one o eighted average of the oise is measured. "A", uman ear. e noise level, over a sy Laboratory is n per IS 196:1960 MDL: Minimum As per Noise Po Sample Comply esra & Team y for content of this repor except in full, without wri ance and not for legal pu uld be communicated in mental Management will ase send an email at gri	Enc of the four above mentic e level of sound in decib , in dB(A) Leq, denotes t pecified period. naintaining Temper 6(C). Detection Limit, B pollution (Regulation with Prescribed S) with Prescribed S) rt. itten approval of the MD. impose or for advertisement writing within 7 days of its be limited to invoiced amo n.iemeco@gmail.com	a of Reports oned categories by to bels on scale A which he frequency weigh rature 27± 2°C DL: Below Detennand Control) pecification.	and Relative Hun ction Limit Rules - 2000	rity. In hearing. Thent of noise and nidity 65±5 %	thorized Signatory

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



ULR No .:

**Discipline:** Chemical

Т

С

1

1

5

Group: Atmospheric Pollution

# **Institute for Environmental Management**

Accredited byJharkhand State Pollution Control Board, JSPCB<br/>National Accreditation Board for Testing Laboratory (NABL) vide TC-11515Certified ByISO 9001:2015 (QMS) & ISO 45001:2018

3

0

0

0



1

1

0

0

Sub-Group: Ambient Noise Levels (Excluding Vibration)

8

6

#### **Test Report**

2

5

1

Report Is	sue Date: 13-1	2-2023				Test Rep	ort No.	: RN-23	30714001N2	
Sample II	D: 231211AP12	2002				Sample	Descrip	tion: Ar	nbient Noise	
Challan N	No./P.O. No.: 4	511012880	_			Challan	No./ P.I	No. Dat	e: 13-07-2023	
Issued to	o: M/s Tata Ste (Formerly Ta Gamaharia F Seraikela-Kl	eel Limited ata Steel Lor Phase-V, Ad harsawan, J	ng P ityap Ihark	roducts Limite pur Industrial A shand-832108	d) Area,			ľ		
Type of I	ndustry: Iron 8	Steel			5	Custome	er Repre	esentati	ive: Shweta Ku	mari
Sample D	Drawn by: IEM	Team			21	Samplin	g Date:	08-12-2	2023 to 09-12-2	023
Protocol:	: CPCB Guidelin	e & IS Meth	od 9	989:1981						
Sampling	Location: STA	TION-2 PLAN	TW	EST SIDE BOUNDA	ARY	R		-		1
Field Met	teorological In	formation	A. 1	Temp.(°C): 25	R.H.	(%): 65	W.C.:	Cloudy	W.D.:	NW to SE
Sample R	Receiving Date:	11-12-2023	5	Testing Starte	d: 11	-12-2023		Testing	Ended: 13-12-	2023
			-	Te	st Res	ult		1997 II 19		
SI. No	Para	meter		Method		Unit	Day	Time	Night Time	Norms**
1	Equivalent So	und Level (Le	eq)	IS 9989:1981		dB(A)	5	8.6	<b>4</b> 9.9	Day - 75 Night - 70
							1			
Note: - 1. Day time s 2. Night time 3. Mixed cata 4. dB(A) Leq 5.A "decibel" response cha	shall mean from 6.00 e shall mean from 10 regories of areas may denotes the time we " is a unit in which no aracteristics of the h	) a.m. to 10.00 p. 0.00 p.m. to 6.00 y be declared as c eighted average o oise is measured. uman ear.	.m. a.m. one of of the . "A", i	the four above menti level of sound in decil n dB(A) Leq, denotes t	d of Re oned ca bels on s the freq	tegories by th scale A which uency weight	ne compete is relatable ing in the r	ent author e to huma measurem	ity. n hearing. ent of noise and corr	esponds to frequency
Note: - 1. Day time s 2. Night time 3. Mixed catu 4. dB(A) Leq 5.A "decibel" response cha 6.Leq: It is ar Eny, Con	shall mean from 6.00 e shall mean from 10 egories of areas may denotes the time we " is a unit in which ne aracteristics of the h n energy mean of the dition of Lab.	a.m. to 10.00 p. 0.00 p.m. to 6.00 y be declared as c eighted average o oise is measured. uman ear. e noise level, ove	.m. a.m. one of of the . "A", i er a spe is ma	End the four above menti level of sound in decil in dB(A) Leq, denotes t ecified period. aintaining Tempe	d of Re oned ca bels on s the freq erature	tegories by th scale A which uency weight	ne compete is relatable ing in the r	ent author e to huma measurem tive Hum	ity. n hearing. ent of noise and corr nidity 65±5 % in	esponds to frequency all testing area a
Note: - 1. Day time s 2. Night time 3. Mixed cat 4. dB(A) Leq 5.A "decibel" response cha 6.Leq: It is ar Env. Con	shall mean from 6.00 e shall mean from 10 regories of areas may denotes the time we " is a unit in which no aracteristics of the h n energy mean of the dition of Lab.	0 a.m. to 10.00 p. 0.00 p.m. to 6.00 y be declared as c eighted average o oise is measured. uman ear. e noise level, ove Laboratory per IS 196:	.m. a.m. one of of the . "A", in er a spe is ma 1966	the four above menti level of sound in decil in dB(A) Leq, denotes t ecified period. aintaining Tempe (C).	d of Re oned ca bels on s the freq	tegories by the scale A which uency weight	ne compete is relatable ing in the i nd Relat	ent author e to huma measurem tive Hum	ity. n hearing. ent of noise and corr idity 65±5 % in	esponds to frequency all testing area a
Note: - 1. Day time s 2. Night time 3. Mixed catu 4. dB(A) Leq 5.A "decibel" response cha 6.Leq: It is ar Env. Con Abbrevia	shall mean from 6.00 e shall mean from 10 egories of areas may denotes the time we " is a unit in which ne aracteristics of the h n energy mean of the idition of Lab.	0 a.m. to 10.00 p. 0.00 p.m. to 6.00 y be declared as c eighted average o oise is measured. uman ear. e noise level, ove Laboratory per IS 196: MDL: Minim	.m. a.m. one of of the . "A", i er a spe is ma 1966 num I	En the four above menti level of sound in decil in dB(A) Leq, denotes t ecified period. aintaining Tempe (C). Detection Limit, F	d of Re oned ca bels on s the freq erature BDL: B	tegories by the scale A which uency weight e 27± 2°C a elow Detect	ne compete is relatable ing in the p and Relat	ent author e to huma measurem tive Hum nit	ity. n hearing. ent of noise and corr nidity 65±5 % in	esponds to frequency all testing area a
Note: - 1. Day times 2. Night times 3. Mixed cat 4. dB(A) Leq 5.A "decibel" response cha 6.Leq: It is ar Env. Con Abbrevia Norms** Remark	shall mean from 6.00 e shall mean from 10 egories of areas may denotes the time we " is a unit in which ne aracteristics of the h n energy mean of the idition of Lab. tion is specified	0 a.m. to 10.00 p. 0.00 p.m. to 6.00 y be declared as c eighted average o oise is measured uman ear. e noise level, ove Laboratory per IS 196:: MDL: Minin As per Nois Sample Con	.m. a.m. one of of the . "A", i r a spe is ma 1966 num I se Pol nply v	En the four above menti level of sound in decil in dB(A) Leq, denotes i ecified period. aintaining Tempe (C). Detection Limit, F llution (Regulatio with Prescribed S	d of Re oned ca bels on s the freq erature BDL: B on and Specifi	tegories by the scale A which uency weight e 27± 2°C a elow Detect Control) R cation.	ne compete is relatable ing in the p and Relat ction Lin tules - 20	ent author e to huma measurem tive Hum nit 000	ity. n hearing. ent of noise and corr nidity 65±5 % in	esponds to frequency all testing area a
Note: - 1. Day time s 2. Night time 3. Mixed cat 4. dB(A) Leq 5.A "decibel" response cha 6.Leq: It is ar Env. Con Abbrevia Norms** Remark rested By: Sample Dra	shall mean from 6.00 e shall mean from 10 regories of areas may denotes the time we " is a unit in which no aracteristics of the h n energy mean of the dition of Lab. tion is specified : Neema Kumari rawn By: Arjun B	Da.m. to 10.00 p. 0.00 p.m. to 6.00 y be declared as c eighted average o oise is measured. uman ear. e noise level, ove Laboratory per IS 196:: MDL: Minin As per Nois Sample Con	.m. a.m. one of of the . "A", in r a spe is ma 1966 num I se Pol nply v	End the four above menti level of sound in decil in dB(A) Leq, denotes the ecified period. aintaining Tempe (C). Detection Limit, F Ilution (Regulation with Prescribed S	d of Re oned ca bels on s the freq erature BDL: B on and Specifi	tegories by the scale A which uency weight e 27± 2°C a elow Detect Control) R cation.	ne compete is relatable ing in the r ind Relat ction Lin Rules - 20	ent author e to huma measurem tive Hum nit 000	ity. n hearing. ent of noise and corr hidity 65±5 % in	esponds to frequency all testing area a
Note: - 1. Day time s 2. Night time 3. Mixed cat 4. dB(A) Leq 5.A "decibel" response cha 6.Leq: It is ar Env. Con Abbrevia Norms** i Remark Sample Dra	shall mean from 6.00 e shall mean from 10 regories of areas may denotes the time we " is a unit in which ne aracteristics of the h n energy mean of the idition of Lab. tion is specified : Neema Kumari awn By: Arjun B	0 a.m. to 10.00 p. 0.00 p.m. to 6.00 y be declared as c eighted average of oise is measured. uman ear. e noise level, ove Laboratory per IS 196: MDL: Minim As per Nois Sample Con	.m. a.m. one of of the . "A", in r a spe is ma 1966 num I se Pol nply v	End the four above menti level of sound in decil in dB(A) Leq, denotes to ecified period. aintaining Tempe (C). Detection Limit, F llution (Regulation with Prescribed S	d of Re oned ca bels on s the freq BDL: B on and Specifi	tegories by the scale A which uency weight 2 27± 2°C a elow Detect Control) R cation.	ne compete is relatable ing in the p and Relat	ent author e to huma measurem tive Hum nit 000	ity. n hearing. ent of noise and corr nidity 65±5 % in	esponds to frequency all testing area a
Note: - 1. Day time s 2. Night time 3. Mixed cat 4. dB(A) Leq 5.A "decibel" response cha 6.Leq: It is ar Env. Con Abbrevia Norms** Remark rested By: cific Contract The laborator This report is Any complain Total liability of In case of fee	shall mean from 6.00 e shall mean from 10 regories of areas may denotes the time we " is a unit in which me aracteristics of the h n energy mean of the dition of Lab. tion is specified : Neema Kumari awn By: Arjun B tual Notes: - ry accepts responsibilit hall not be reproduced i intended for only guida t about this report shou of lastitute for Environne adback/ complaints, ple	o a.m. to 10.00 p. 0.00 p.m. to 6.00 y be declared as c eighted average o oise is measured. uman ear. e noise level, ove Laboratory per IS 196:: MDL: Minin As per Nois Sample Con esra & Team esra & Team y for content of this except in full, witho ance and not for leg uld be communicat mental Managemer ase send an email	.m. a.m. one of of the l ."A", in r a spec- is ma is m	End the four above menti level of sound in decili in dB(A) Leq, denotes the ecified period. aintaining Tempe (C). Detection Limit, F llution (Regulation with Prescribed S with Prescribed S the approval of the MD. pose or for advertisemer riting within 7 days of its be limited to invoiced amo iemeco@gmail.com	d of Re oned ca bels on s the freq BDL: B on and Specifi bissue ount only	tegories by the scale A which uency weight e 27± 2°C a elow Detection Control) R cation.	ality Che	ent author e to huma measurem tive Hum nit 000 ecked b	ity. n hearing. ent of noise and corr hidity 65±5 % in	esponds to frequency all testing area a nized Signatory

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





ULR No.:

Т

С

1

1

5

1

Jharkhand State Pollution Control Board, JSPCB Accredited by National Accreditation Board for Testing Laboratory (NABL) vide TC-11515 ISO 9001:2015 (QMS) & ISO 45001:2018 Certified By

3

0

0

0

0

0

1

8

6



2

#### **Test Report**

2

5

Disciplin	e: Chemical	Group: Atn	nospheric Pollut	ion	Sub-Grou	<b>Ip:</b> Ambient N	oise Levels (Exc	luding Vibration)
Report Is	ssue Date: 13-1	2-2023			Test Rep	ort No.: RN-23	30714001N3	
Sample I	ID: 231211AP12	2003	_		Sample D	Description: Ar	nbient Noise	
Challan I	No./P.O. No.: 4	511012880			Challan N	No./ P.No. Dat	e: 13-07-2023	
Issued to	o: M/s Tata Ste (Formerly Ta Gamaharia F	eel Limited ata Steel Long P Phase-V, Adityap	roducts Limite	d) Area,	1			
Type of I	Industry: Iron 8	Steel	11anu-032100		Custome	r Representat	ive: Shweta Ku	mari
Sample	Drawn by: IEM	Team			Sampling	Date: 08-12-2	2023 to 09-12-2	023
Protocol	CPCB Guidelin	e & IS Method 9	989.1981	-	camping	,		
Samplin	g Location: STA	TION-3 PLANT FAS	ST SIDE BOUNDAR	RY				
Field Me	teorological In	formation A	Temp (°C): 25	RH	(%): 65	W.C : Cloudy	W.D.	NW to SE
Sample	Receiving Date:	11-12-2023	Testing Starte	d. 11-	12-2023	Testing	Ended: 13-12-	2023
Sample	Receiving Date.	. 11-12-2025	Te	st Resu	It	resting	Linded. 15 12	2023
SI. No	Para	meter	Method		Unit	Day Time	Night Time	Norms**
1.	Equivalent So	und Level (Leq)	IS 9989:1981		dB(A)	67.9	62.8	Day - 75 Night - 70
		and the second sec	End	d of Rep	orts	A CONTRACTOR		
response ch 6.Leq: It is a	aracteristics of the h	uman ear. e noise level, over a spe Laboratory is m	ecified period.	rature	27± 2°C an	nd Relative Hum	iidity 65±5 % in	all testing area as
		per IS 196:1966	(C).					
Abbrevia Norms**	ition is specified	MDL: Minimum	Detection Limit, E	BDL: Be	low Detect	tion Limit	and the second second	
Remark	is specified	Sample Comply	with Prescribed S	pecific	ation.	aics 2000		(n
Tested By: Sample Dr	: Neema Kumari <b>rawn By:</b> Arjun B	esra & Team						
ecific Contract	tual Notes: -	v for content of this report	<u>a</u>		Qua	lity Checked b	y Autho	rized Signatory
ecific Contract The laborato This report sl This report is Any completive Total liability	tual Notes: - ry accepts responsibility hall not be reproduced intended for only guida nt about this report shou of Institute for Environn ethack/ complainte, pla	y for content of this report except in full, without writt ance and not for legal pury uld be communicated in w nental Management will b	en approval of the MD. sose or for advertisemen riting within 7 days of its e limited to invoiced amo	it. issue bunt only.	Qua Sh	lity Checked b	Autho	rized Signatory
ecific Contract The laborato This report sl This report is Any complair Total liability In case of fee the basis of Q	tual Notes: - ny accepts responsibility hall not be reproduced is intended for only guida nt about this report shou of Institute for Environn edback/ complaints, ple uality Checked and Tec	y for content of this report except in full, without writt ance and not for legal purp uld be communicated in w mental Management will b rase send an email at gm. chnical data verified by the	en approval of the MD. bose or for advertisemen riting within 7 days of its e limited to invoiced amo iemeco@gmail.com Authorized signatory, th	t. issue punt only. ie report	Qua Sh (S Dy. (S	lity Checked b Shreya Sonal) Quality Manage	y Autho	rized Signatory

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



ULR No .:

**Discipline:** Chemical

Report Issue Date: 13-12-2023

Т

С

1

1

5

Group: Atmospheric Pollution

1

# **Institute for Environmental Management**

Jharkhand State Pollution Control Board, JSPCB Accredited by National Accreditation Board for Testing Laboratory (NABL) vide TC-11515 Certified By ISO 9001:2015 (QMS) & ISO 45001:2018

3

0

0

Test Report No.: RN-230714001N4

0



3

8

6

0

0

Sub-Group: Ambient Noise Levels (Excluding Vibration)

1

#### **Test Report**

2

5

	D: 231211AP14	2004			Sample	Desc	ription: An	nbient N	loise	
Challan N	No./P.O. No.: 4	511012880			Challan	No./	P.No. Dat	e: 13-07	-2023	
Issued to	0:									
	M/s Tata Ste	el Limited								
	(Formerly Ta	ita Steel Lon	ng F	Products Limited)						
	Gamaharia P Seraikela-Kh	Phase-V, Adi narsawan, Ji	tya har	pur Industrial Area, khand-832108						
Type of I	ndustry: Iron 8	Steel			Custom	er Re	presentat	ive: Shw	eta Kur	mari
Sample D	Drawn by: IEM	Team			Samplin	g Da	te: 08-12-2	2023 to 0	9-12-2	023
Protocol:	: CPCB Guidelin	e & IS Metho	od 9	989:1981		1				
Sampling	Location: STA	TION-4 PLANT	SO	UTH SIDE BOUNDARY						
Field Me	teorological In	formation	A.	Temp.(°C): 25 R.H	H. (%): 65	W.	c.: Cloudy		W.D.:	NW to SE
Sample F	Receiving Date:	11-12-2023		Testing Started: 1	1-12-2023		Testing	Ended:	13-12-2	2023
	<u> </u>			Test Re	sult					
SI. No	Para	meter		Method	Unit		Day Time	Night	Time	Norms**
1.	Equivalent So	und Level (Le	q)	IS 9989:1981	dB(A)		68.7	55.	.2	Day - 75 Night - 70
1				End of F	Reports		State of the local diversion of the local div			
5.A "decibel' response cha	" is a unit in which no aracteristics of the h	eighted average o bise is measured. uman ear.	f the "A",	e level of sound in decibels on in dB(A) Leq, denotes the fre	categories by the scale A which equency weight	is relating in	table to huma	n hearing. ent of noise	and corre	esponds to frequency
5.A "decibel" response cha 6.Leq: It is ar Env. Con	" is a unit in which no aracteristics of the h n energy mean of the udition of Lab.	eighted average o bise is measured. uman ear. e noise level, over Laboratory i	f the "A", a sp is m	elevel of sound in decibels of in dB(A) Leq, denotes the fre pecified period.	re 27± 2°C a	is relating in	table to huma the measurem elative Hum	n hearing. Thent of noise	e and corre	esponds to frequency all testing area as
5.A "decibel' response cha 6.Leq: It is ar Env. Con	" is a unit in which no aracteristics of the h n energy mean of the idition of Lab.	eighted average o oise is measured. uman ear. e noise level, over Laboratory i per 1S 196:1	f the "A", a sp is m .966	elevel of sound in decibels of in dB(A) Leq, denotes the free becified period. maintaining Temperatu 5(C).	re 27± 2°C a	is relating in	table to huma the measurem elative Hum	n hearing. Thent of noise nidity 654	e and corre	esponds to frequency all testing area as
5.A "decibel' response cha 6.Leq: It is ar Env. Con Abbrevia	achoices the time we " is a unit in which no aracteristics of the h n energy mean of the indition of Lab.	eighted average o bise is measured. uman ear. e noise level, over Laboratory i per IS 196:1 MDL: Minim As per Noise	is m 966	elevel of sound in decibels of in dB(A) Leq, denotes the free pecified period. aaintaining Temperatu 5(C). Detection Limit, BDL: Ulution (Regulation an	categories by tr n scale A which equency weight re 27± 2°C a Below Deter d Control) F	is relating in the com	elative Hum	n hearing. Thent of noise	e and corre	esponds to frequency all testing area as
5.A "decibel" response cha 6.Leq: It is an Env. Con Abbrevia Norms** i Remark	aenotes the time we " is a unit in which no aracteristics of the h n energy mean of the adition of Lab. tion is specified	eighted average o bise is measured. uman ear. e noise level, over Laboratory i per IS 196:1 MDL: Minim As per Noise Sample Com	f the "A", a sp is m .966 um e Po ply	elevel of sound in decibels of in dB(A) Leq, denotes the free pecified period. aaintaining Temperatu 5(C). Detection Limit, BDL: Ilution (Regulation an with Prescribed Speci	re 27± 2°C a Below Deted Control) F	is relating in the community of the comm	elative Hun Limit - 2000	n hearing. In hearing. In to find the first of hoise	e and corre	esponds to frequency all testing area as
5.A "decibel" response chi 6.Leq: It is an Env. Con Abbrevia Norms** Remark ested By: ample Dra	" is a unit in which no aracteristics of the h n energy mean of the idition of Lab. tion is specified : Neema Kumari awn By: Arjun B	eighted average o oise is measured. uman ear. E noise level, over Laboratory i per IS 196:1 MDL: Minim As per Noise Sample Com	is m is m .966 um ply	elevel of sound in decibels or in dB(A) Leq, denotes the free eccified period. Detection Limit, BDL: Ilution (Regulation an with Prescribed Speci	re 27± 2°C a Below Deter d Control) F fication.	is relating in the com	elative Hum Limit - 2000	n hearing. Nent of noise	e and corre	esponds to frequency all testing area as
5.A "decibel" response chi 6.Leq: It is an Env. Con Abbrevia Norms** Remark ested By: ample Dra	aenotes the time we " is a unit in which no aracteristics of the h n energy mean of the idition of Lab. tion is specified Neema Kumari awn By: Arjun B	eighted average o oise is measured. uman ear. e noise level, over Laboratory i per IS 196:1 MDL: Minim As per Noise Sample Com	is m 966 um Ply	elevel of sound in decibels or in dB(A) Leq, denotes the free pecified period. maintaining Temperatu 5(C). Detection Limit, BDL: Illution (Regulation an with Prescribed Speci	categories by tr in scale A which equency weight re 27± 2°C a Below Deter d Control) F fication.	ality	elative Hun Limit - 2000	n hearing. In hearing. In hearing. In hearing. In hearing.	e and corre	esponds to frequency all testing area as
5.A "decibel" response chi 6.Leq: It is an Env. Con Abbrevia Norms** Remark ested By: ample Dra cific Contract The laborator This report is Any complain Total liability of In case of fee	and the second s	eighted average o bise is measured. uman ear. e noise level, over Laboratory i per IS 196:1 MDL: Minim As per Noise Sample Com esra & Team esra & Team (for content of this is except in full, withou ance and not folga uld be communicate mental Management ase send an email a	report report din the	t. t. t. te approval of the MD. rpose or for advertisement. writing within 7 days of its issue be limited to invoiced amount or lieneco@gmail.com	Quency weight re 27± 2°C a Below Deter d Control) Fication.	ality	checked b	n hearing. In hearing. Inidity 654	Autho	rized Signatory

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



# CSR Activities from Oct'23 to March'24

The second of th

# TSL Gamharia

## Event Date : 03-03-2024



## **BIRTHDAY CELEBRATION OF JAMSHEDJI TATA & YOUNGSTER ADDING VALUES PROGRAM**

The Tata Volunteering Week21 was launched on 3rd March with company volunteers represented from both operation and services department at the Community Centre, Gamharia. The volunteers along with the students of NIT & their professors spoke about how founder's principle of Good Thoughts, Good Words and Good Deeds have inspired the entire country and his contribution towards building this nation over 150 years. The team had a pad yatra of Penderbera village under Rapcha panchayat along with PRI members and key communities till the evening.



### Event Date : 06-03-2024



## **AWARENESS OF ROAD SAFETY AMONG THE HIGH SCHOOL STUDENT**

Awareness of road safety is crucial for reducing accidents and promoting responsible behavior on the road through young mind that easily distracted.

Company volunteers along with TSF team organised a physical session on awareness of road safety with questionnaire and answers of the student. Informatic session in which 2 schools (Vani Vidya Mandir and vidya Bharti School) student of class 9<sup>th</sup> participated. Volunteers help the students to raise awareness about the importance of following traffic rules, wearing seat belts, avoiding distraction during driving and dangers of speeding and driving under the influence. Additionally incorporating road safety topic into schools as peer-led education can further enhance awareness and promote safer behaviour among the high school students. 46 student who attended the session was curious to know the safety equipment of vehicle and how they works, such as why we use

red light in traffic and others..





### **PWD AWARENESS PROGRAM FOR PRI MEMBERS AND YOUTHS:**

Panchayat Heads, Village Leaders, Key Opinion Makers, and other relevant stakeholders of Gamharia have been very encouraging and extends substantial cooperation to Tata Steel Foundation. Constant rapport, coaching them on multiple CSR matters has enabled smooth functioning of CSR. In recent past years, Tata Steel Gamharia has taken up miscellaneous attempts for Persons With Disability (PWDs) for their overall welfare. Some of these people's representatives (PRI) arrived frontwards during the mapping of the PWDs in operational panchayats of Gamharia region in previous year. A vivid orientation on key aspects of PWDs, the RPWD act etc. was taken on at the Community Centre, Gamharia under TVW21 programme jointly by TSF team and company volunteers. Thorough and accurate information were essential for the PRIs who plays a pivotal position in bringing PWDs further to avail the several benefits extended by SABAL. Mr. Tenik of SABAL took the lead in sharing his lived-in experiences and detailing about the government schemes provisioned both at state and central level. The company volunteers too shared their bit about the efficacy of organizing such a sensitization session. Mrs. Nirola Sardar, Mukhiya of Chotta Gamharia had high admiration for TSF headed for the cause. A total of ten company volunteers pompously paid 3.2 hours each for the meeting. Here is what one of the volunteers has to say about the event.







- Organize 5 Days Agriculture training program on agriculture and allied activity in Pindrabera Village with the partner Organization NIT Jamshedpur. First day Inauguration of the training jointly done by CSR head Gamharia and NIT
- Interaction with the entrepreneur of tribal community During Johar Haat , Kadma to strengthen the local tribal community and make them entrepreneur through their local/ Trible skill and provide additional skill knowledge.





✤ 9 out 11 identified PwD of Ramjivanpur village got PwD certification with initiative of Tata Steel Gamharia. Application for the certified Pwd for Pension scheme of government of Jharkhand are in process.



✤ Youth interaction program organize at Gauri Village with Model Career center (MCC), a wing of Tata Steel Foundation. To provide skill base job opportunity to the youths of the villages. During that meeting unemployed youth know the job opportunity.41 youth of Gauri and Sapra Village attended the program, 21 of them get registered in MCC for the Job Opportunities.

The Manual Property of the