

Ref. No. - TSG/EC/2024-25/Nov-24/01 Date - 19/11/2024

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

Subject: Half yearly environmental clearance compliance report of Tata Steel Limited, Gamharia for the period from April 2024 to September 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 April 24 to September 24.

This is for your kind information and necessary records please.

Thanking you,

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

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(Ravi Ranjan Prasoon) Head - Environment TSG

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

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.	 Several Steps are taken to mitigate RSPM levels in ambient air. Measures taken for control of dust levels in ambient air includes the following – Fixed type sprinklers including rain guns are installed in raw material handling areas. 7 Nos of Water mist canon is installed in the RMHS and slag dumping area of MBF to control fugitive emission during material handling. Mobile sprinklers are provided to reduce fugitive dust from roads. Source emissions are controlled by effective operation of pollution control systems viz. ESPs, Bag filters, dry fog systems etc. Broad leaved trees are planted in open areas within the department and plant periphery. Construction of RCC roads inside plant. All the paved roads are cleaned by vacuum road sweeper to arrest dust emission due to vehicular movement. Raw material stock yards are covered with tarpaulin. Construction of Four Nos Coal Storage Shed at DRI, MBF, CPP & Coke Oven 4 Continuous Ambient Air Quality Monitoring Stations (CAAQMS) are installed in different corners of the plant for ambient air quality monitoring. 09 online gas analyzers and 23 online dust monitors are also installed at different stacks for monitoring of emission from the stack. Stack monitoring result attached as Annexure-1 Ambient Air monitoring result attached as Annexure-2
ii	Stack monitoring facilities for all the major stacks and adequate air pollution control systems to control particulate emissions within the prescribed limits from coke oven shall be provided. Carbon mono-oxide (CO) shall also be monitored along with other parameters and standards notified under the Environment (Protection) Act shall be followed. ESP shall be installed to control the particulate emissions from the pellet plant. The reports shall be submitted to	Stack monitoring facilities are provided at all major stacks. 09 online gas analyzers and 23 online dust monitors are installed covering all major stacks for monitoring of emission from the stacks. Adequate pollution control devices are installed to control the particulate matter emission from coke oven and pellet plant. PM, SO ₂ , and NOx in flue gas of Coke Oven is monitored at regular intervals. The monitoring reports are regularly submitted to MoEFCC Ranchi, CPCB and JSPCB.

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

Half yearly Environment Clearance Compliance Status (From Apr - 2024 to Sept - 2024)

	the Ministry's Regional Office at Bhubaneswar, SPCB and CPCB.	Stack monitoring result attached as Annexure-1
iii	Multistage scrubber shall be installed to control gaseous and dust emissions from the coke oven stack. Measures shall be taken to prevent leakages from coke oven plant.	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 rd 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, 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.	 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. 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 Quality monitoring reports are attached as Annexure-5.

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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.

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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. CREP compliance Report is attached as Annexure - 10
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.

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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 th 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.

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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. Ambient Noise Monitoring Report is attached as Annexure - 8
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.
х	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

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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 periodic 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 once	nitoring reports are submitted in e in every six months as stipulated.

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xvi	The environmental statement for each financial year ending 31 st 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 th 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 are: 01.02.12. PCB: 18.01.12. o started on: 15.02.12

Stack Emission Monitoring

S.No	Unit	Stack Attached to	Month	Report No.	Sampling on	Sampling Time	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		RN-230714001S18	29.04.2024	11:20 am to 11:54 am	166	6.8	129713	34.5	352.9	84.1
2	CPP	WHRB - 2 & 3 (DRI-2&3)		RN-230714001S17	27.04.2024	12:40 pm to 1:18 pm	183	6.1	112042	33.2	285.6	48.2
3		WIRB - 4 & 5 (DRI-4&5) FFS of SMS - 1 & 2		RN-230714001514	17.04.2024	7:40 am to 8:20 am	97	5.9	405584	34.5	245.5 48.3	128.5
5	SMS	FES of SMS - 3		RN-230714001519	30.04.2024	12:00 pm to 12:35 pm	90	6.5	366158	22.6	64.7	124.5
6	WRM	Reheating Furnace		RN-230714001S13	15.04.2024	9:10 am to 10:12 am	390	8.9	24683	23.7	59.1	126.4
7	Blooming Mill	Reheating Furnace		RN-230714001S12	15.04.2024	8:00 am to 8:33 am	351	7.1	37186	24.5	78.4	152.4
8	Sinter Plant	Tail ESP		RN-230714001S09	10.04.2024	10:20 am to 11:00 am	95	5.9	263909	30.4	-	-
9	Pellet Plant	Kiln Stack	Apr-24	RN-230714001S16	25.04.2024	11:00 am to 11:52 am	135	10.1	728929	28.5	79.5	96.5
10	MBF-1	Cround Honnor		RN-230714001S10	11.04.2024	10:20 am to 11:05 am	31	5.3	57062	24.1	-	-
12	MDF-1	Stock House		RN-230714001508	11.04.2024	11:40 am to 12:43 pm	40	7.4	20181	18.6	-	-
13		Stoves	1	RN-230714001S06	08.04.2024	11:04 am to 11:44 am	148	5.9	60633	19.2	37.4	65.5
14		Cast House		RN-230714001S02	05.04.2024	11:00 am to 11:33 am	46	7.1	132102	22.3	-	-
15	MBF-2	PCI Stack		RN-230714001S03	05.04.2024	12:03 pm to 12:44 pm	70	13.0	30995	18.2	-	-
16		Stock House		RN-230714001S04	06.04.2024	10:17 am to 11:19 am	44	8.9	101283	21.9	-	-
17		RMHS		RN-230714001S05	06.04.2024	12:00 pm to 12:38 pm	48	6.2	30964	23.4	-	-
18		CPP 25 MW Stack		RN-230714001S03	06.05.2024	08:10 am to 08:44 am	115	6.8	185790	56.4	498.1	384.1
20	CPP	WHRB - 2 & 3 (DRL-2&3)		RN-230714001519	20.05.2024	7:40 am to 8:14 am	176	6.8	126848	31.4	273.5	45.2
20		WHRB - 4 & 5 (DRI-4&5)		RN-230714001S15	20.05.2024	8:40 am to 9:13 am	131	7.1	147185	30.2	324.1	118.4
22	eme	FES of SMS - 1 & 2		RN-230714001S17	21.05.2024	10:50 am to 11:23 am	72	7.1	420954	26.4	50.4	86.9
23	51/15	FES of SMS - 3		RN-230714001S07	15.05.2024	08:04 am to 8:41 am	76	6.5	380841	24.1	68.7	132.4
24	WRM	Reheating Furnace		RN-230714001S16	21.05.2024	07:45 am to 8:47 am	375	8.9	25242	22.7	55.5	113.7
25	Blooming Mill	Reheating Furnace		KN-230714001S08	15.05.2024	09:40 am to 10:07 am	360	8.6	44399	22.4	74.2	143.5
26	Sinter Plant	Tail FSP	May-24	RN-230714001S13	18.05.2024	12:50 pm to 1:27 pm	117	0.5	523189 270473	40.4	58.2	115.8
28	Pellet Plant	Kiln Stack	may-24	RN-230714001812	27.05.2024	11:35 am to 12:04 am	94 134	8.0	578967	20.1	82.4	105.9
29	I ONCE FIAILE	Cast House	1	RN-230714001S11	17.05.2024	08:10 am to 08:53 am	34	5.6	59703	19.7		-
30	MBF-1	Ground Hopper	1	RN-230714001S09	16.05.2024	08:42 am to 9:25 am	50	12.4	25405	19.8	-	-
31		Stock House	1	RN-230714001S10	16.05.2024	7:47 am to 8:19 am	42	7.4	27658	20.1	-	-
32		Stoves		RN-230714001S05	08.05.2024	08:30 am to 09:07 am	118	6.5	71933	21.4	42.4	68.9
33	MBE O	Cast House		RN-230714001S01	03.05.2024	8:12 am to 8:44 am	48	7.4	137456	21.4	-	-
34	WDF-2	PCI Stack		RN-230714001S02	03.05.2025	9:00 am to 9:41 pm	73	13	30725	20.5	-	-
36		RMHS		RN-230714001504	08.05.2024	09:25 am to 10:07 am	40	6.5	32462	18.6	-	-
37	677	WHRB - 2 & 3 (DRI-2&3)		RN-230714001S04	21.06.2024	10:25 am to 10:53 pm	141	8.3	67905	33.4	288.4	49.3
38	CPP	WHRB - 4 & 5 (DRI-4&5)		RN-230714001S08	22.06.2024	11:15 am to 11:47 am	131	7.1	147185	32.6	331.5	123.4
39	SMS	FES of SMS - 1 & 2		RN-230714001S16	27.06.2024	12:10 pm to 12:42 pm	75	7.4	434906	25.1	52.9	89.2
40	0110	FES of SMS - 3		RN-230714001S14	26.06.2024	11:30 am to 12:04 pm	80	6.8	393740	23.6	71.4	144.5
41	WRM	Reheating Furnace		RN-230714001S12	25.06.2024	10:40 am to 11:25 am	360	11.8	34291	26.3	58.9	118.3
42	Blooming Mill	Reheating Furnace		RN-230714001S15	26.06.2024	10:30 am to 11:11 am	365	13.0	66690	24.9	78.1	151.4
43	Pellet Plant	Kiln Stack		RN-230714001517	17.06.2024	11:00 am to 11:32 nm	133	7.4	536734	23.3	86.3	112.7
45	1 01100 1 14110	Cast House	Jun-24	RN-230714001S01	15.06.2024	11:40 am to 12:25 pm	38	5.3	55774	21.5	-	-
46	MBF-1	Ground Hopper		RN-230714001S13	25.06.2024	11:55 am to 12:36 pm	50	13.0	26635	18.8	-	-
47		Stock House		RN-230714001S02	15-06-2024	10:40 am to 11:11 am	45	7.7	28510	18.8	-	-
48		Stoves	-	RN-230714001S09	24.06.2024	10:20 am to 10:54 am	114	6.8	76043	21.9	45.8	71.8
49	MBE O	Cast House		RN-230714001S10	24.06.2024	01:05 pm to 01:39 pm	50	6.8	125521	21.6	-	-
50	MBF-2	PCI Stack		RN-230714001S11	24.06.2024	11:45 am to 12:23 pm	60	6.2	15223	22.1	-	-
52		RMHS	4	RN-230714001500	22.00.2024	01:15 pm to 01:53 pm	40	6.9	30866	19.0	-	-
53		CPP 30 MW Stack		RN-230714001S25	09.07.2024	12:13 pm to 01:03 pm	110	10.6	293437	22.4	522.5	245.8
54		CPP 25 MW Stack		RN-230714001S08	18.07.2024	11:20 am to 11:48 am	125	8.3	220529	53.2	472	362.7
55		WHRB - 1 & 40 TPH	-	RN-230714001S04	15.07.2024	11:38 am to 12:09 pm	185	7.7	140363	34.5	372.4	82.1
56	CPP	WHRB - 2 & 3 (DRI-2&3)		RN-230714001S03	15.07.2024	12:55 pm to 1:57 pm	145	8.9	177847	30.5	294.5	40.2
57		WHRB - 4 & 5 (DRI-4&5)		RN-230714001S05	16.07.2024	11:23am to 12:25 pm	179	8.9	164564	32.4	346.8	126.9
50		Coke Oven WHRB - 1		RN-230714001522 RN-230714001523	02.07.2024	10:41am to 11:01am	163	8.0 8.4	136236	17.5	13.2	42.1
60		FES of SMS - 1 & 2	1	RN-230714001525	20.07.2024	11:15 am to 11:48 am	73	7.1	417757	24.2	46.8	83.4
61	SMS	FES of SMS - 3		RN-230714001S12	20.07.2024	12:45 pm to 1:40 pm	185	10.1	448822	23.1	61.7	128.4
62	WRM	Reheating Furnace		RN-230714001S19	29.07.2024	12:20 pm to 1:15 pm	366	10.1	29043	23.4	51.4	124.7
63	Blooming Mill	Reheating Furnace	Jul-24	RN-230714001S01	13.07.2024	11:40 am to 12:32 pm	370	10.4	52866	24.1	70.1	151.2
64	Sinter Plant	Tail ESP Vila Stacl-		KN-230714001S16	24.07.2024	10:58 am to 11:32 am	96	6.8	302228	27.9	-	-
66	Pellet Plant	Stoves		RN-230714001817	20.07.2024	10:33 am to 11:11 am	134	8 67	31/135 73883	42.4 5.8	33.1	90.4 62.4
67	1000	Cast House	1	RN-230714001S15	24.07.2024	12:15 pm to 12:55 nm	40	5.9	61255	20.4	-	
68	MBF-1	Ground Hopper	1	RN-230714001S02	13.07.2024	12:50 pm to 1:37 pm	53	11.5	23357	19.4	-	-
69		Stock House		RN-230714001S09	19.07.2024	10:43 am to 11:15 am	38	7.4	27983	22.5	-	-
70		Stoves		RN-230714001S06	17.07.2024	12:25 pm to 12:54 pm	134	8	84686	21.8	46.8	62.3
71	MBF-2	PCI Stack		RN-230714001S07	17.07.2024	11:30 am to 12:08 pm	68	14.2	34035	22.5	-	-
72		Stock House		RN-230714001S13	23.07.2024	11:17 am to 11:43 am	40	8.9	102392	20.2	-	-
74		WHRB - 2 & 3 (DRI-28-3)		RN-230714001814	23.07.2024	12:13 pm to 01:01 pm	5U 128	0.8	3300U 160867	∠1.5 33.3	308.8	44.6
75	CPP	WHRB - 4 & 5 (DRI-4&5)		RN-230714001802	29.08.2024	11:26 am to 11:56 am	111	8	174536	36.2	361.1	131.3
76	MBE 0	Stock House	Aug-24	RN-230714001S03	30.08.2024	10:49 am to 11:27 am	42	13.9	159141	22.9	-	-
77	MDF-2	RMHS		RN-230714001S04	30.08.2024	12:10 pm to 12:43 pm	52	7.1	350207	24.3	-	-
78		CPP 25 MW Stack		RN-240715001S12	23.09.2024	12:25 AM to 11:05 AM	120	5.9	159111	59.4	475.5	367.5
79	СРР	WHRB - 2 & 3 (DRI-2&3)		RN-240715001S08	13.09.2024	12:45 PM to 01:47 PM	146	8.9	177876	38.6	312.3	49.4
80	SW6	WHKB - 4 & 5 (DRI-4&5)		KIN-240715001S09	13.09.2024	11:15 AM to 11:46 PM	189	7.7	139593	34.6	364.6 50.2	136.1
82	WRM	Reheating Furnace		RN-240715001811	20.09.2024	11:20 AM to 12:10 PM	365	10.9	31436	23.5	54.9	129.5
83	Blooming Mill	Reheating Furnace	1	RN-240715001S03	03.09.2024	11:15 AM to 11:47 AM	235	7.4	47651	26.2	73.6	156
84	Sinter Diant	Process ESP	Ser 24	RN-240715001S02	12.09.2024	11:12 AM to 11:42 AM	143	7.7	581050	42.3	58.3	124.2
85	Sinter Flant	Tail ESP	5cp-24	RN-240715001S07	12.09.2024	12:45 PM to 01:14 PM	98	8	354783	27.5	-	-
86	Pellet Plant	Kiln Stack		RN-240715001S06	05.09.2024	11:25 AM to 11:57 AM	140	7.4	527410	24.2	89.7	101.2
87	MDE 1	Cast House		RN-240715001S13	24.09.2024	11:35 AM to 12:18 PM	40	5.6	58548	18.4	23.1	27.4
80	MDF-1	Stock House	1	RN-240715001815	24.09.2024	12:35 PM to 02:01 PM	54	13	20309	10.8	-	-
90	··	Cast House	1	RN-240715001804	04.09.2024	11:05 AM to 11:39 AM	51	16	20423	22.6	26.3	26.6
91	MBF-2	PCI Stack	1	RN-240715001805	04.09.2024	12:05 PM to 12:42 PM	65	14.5	35056	21.7	-	-





8 5 2 4 0 n Ø 0 1 4 5 1 0 1 ULR No .: C 1 1 Group: Atmospheric Pollution Sub-Group: Stack Emission Discipline: Chemical Test Report No.: RN-230714001S01 Report issue Date: 18-07-2024 Sample Description: Stack Emission Sample ID: 240715AP11001 Challan No./P.No. Date: 13-07-2023 Challan No./P.O. No.: 4511012880 Issued to: M/s Tata Steel Limited (Formerly Tata Steel Long Products Limited) Gamaharia Phase-V, Adityapur Industrial Area, Seraikela-Kharsawan, Jharkhand-832108 Type of Industry: Iron & Steel Customer Representative: Shweta Kumari Sampling Date: 13-07-2024 (11:40 am to 12:32 pm) Sample Drawn by: IEM Team Protocol: CPCB Guideline (LATS/80/2013-14) & IS Method 11255 Series W.C.: Semi-Cloudy W.D.: NW to SE Field Meteorological Information A. Temp.("C): 32 R.H. (%): 67 Testing Ended: 18-07-2024 Sample Receiving Date: 15-07-2024 Testing Started: 15-07-2024 General Physical Information Stack Height from Ground Level (m) 80 Stack Identification Single Port Hole Height from Ground Level (m) 22 **Emission Due to Reheating Furnace** Inner Dimension of Stack (m) 2 Plat Form Permanent BLOOMING MILL STACK Type of Fuel Used BF gas/ LSD Stack Description Circular Quantity of Fuel Shape of Stack **Production Capacity Construction Material** Metal Sampling Port Available Pollution Control Device (if any) None Flue Gas Volumetric Flow Rate (Nm³/hr): 52866.3 Flue Gas Temperature (*C): 370 Flue Gas Velocity (m/s): 10.4 Test Result Result Norms** SI. NO. Test Methods Unit Parameters IS 11255 (Part-1) mg/Nm³ 24.1 1. Particulates Matter (PM) IS 11255 (Part-2) mg/Nm³ 70.1 2. Sulphur Dioxide (SO2) ---mg/Nm³ 151.2 3. Oxides of Nitrogen (NO₂) IS 11255 (Part-7) 11.4 Carbon Dioxide (CO2) 15 13270:1992 96 v/v 4. ----BDL(MDL-0.2) 5. Carbon Monoxide (CO) 15 13270:1992 ppm 12.2 IS 13270:1992 % v/v 6. Oxygen (O₂) -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	***
Tostod By: Akanksha Sou	rabb

Tested By: Akanksha Sourabh

Sample Drawn By: Rahul Singh & team



Page 1 of 1

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





Test Report 2 4 9 т Ċ 5 1 5 0 0 n 0 0 A ULR No .: 1 1 1 1 Sub-Group: Stack Emission Discipline: Chemical Group: Atmospheric Pollution Test Report No.: RN-230714001S02 Report Issue Date: 18-07-2024 Sample Description: Stack Emission Sample ID: 240715AP11002 Challan No./P.No. Date: 13-07-2023 Challan No./P.O. No.: 4511012880 issued to: M/s Tata Steel Limited (Formerly Tata Steel Long Products Limited) Gamaharia Phase-V, Adityapur Industrial Area, Seraikela-Kharsawan, Jharkhand-832108 Type of Industry: Iron & Steel Customer Representative: Shweta Kumari Sample Drawn by: IEM Team Sampling Date: 13-07-2024 (12:50 pm to 1:37 pm) Protocol: CPCB Guideline (LATS/80/2013-14) & IS Method 11255 Series Field Meteorological Information A. Temp.("C): 32 R.H. (%): 67 W.C.: Semi-Cloudy W.D.: NW to SE Testing Ended: 18-07-2024 Sample Receiving Date: 15-07-2024 Testing Started: 15-07-2024 General Physical Information Stack Height from Ground Level (m) 30 Stack Identification Single Port Hole Height from Ground Level (m) 22 Emission Due to Crushing 0.9 Inner Dimension of Stack (m) Plat Form Permanent Stack Description MBF-1 Ground Hopper Type of Fuel Used RMHS Shape of Stack Circular **Quantity of Fuel** ----Production Capacity Construction Material Metal ____ Pollution Control Device (if any) Sampling Port Available **Bag Filter** Flue Gas Volumetric Flow Rate (Nm³/hr): 23357.1 Flue Gas Temperature (°C): 53 Flue Gas Velocity (m/s): 11.5 Test Result Norms** Parameters **Test Methods** Unit Result SI, NO. Particulates Matter (PM) IS 11255 (Part-1) mg/Nm 19.4 1. ---mg/Nm³ 2. Sulphur Dioxide (SO₂) IS 11255 (Part-2) ---Oxides of Nitrogen (NO₂) IS 11255 (Part-7) mg/Nm³ 3. % v/v Carbon Dioxide (CO₂) 15 13270:1992 4. _ 5. Carbon Monoxide (CO) IS 13270:1992 ppm ----IS 13270:1992 6 Oxygen (O2) % v/v ---d ad D

	Lina of Noport					
Env. Condition of Lab.	Laboratory is maintaining Temperature 27: 2°C and Relative Humidity 65:5 % in all testing area as per 15 196:1966(C).					
Abbreviation	MDL Minimum Detection Limit, BDL: Below Detection Limit					
Norms** is specified						
Remark	448.					
Tostad Bur Akanksha So	urable					

Sample Drawn By: Rahul Singh & team

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

Ranchi-834002, Jharkhand, India



Institute for Environmental Management



					Te	est Re	port	-	0	0	0	1	1	15	T	0
	TC	1 1	1	5	1 5	2 4	0	0	0	U D	0	Stark	Emise	lion		
JLR No.:	1 C		-		Group: Atm	ospheric	spheric Pollution Sub-Group: Stack Emission									
Discipline: (hemical	024	-	-		Т	est Rep	ort No	0.: RN	4-2307	1400	1503		_	-	-
Report Issu	e Date: 25-07-2	024				S	iample [Descri	ption	: Stac	k Emi	ssion				-
Sample ID:	240722AP1200	1				0	hallan I	No./P	No. I	Date:]	13-07	2023				-
Challan No.	/P.O. No.: 4511	012880	_			-		10.211.000								
ssued to: (M/s Tata Steel Formerly Tata Samaharia Ph	Limite Steel L ase-V. /	d Long Adit	g Pro yapu arkha	ducts Limi r Industria and-832108	ited) I Area, 8	_7				Ch	unin	(uma	ri		
	Seraikela-Kila	and	1 0111				Custom	er Rej	prese	ntativ	e: Sn	weus i	sum to	1.57	nm	1
Type of Inc	lustry: Iron & Si	een					Samplin	g Dat	e: 15	-07-20	24 (1	2:55	in to	4.31	Parity	_
Sample Dr	awn by: IEM I	eam	(201	2.14)	& IS Metho	d 11255	Series	(Carlos Mar							CE.	_
Protocol: (PCB Guideline	LAIS/80	1201	5 To	ma der 30	R.H.O	6): 65	W.0	:: Par	rtly Su	nny	W.C).: N	N 10 -	5E	-
Field Mete	orological Infor	mation	1	A. Te	mp. of Star	tod- 22-	07-2024		1	Testing	g Ende	ed: 23	-07-2	024		_
Sample Re	ceiving Date: 2	2-07-202	4		esting star	usical info	rmation						- 1-			-
1					Generalty	Sta	ck Heigh	nt from	n Gro	ound L	evel (m)	t	15	_	_
Stack Iden	ntification	Commo	on	and some		Por	t Hole H	leight	from	Grou	nd Le	vel (n	n) 7	20.2		_
Emission	Due to	Reheat	ting F	Furnad	ce	or Dime	ension	of St	tack (n	n)			3.2			
Plat Form	Plat Form Permaner						no of Fuel Lised						1	Waste Heat		
Stack Des	Stack Description DRI 2,3 (W			(HRB)		Typ	se of Fu	f Eug		-	-				-	
Statk Des	Shape of Stack Circular					Qu	antity o	Fue	alta							
Shape of	Shape of Stack					Pro	oduction	n Capa	ICITY	den fil	Inne	-		ESP		
Construc	Cont Materia	Availa	ble			Po	llution (Contro	of Dev	nce (n	any					
Sampling	Port	- Printerio	-10	-		100 1000	1		Luna	stele E	Inw R	ate (f	4m3/1	nr): 1	7784	46
The Car	Temperature (*	c): 145	Flue	e Gas	Velocity (m	/s): 8.9	Flue	Jas Vi	Diame	eurier		a.c. 1.		-		-
Flue Gas	remperature (Test Resu	It		-	_		-				
		1000000000			Test Me	thods	1	Unit			Resu	It	-	NO	21103	-
SI. NO.	Para	meters	-	-	15 11255	Part-1)	m	z/Nm ³			30.5		-			-
1.	Particulates Ma	tter (PM)	1	-	10 11255 ((Part-2)	m	g/Nm ³			294.	5				-
2.	Sulphur Dioxide	(SO ₂)	-		15 11255	(Part-7)	mg/Nm ³			40.2						_
3.	Oxides of Nitro	gen (NO ₂)	-	-	15 1235	1-1992	9	%v/v			9.6	-			-494	
4.	Carbon Dioxide	(CO ₁)			15 13270	0:1992		ppm				2		_		-
5.	Carbon Monox	ide (CO)			15 13270	0:1992		% v/v			10				-	
6.	Oxygen (O ₂)				EI	nd of Rep	ort	-			tin all	testin	AFRA I	as per	15	-
		Laborato	ory is	mainta	ining Temperat	ure 271 2	C and Rel	ative H	umadit.	4 4929 1						_
Env. Co	ndition of Lab.	196:196	6101	Det	ation Limit B	DL: Below	N Detectio	on Lim	t				_	_	_	-
Abbrev	ation	MDL M	hnimy	im Den	egildin Louise o					-	-	-			-	-
Norms'	' is specified			-								-				
Remark Tested Sample	By: Akanksha So Drawn By: Rah	urabh Il Singh &	tean	n												
												-	10.00	10000	100	2
	C-11/18/2/18/2/19/19/19/19/19/19/19/19/19/19/19/19/19/							R	eview	ved by	1	anno	Auto	prized	1 210	E
Specific Con	tractual Notes -		-	this rann	t.		-		Contraction of the		118	T	- Br	7-1	10	1
1 The lab 2 The off	oratory accepts responsi yort shall not be reprodu	oed except in	full, w	thout et	then approval of th	e MD. Heeroort		T.	alm	m	14/	400	E V	E PY	9	-
Z. 1104/161	and in interacted for ODV (suidance and	i not for	r legal pi	incose or icr advise	address of the latest	à	1.	1.0.00	500.00 1	1	ب الد ال	-	E.M	9	

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

5. Total liability of Institute for Environmental Managament will be limited to involced amount only.

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S. C. Jain) (Taugeer Ahmad Director . Technical Manager R

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





ULR No.	: T	C 1	1 5	1 5	2	4 0	0 0	0 0	1 1 5						
Disciplin	e: Chemical			Group: Atr	nosphe	ric Polluti	on	Sub-Group: Sta	ack Emission						
Report l	ssue Date: 25-0	7-2024			. 1	Test Rep	ort No.:	RN-230714001S	04						
Sample	D: 240722AP12	2002				Sample Description: Stack Emission									
Challan	No /P.O. No.: 4	511012880	5			Challan	No./P.No	Date: 13-07-20	023						
Issued t	o: M/s Tata St (Formerly Ta Gamaharia I Seraikela-Kl	eel Limit ata Steel Phase-V, harsawar	ed Long Pr Adityap	oducts Lim ur Industria and-832108	ited) I Area	3	T.								
vpe of l	Industry: Iron &	Steel		Charles and the second		Custome	r Repres	entative: Shwet	a Kumari						
Sample	Drawn by: IEM	Team				Samplin	Date: 1	5-07-2024 (11:38	8 am to 12:09 pm)						
Protocol	: CPCB Guidelin	e (LATS/80	/2013-14) & IS Method	11255	Series									
Field Me	teorological Inf	ormation	A. Te	mp.("C): 30	R.H. (K): 65	W.C.: Pa	artly Sunny W	.D.: NW to SE						
Sample I	Receiving Date:	22-07-202	24	Testing Start	ed: 22-	07-2024		Testing Ended:	25-07-2024						
				General Phy	nical Info	rmation									
Stack Id	entification	Commo	n		Stack	Height f	rom Grou	und Level (m)	63						
Emission Due to kiln					Port	Hole Hei	ght from	Ground Level (n	n) 32						
Plat Form Available					Inne	Dimens	3.2								
Stack Description WHRB (1&40 T			1&40 TPH)	DRI-1	Type	of Fuel L	Ised		Coal						
Shape of Stack Circular			r	1.	Quar	ntity of Fu	Jel								
Constru	ction Material	RCC			Prod	uction Ca	pacity								
Samplin	g Port	Availab	le		Pollu	tion Con	trol Devid	ce (if any)	ESP						
Flue Ga	s Temperature	(°C): 185	Flue Gas	Velocity(m/s	s): 7.7	Flue G	as Volum	etric Flow Rate	(Nm ³ /hr):140363.						
				Tes	t Result	1		2.2							
SI. NO.	Par	ameters		Test Metho	ods	Uni	it	Result	Norms**						
1.	Particulates Ma	atter (PM)		IS 11255 (Pa	rt-1)	mg/N	lm ³	34.5							
2.	Sulphur Dioxid	e (502)		IS 11255 (Pa	rt-2]	mg/N	m	372.4							
3.	Oxides of Nitro	gen (NO2)		IS 11255 (Pa	rt-7)	mg/N	lm ³	82.1	****						
4,	Carbon Dioxide	e (CO ₂)	2	IS 13270:19	992	% v,	****								
5.	Carbon Monox	ide (CO)		IS 13270:19	992	ppr	n								
6.	Oxygen (O2)			15 13270:19	992	%v/v									
Env. Co	ndition of Lab.	Laboratory 195:19550	is maintaini	ing Temperature	171 1°C	and Relative	Humidity (5525 % in all testing	aree as per 15						
Abbrevi	ation	MDL: Mini	mum Detect	tion Limit, BDL:	Below I	etection L	mit								
Norms**	is specified	***													
Tested E Sample	By: Akanksha Sot Drawn By: Rahul	urabh I Singh & te	am			1									
ecific Contr	ractual Notes -	1912-04/19/0	a		-		Reviewed	by A	uthorized Signato						
1. The labor 2. This repo	atory accepts responsib rt shall not be reproduce	lity for content of id except in full,	of this report. without written	approval of the MO.		-		A de Commentante	SP						

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Laboratory Site - H.No. - A-13, Saket Vihar, Neur Sohrai Bhawan, Harma Housing Colony,

Ranchi-834002, Jharkhand, India





ULR No.:	T	C	1	1	5	1 5	2	4 0	0	0	0	0.	1	1	5	2
Disciplin	e: Chemical	ric Pollution Sub-Group: Stack Emission														
Report Is	ssue Date: 2	5-07-2	2024					Test Rep	port No	.: RN-	23071	400	1805			
Sample I	D: 240722AF	1400	1					Sample	Descri	ption:	Stack	Emi	ssion			_
Challan I	No./P.O. No.	: 4511	01288	30				Challan	No./P.	No. Da	ate: 13	3-07	2023			
Issued to	o: M/s Tata (Formerly Gamahar Seraikela	Steel Tata ia Ph -Khai	l Limi Stee ase-V rsawa	ted I Lor , Ad	ng Pre ityapi harkh	oducts Lim ur Industria and-83210	nited) al Area 8									
Type of I	ndustry: Iron	1 & Ste	eel	0.01-0	00000020	86 6 1 1 2 2 C - 2 C		Custom	er Rep	resent	ative:	Shy	reta K	umari		
Sample	Drawn by: I	EM Te	am					Samplin	g Date	: 16-0	7-2024	1 (11	:23 ar	n to 1	2:25 p	m)
Protocol	: CPCB Guide	line (I	LATS/8	0/20	13-14	& IS Metho	d 1125	5 Series								
Field Me	teorological	Inform	mation	1	A. Te	mp.(°C): 30	R.H. (%): 64	W.C.	: Semi-	Cloud	ly	W.D.	NW	to SE	
Sample F	Receiving Da	te: 22	-07-20	24		Testing Star	ted: 22-	07-2024		Tes	ting E	nde	d: 25-0	7-202		
					-	General Ph	vsical Info	mation								
Stack Ide	entification		Comm	non			Sta	ck Heigh	t from	Groun	d Leve	el (m	1)	63		
Emission	Due to		-		-		Po	rt Hole H	eight f	rom G	round	Lev	el (m)	22.		
Plat For	m		Perma	anent			Inn	er Dimer	nsion o	f Stack	(m)			3.2	-	
Stack De	scription		DRI 4,	5 (W	HRB)		Typ	e of Fue	Used					Coa	đ	
Shape of	f Stack		Circula	ar			Qu	antity of	Fuel							
Construe	ction Materia	al	RCC				Pro	duction	Capaci	ty						
Samplin	g Port		Availa	ble			Po	lution Co	ontrol I	Device	(if any	y)		ESP	-	
Elus Ca	Tomporatu	100	1 1 70	Ch.	- Car	Volocity (m)	1-1-00	Elun	Tar Vol	umote	ic Elen		to /ble	3/hr)	-1645	62 (
Fille Ga	s remperatu	re (c,	j: 1/9	Piu	e Gas	Velocity (III)	st Resul	riue	aas vu	umeu	IC FION	W ILD	te (m	11 / 111 /	.1045	0.5.5
SI, NO.	1	arame	eters			Test Meth	ods	Ur	uit		Res	ult		1	Vorms	
1.	Particulates	Matte	r (PM)			IS 11255 (Pa	art-1)	mg/Nm ³			32.4					_
2.	2. Sulphur Dioxide (SO ₃)			IS 11255 (Pa	art-2}	mg/Nm [®]			346.8				++++			
з.	3. Oxides of Nitrogen (NO ₂) IS 11255 (IS 11255 (Pa	art-7}	mg/l	Nm ³		126	5.9			-			
4.	Carbon Diox	ide (C	02)			15 13270:1	992	95 V	/v	10.8						
5.	Carbon Mor	noxide	(CO)			IS 13270:1	992	pp	m		33	32				
		ren (0) IS 13270:199				the second second	% v/v 8.8									

Env. Condition of Lab.	Laboratory is maintaining Temperature 27: 2°C and Relative Humidity 65:5% in all testing area as per 15 196:1966(C).
Abbreviation	MDL: Minimum Detection Limit, BDL: Below Detection Limit
Norms** is specified	222 ·
Remark	

Tested By: Akanksha Sourabh

Sample Drawn By: Rahul Singh & team

Specific Contractual Notes	Reviewed by Authorized Signatory
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 folar replay of reactive of chinometria hardegenear and be anneo of herocat another only. in case of feedback/ complaints, please send an email at <u>gm iemecol@gmail.com</u> 	(Taugeer Ahmad) (Dt//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 + Anote + Director

Page 1 of 1

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

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

Ranchi-834002, Jharkhand, India





ULR No .:	T	C	1	1	5	1 5	2	4 0	0	0	0	0	1	1	5	3
Discipline	e: Chemica	1	- In the second	-	application page	Group: At	mosphe	ric Pollut	ion	5	ub-Gr	oup:	Stack I	Emissi	on	
Report Is	sue Date:	25-07	-2024					Test Rep	port N	0.: RN	-2307	1400	1\$06			
Sample I	D: 240722/	AP160	01					Sample	Descri	ption:	Stack	Emi	ssion			
Challan N	No./P.O. N	0.: 451	10128	80				Challan	No./P	No. D	ate: 1	3-07	2023			
Issued to	M/s Tat (Former Gamaha Seraike	a Ster ly Tat ria Pl la-Kh	el Lim a Stee hase-\ arsaw	ited el Lo /, Ad	ng Pre lityapi Jharkt	oducts Lin ur Industri and-83210	nited) al Area 08	47								
Type of I	ndustry: In	on & S	iteel		entratero	A A A A A A A A A A A A A A A A A A A		Custom	er Rep	resent	tative	: Shy	veta Ku	umari		
Sample I	Drawn by:	IEM T	eam				-	Samplin	g Date	: 17-0	7-202	4 (12	:25 pn	n to 13	2:54 p	m)
Protocol	CPCB Guid	feline	(LATS/	80/20	013-14	& IS Metho	d 11259	Series								
Field Me	teorologica	al Info	rmatio	n	A. Te	mp.(°C): 31	R.H. (%): 67	W.C.	: Parti	y Sun	ny	W.D.:	NE t	o SW	
Sample R	Receiving D	ate: 2	2-07-2	024		Testing Star	ted: 22-	07-2024	1.000	Te	sting	Ende	d: 25-0	7-202	24	
						General Pt	vysical Info	rmation			_					
Stack Ide	entification	1	Single	2		Stack He	eight fro	om Grou	nd Lev	el (m)		50				
Emission	Due to		Furn	ace		Port Ho	le Heigh	t from G	round	Level	(m)	30		-		
Plat For	m		Perm	anen	t	Inner Di	imensio	n of Stac	k (m)			2.3				
Stack De	scription		MBF-	2 Sto	ve	Type of	Fuel Us	ed				BFg	as			
Shape of	Stack		Circu	lar		Quantit	y of Fue	ł		-						
Construc	tion Mate	rial	RCC	100		Product	ion Cap	acity								
Sampling	g Port		Yes			Pollutio	n Contr	ol Device	(if an	y)		Dry	gas cle	aning	plant	
Flue Gas	s Temperat	ture (*	C): 134	Fl	ue Gas	Velocity (m	/s): 8.0	Flue 0	Gas Vo	lumet	ric Flo	w Ra	ite (Nr	n³/hr)	:8468	5.9
-		0		-	-	Tort Month	andr.	Lie	de .	-	De		_	1.	lorms	
SI. NO.	Bertinden	Paran	neters		-	IE MORE /D	1005	mad	Mm ³	-	2	1.0		-	Units	
1.	Sulphur D	invide	ter (PM		-	IS 11255 /P	art.71	mg/l	mg/Nm ³ 46.8					_		
1	Ovides of	Nitron	0011	1	-	IS 11255 (P	art-75	rog/	Nm ³	-	62.3					_
4.	Carbon Di	oxide (CO.)	1		15 13270	1992	96.1	/v	-	1	12.4				
5.	Carbon M	onoxid	e (CO)	-		IS 13270:1	1992	pp	m		9	9.6				
6.	Oxygen (C),)		-		15 13270:1	1992	\$61	N		8	3.4			- 14 - 14	
	1	af.			-	Enc	d of Repo	rt								

Env. Condition of Lab.	196:1966(C)
Abbreviation	MDL: Minimum Detection Limit, BDL: Below Detection Limit
Norms** is specified	
Remark	
Tested By: Akanksha Sor	urabh

Sample Drawn By: Rahul Singh & team



Page 1 of 1

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





5 5 2 4 0 0 0 1 5 4 т C 1 1 0 n 1 ULR No.: 1 Discipline: Chemical Group: Atmospheric Pollution Sub-Group: Stack Emission Test Report No.: RN-230714001S07 Report Issue Date: 25-07-2024 Sample Description: Stack Emission Sample ID: 240722AP16002 Challan No./P.No. Date: 13-07-2023 Challan No./P.O. No.: 4511012880 Issued to: M/s Tata Steel Limited (Formerly Tata Steel Long Products Limited) Gamaharia Phase-V, Adityapur Industrial Area, Seraikela-Kharsawan, Jharkhand-832108 Customer Representative: Shweta Kumari Type of Industry: Iron & Steel Sampling Date: 17-07-2024 (11:30 am to 12:08 pm) Sample Drawn by: IEM Team Protocol: CPCB Guideline (LATS/80/2013-14) & IS Method 11255 Series W.C.: Partly Sunny W.D.: NE to SW Field Meteorological Information A. Temp.("C): 31 R.H. (%): 67 Testing Ended: 25-07-2024 Sample Receiving Date: 22-07-2024 Testing Started: 22-07-2024 General Physical Information Stack Identification Single Stack Height from Ground Level (m) 30.2 Port Hole Height from Ground Level (m) 30 Emission Due to Furnace 1 Inner Dimension of Stack (m) Plat Form Permanent Type of Fuel Used MBF - 2 PCI RMHS Stack Description Circular Quantity of Fuel -----Shape of Stack Metal Production Capacity Construction Material Sampling Port Available Pollution Control Device (if any) Bag Filter Flue Gas Velocity (m/s): 14.2 Flue Gas Volumetric Flow Rate (Nm³/hr):34034.8 Flue Gas Temperature (°C): 68 Test Result Test Methods Unit Result Norms** SI, NO. Parameters IS 11255 (Part-1) mg/Nm 22.5 1. Particulates Matter (PM) ---mg/Nm³ 2. Sulphur Dioxide (SO₂) IS 11255 (Part-2) ---mg/Nm³ Oxides of Nitrogen (NO2) 15 11255 (Part-7) 3. % v/v 4. Carbon Dioxide (CO₂) IS 13270:1992 --------Carbon Monoxide (CO) IS 13270:1992 5. ppm ____ 6. Oxygen (O2) IS 13270:1992 % v/v -------- End of Report.

Env. Condition of Lab.	Laboratory is maintaining Temperature 37x 3°C and Relative Humidity 55±5 % in all testing area as per 15 196(1966)C).	
Abbreviation	MDL Minimum Detection Limit, BDL Below Detection Limit	
Norms** is specified		
Remark		
Tested But Akapkaba Co.	unbh	

Sample Drawn By: Rahul Singh & team

Authorized Signatory Specific Contractual Notes Reviewed by TOD DA. The laboratory accepts responsibility for content of this report. This report shall not be reproduced except in full, without written approval of the MD. 2 This report is intended for only guidance and not for legal purpose or for advertisement. 3 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 involced amount only. (Dr. S. C. Jain) (Taugeer Ahmad) fi In case of feedback/ complaints, please send an email at gmuemeco@comeil.com On the basis of Quality Checked and Technical data vertiled by the Authorized signatory, the report Director Technical Manager is issued by the Director of the Organization.

Page 1 of 1

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

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

Ranchi-834002, Jharkhand, India





Test Report 5 5 1 5 2 4 0 n 0 0 5 ULR No .: т C 1 1 0 1 1 Group: Atmospheric Pollution Sub-Group: Stack Emission Discipline: Chemical Report Issue Date: 25-07-2024 Test Report No.: RN-230714001S08 Sample Description: Stack Emission Sample ID: 240722AP25001 Challan No./P.No. Date: 04-07-2022 Challan No./P.O. No.: 4511010303 Issued to: M/s Tata Steel Limited (Formerly Tata Steel Long Products Limited) Gamaharia Phase-V, Adityapur Industrial Area, Seraikela-Kharsawan, Jharkhand-832108 Customer Representative: Shweta Kuman Type of Industry: Iron & Steel Sampling Date: 18-07-2024 (11:20 am to 11:48 am) Sample Drawn by: IEM Team Protocol: CPCB Guideline (LATS/80/2013-14) & IS Method 11255 Series Field Meteorological Information A. Temp.(*C): 32 R.H. (%): 65 W.C.: Partly Sunny W.D.: West to East Testing Started: 22-07-2024 Testing Ended: 25-07-2024 Sample Receiving Date:22-07-2024 General Physical Information Stack Identification Stack Height from Ground Level (m) 79.7 Single Port Hole Height from Ground Level (m) 26.5 Emission Due to Boiler Inner Dimension of Stack (m) 3.6 Plat Form Permanent 25 MW Type of Fuel Used Stack Description Coal Shape of Stack Circular **Quantity of Fuel** -----**Production Capacity Construction Material** RCC -----Sampling Port Pollution Control Device (if any) ESP Yes Flue Gas Volumetric Flow Rate (Nm³/hr):220529.3 Flue Gas Temperature (°C): 125 Flue Gas Velocity (m/s): 8.3 Test Result Norms** SI. NO. Parameters Test Methods Unit Result mg/Nm 53.2 1. Particulates Matter (PM) IS 11255 (Part-1) _ IS 11255 (Part-2) mg/Nm³ 472 Sulphur Dioxide (502) 2 mg/Nm³ 362.7 Oxides of Nitrogen (NO2) IS 11255 (Part-7) 3. IS 13270:1992 10.2 4. Carbon Dioxide (CO₂) 96 ----

	End of Report		and the second second second	Manager and Annual A
Env. Condition of Lab.	Laboratory is maintaining Temperature 37: 2°C a 196:1966(C).	nd Relative Humidity	65±5 % in all testing are	a as per 15
Abbreviation	MDL: Minimum Detection Limit, BDL: Below Di	etection Limit		
Norms** is specified		THE REPORT OF A		
Remark				

96

95

IS 13270:1992

15 13270-1992

BDL(MDL-0.2)

10.2

Tested By: Akanksha Sourabh

Oxygen (O.)

5.

8

Sample Drawn By: Rahul Singh & team

Carbon Monoxide (CO)

Specific Contractual Notes -	Reviewed by	Authorized Signatory
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On the basis of Quality Checked and Technical data verified by the Authorized signalory, the report is issued by the Director of the Organization.	Technical Manager	Director
Page 1 of 1	C	finct

Corporate office - A-S, 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





ULR No.	: T	C	1	1	5		1	5	2	4	0	0	0		0	0		1	1	5	6
Disciplin	scipline: Chemical Group: Atmospheric Pollution Sub-Group												up: S	Stac	ck Ei	nissi	on				
Report Is	ssue Date: 2	5-07-2	2024							Tes	st Rep	ort N	o.: R	N-2	307	1400	150)9			
Sample	D: 240722AF	2600	1							Sar	nple (Descr	iption	n: 5	tack	Emis	sio	n			
Challan I	No./P.O. No.	: 4513	10128	80						Cha	allan M	No./P	No.	Dat	e: 1	3-07-	202	23			
Issued t	o: M/s Tata (Formerly Gamahar Seraikela	Stee Tata a Ph -Kha	I Lim Stee ase-\ irsaw	ited el Lor /, Ad /an, J	ng P ityaj	rodu our l	ucts ndu id-8	Lin Listri	nited al Ar) ea,						- 4					
Type of	Industry: Iron	& St	eel	1002100	1-0020					Cu	stome	r Rep	orese	nta	tive:	Shw	eta	Ku	nari		
Sample	Drawn by: II	M Te	am							Sar	mpling	g Date	e: 19	-07-	202	4 (10	:43	am	to 1	1:15 a	(m)
Protocol	: CPCB Guide	line (LATS/	80/20	13-1	4) &	IS M	letho	od 117	55 Se	ries	-									
Field Me	teorological	Infor	matio	n	A. T	emp	.(°C)	: 32	R.H	. (%): 6	55	W.C	.: Par	tly :	Sunn	Y	w.	D.:	NW	to SE	
Sample	Receiving Da	te: 22	07-2	024		Tes	ting	Star	ted: 2	2-07-2	2024		T	esti	ing E	nded	1: 2	5-07	-202	24	
							Gen	eral P	hysical I	nformat	ion		2				_				
Stack Id	entification	5	Single	ž				St	tack H	eight	from	Grou	nd Le	vel	(m)		1	80			
Emission Due to Po						ort Ho	t Hole Height from Ground Level (m)								27						
Plat For	m		Perm	anent			-	In	nner Dimension of Stack (m)								1.2				
Stack De	escription		MBF-	1 510	CK H	OUS	E	T	vpe of	Fuel	Used										
Shape o	f Stack		Circul	lar	Acres 1		-	0	uanti	v of F	uel		-	-		_					
Constru	ction Materi	al	Meta	I	-			P	roduc	tion C	anacit	v	-	-							
Complin	a Port		Avails	able	-	-		P	ollutie	n Cor	trol D	evice	(if a	nu)	_			Bag Filter			
Sampin	SPOR	-	Magnit	aore			-	1.0	onden	in con	ici or b	cence	. for a		_			JOB .			_
Flue Ga	s Temperatu	re (°C): 38	Flu	e Ga	s Vel	ocit	y (m	/s): 7	4 F	lue G	as Vo	lume	etric	Flo	w Ra	te (Nm	/hr)	: 279	82.8
2000020				1.00	10000			Te	est Res	ult							interest of				-
SI. NO.	1	aram	eters				Test	Met	hods	1	Uni	t	1		Ret	sult	-		1	Norms	**
1.	Particulates	Matte	er (PM	}		IS	112	55 (P	art-1)		mg/N	m			22	1.5	-	_			
2.	Sulphur Dio	dde (S	(0)	-		IS	112	55 (P	art-2)		mg/N	m			-						
3.	Oxides of N	troger	n (NO))		15	112	55 (P	art-7)		mg/N	m³			- 2					-	
4.	Carbon Dio	ide (C	01)			1	5 13	270:	1992		% v/	v			+	+			-	-	
5,	Carbon Mor	oxide	(CO)			1	\$ 13	270:	1992	2 ppm						-					
6,	Oxygen (O2)	1				1	S 13	270:	1992	2 % v/v						11-					
		1.2			-		-	-End	of Rep	ort			100 20		10.00	1.10.07				16-	
Env. Co	ndition of La	0. 1	96:1956	5(C)	entri	ning 4	cube	rater	e arra a	e ana i	- Erative	n anni	114 03			10000	18.4		- PRI	55	
Abbrevi	ation	N	IDL: M	nimum	Dete	ction	Limit	8 D I	Belo	w Deter	ction Li	mit				_					
Norms**	is specified	-			_										_						
Romark						_															

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 Total lability of insistue for Environmental Management will be inhibit to involute amount only. In case of feedback/ complaints, please and an email at <u>pm ierhood@omail.com</u> 	(Taugeer Ahmad)	2 / (Dr. S. C. Jain)
In the basis of Quality Checked and Technical data verified by the Authorized signalory, the report s issued by the Director of the Organization.	Technical Manager	Director
Page 1 of 1	R	m ^{et}

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, Harma Housing Colony,

Ranchi-834002, Jharkhand, India





				Tes	t Rep	port							
ULR No.:	T	C 1 1	5	1 5	2	4 0	0	0 0	0 1	1	5	8	
Disciplin	e: Chemical			Group: Atm	osphe	eric Polluti	on	Sub-G	roup: Stack	Emissio	in		
Report Is	sue Date: 25-0	7-2024		100 A		Test Rep	ort No.:	RN-230	714001S11			_	
Sample I	D: 240722AP30	001				Sample	Descript	ion: Stac	k Emission	-		_	
Challan f	No./P.O. No.: 49	11012880				Challan	No./P.N	o. Date:	13-07-2023			_	
Issued to	o: Tata Steel Lo (Formerly kn Gamaharia F Seraikela-Kh	ong Produ own as Ta Phase-V, A aarsawan, .	ct Limi ta Spo dityapı Jharkh	ted nge Iron Lir ur Industrial and-832108	nited Area)							
Type of I	ndustry: Iron &	Steel				Custome	er Repre	sentativ	e: Shweta K	umari			
Sample	Drawn by: IEM	Team	_			Samplin	g Date: 2	20-07-20	24 (11:15 ar	n to 11	:48 am	1)	
Protocol	: CPCB Guideline	e (LATS/80/2	2013-14) & IS Method	1125	5 Series							
ield Me	teorological Inf	ormation	A. Te	mp.("C): 29	R.H.	(%): 64	W.C.: 5	emi-Clo	udy W.D.	: West	to Eas	it	
Sample F	Receiving Date:	22-07-2024		Testing Starte	ed: 22	-07-2024		Testing	Ended: 25-	07-2024	4		
			-	General Phy	sical Inf	ormation	-					_	
Stack Ide	entification	Common			Sta	ck Height	from Gr	ound Le	vel (m)	46.1			
Emission	Due to	Furnace			Po	rt Hole He	ight from	d Level (m)	36				
Plat For	m	Permane	nt		Inn	er Dimen	sion of S		5				
Stack De	scription	SMS 1&2			Typ	e of Fuel	Used		Electricity				
Shape of	f Stack	Circular		1.00	Qu	antity of I	Fuel						
Construe	ction Material	Metal			Pro	duction 0	apacity				_		
Samolio	e Port	Ves	-		Po	lution Co	ntrol De	FES		-			
Flue Ga	s Temperature ("C):73 Fl	ue Gas \	Velocity (m/s) Tes):7.1 It Resul	Flue Ga	s Volum	etric Flo	w Rate (Nm	3/hr):4:	17756.	7	
SI. NO.	Para	meters		Test Metho	ods	Un	it	R	esult	N	orms**		
1.	Particulates Ma	atter (PM)	-	IS 11255 (Pa	rt-1)	mg/N	mg/Nm* 24.			-		_	
2.	Sulphur Dioxide	2 (SO2)	-	IS 11255 (Pa	rt-2)	mg/N	mg/Nm ² 46						
3.	Oxides of Nitro	gen (NO2)		15 11255 (Pa	rt-7)	mg/N	im'		83.4	-		_	
4.	Carbon Dioxide	(CO ₂)	-+	15 13270:19	192	75 V	/v	BDI (I	10.4			_	
5.	Oxygen (0.)	de (CO)		15 13270:15	197	96.0	h	BUL	17.4				
0.	Oxygen (O))			End	of Repo	srt	-	-		-	-0.65	_	
Env. Cor Abbrevia	ndition of Lab. ation	Laboratory is 196:1966(C) MDL: Minimu	maintalni m Detec	ing Temperature	Eelow	and Relative	e Humidity imit	6525 % in	all testing are	a as pay t	5		
Norms**	is specified	***	Unerrolliste		0.000		C275-0						
Remark	he Akankaha Cau	***	_									_	
Sample	Drawn By: Rahul	Singh & team	1	# (* * *		100							
ecific Contr	actual Notes: -	Bu for contact of B	troops al				Reviewe	d by	Auth	orized	Signat	on	
This report This report Any comp Total liabil	It is all not be reproduced the intended for only gui laint about this report sh lity of Institute for Enviro feedbacky compliants of	d except in full, wit dance and not for ould be communic mental Managem lease send an em-	hout written legal purpos ated in writi ent will be i al at cm. en	approval of the MD. se or for advertiseme ng within 7 days of its mited to invoiced and recolligated, com	at. I iasue ount only	5). (T	Www augeer A	A S	aoninenca ita	Pris. c	Jain)		
n the basis of	Quality Checked and Te	schnical data verfi	td by the A	thorized signatory, #	he report	Ter	hnical M	Andrehal	G 1 /2	Dires	tor	-	
issued by the	Director of the Organiza	ation	25556/11902	10494-02506-531	sv-sviit)	rec	annoan N	anayer	1.1	Direc	1.01	_	
age 1 of	1							0	-uni				
	Corporate office	- A-8, Modi I	leights, (OppAll India 8	taidio \$	tation, Ratu	Roud, Ra	inchi, Jha	rkhand - 834	001			

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

Ranchi-834002, Jharkhand, India





ULR No.:	Т	C	1	1	1	5 1	S	2	4	0	0	0	0	0	1	1	5	9
Discipline: Cher	mical					Gro	up: At	mosph	neric I	Polluti	on	S	ub-Gro	up: 5	Stack I	Imissi	ion	
Report Issue Da	ate: 25	5-07-2	2024				10		Te	st Rep	ort N	o.: RN	-23071	1400	1\$12			
Sample ID: 2407	722AP	30002	2						Sa	mpie I	Descri	ption:	Stack	Emis	sion			
Challan No./P.C	D. No.:	4511	0128	80				_	Ch	allan	No./P	No. D	ate: 13	3-07-	2023			
M/s (Forr Gam Sera	Tata merly ahari ikela-	Steel Tata a Pha Khar	Limi Stee ase-V sawa	ited I Lo /, Ad an, J	ng F litya harl	Produc pur In khand-	ts Lin dustri 83210	nited) al Are)8	ea,	2								
Type of Industry	y: Iron	& Ste	eel	2204050		10.0000 m			Cu	stome	er Rep	resen	tative:	Shw	eta Ku	ımari		
Sample Drawn	by: IE	M Te	am				_		Sar	mplin	g Date	20-0	7-2024	4 (12	:45 pn	n to 1	:40 pn	1)
Protocol: CPCB	Guide	line (L	ATS/8	30/20	013-1	14) & IS	Metho	od 112	55 Se	ries	-		_	-		_		
Field Meteorolo	ogical	Inform	natio	n	A. 1	Temp.(c): 29	R.H.	(%): (64	W.C.	: Sem	-Cloud	ly	W.D.:	Wes	t to Ea	ast
Sample Receivi	ng Dat	e: 22-	-07-20	024	_	Testi	ng Star	ted: 2	2-07-	2024		Te	sting E	nded	1: 25-0	7-202	24	_
Stack Identifica	ation	1	Single		-	0	eneral P	hysical Ir	ack H	tion leight	from	Grour	dleve	el (m	1	43		
Emission Due t	0		Eurna	ca.	-	_		P	ort He	nie He	icht f	rom G	round	Leve	1 (m)	33.3		_
Plat Form	-	-	Perma	anent			_	In	ner D	limen	sion o	fStac	k (m)		- tool	5		
Stack Descriptio	on	- 1	SMS -	3	·			T	me of	fFuel	Used				-	Elec	tricity	
Shape of Stack	1		Circul	ar		-		0	uanti	ty of I	Fuel							
Construction N	lateria	1	Metal	1	-			P	oduc	tion C	apaci	tv					1	
Sampling Port			Yes		-			P	ollutio	on Co	ntrol (Device	(if any	()		FES	2	
		-												-				
Flue Gas Temp	eratur	e (*C)	: 185	Flu	ie Gi	as Velo	city (m	/s): 10).1	Flue G	ias Vo	lumet	ric Flow	w Rat	te (Nn	n ³ /hr)	: 448	822
					-		Te	est Resi	ult			and the second second						

SI. NO.	Parameters	Test Methods	Unit	Result	Norms**
1.	Particulates Matter (PM)	IS 11255 (Part-1)	mg/Nm ³	23.1	
2.	Sulphur Dioxide (SO ₂)	IS 11255 (Part-2)	mg/Nm ³	61.7	
3.	Oxides of Nitrogen (NO ₂)	IS 11255 (Part-7)	mg/Nm ³	128.4	
4.	Carbon Dioxide (CO ₂)	15 13270:1992	% v/v	8.2	
5.	Carbon Monoxide (CO)	IS 13270:1992	ppm	32.4	(m) m
6,	Oxygen (O2)	IS 13270:1992	% v/v	10.8	

Env. Condition of Lab.	Leboratury is maintaining Temperature 27± 2°C and Relative Humidity 65±5 % is all testing area as per 15 196:1966(C).
Abbreviation	MDL Minimum Detection Limit. BDL Below Detection Limit
Norms" is specified	
Remark	44A
Tostad By: Akanksha Sou	(right)

Sample Drawn By: Rahul Singh & team

Specific Contractual Notes -	Reviewed by Authorized Signatory
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 four secily of records of complaints, please send an email at <u>on-leneco@gmail.com</u> In case of feedback/ complaints, please send an email at <u>on-leneco@gmail.com</u> 	(Tauqeer Ahmag) 👒 🦪 /(D/ S. C. Jain)
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	the right

Page 1 of 1

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





Test Report 4 0 D 1 1 6 0 5 5 2 0 n n 1 1 ULR No .: т C 1 Group: Atmospheric Pollution Sub-Group: Stack Emission Discipline: Chemical Test Report No.: RN-230714001S13 Report Issue Date: 05-08-2024 Sample Description: Stack Emission Sample ID: 240801AP10001 Challan No./P.No. Date: 13-07-2023 Chailan No./P.O. No.: 4511012880 Issued to: M/s Tata Steel Limited (Formerly Tata Steel Long Products Limited) Gamaharia Phase-V, Adityapur Industrial Area, Seraikela-Kharsawan, Jharkhand-832108 Customer Representative: Shweta Kumari Type of Industry: Iron & Steel Sampling Date: 23-07-2024 (11:17 am to 11:43 am) Sample Drawn by: IEM Team Protocol: CPCB Guideline (LATS/80/2013-14) & IS Method 11255 Series W.C.: Semi-Cloudy W.D.: East to West Field Meteorological Information A. Temp. (%): 29 R.H. (%): 64 Testing Ended: 05-08-2024 Testing Started: 01-08-2024 Sample Receiving Date: 01-08-2024 General Physical Information Stack Height from Ground Level (m) 30 Stack Identification Single 23 Port Hole Height from Ground Level (m) **Emission Due to** 2.1 Inner Dimension of Stack (m) Permanent Plat Form Type of Fuel Used MBF-2 Stock House Stack Description Circular Quantity of Fuel Shape of Stack **Production Capacity** **Construction Material** Metal Pollution Control Device (if any) **Bag Filter** Yes Sampling Port Flue Gas Velocity (m/s): 8.9 Flue Gas Volumetric Flow Rate (Nm³/hr):102391.9 Flue Gas Temperature ("C): 40 Test Result Result Norms** Unit Test Methods SI, NO. Parameters 1. Particulates Matter (PM) IS 11255 (Part-1) mg/Nm 20.2 ---mg/Nm² Sulphur Dioxide (SO₃) IS 11255 (Part-2) 2. ---IS 11255 (Part-7) mg/Nm² Oxides of Nitrogen (NO₂) з. % v/v 4 Carbon Dioxide (CO₂) 15 13270:1992 --------IS 13270:1992 Carbon Monoxide (CO) ppm 5. 6. Oxygen (O2) 15 13270 1992 % v/v ---- End of Report--Laboratory is maintaining Temperature 27: 2°C and Relative Humidity 6515 % in all texting area as per IS Env. Condition of Lab. 196:1966(0) MDL: Minimum Detection Limit, BDL: Below Detection Limit Abbreviation Norms** is specified ---Remark -Tested By: Akanksha Sourabh Sample Drawn By: Rahul Singh & team Specific Contractual Notes Reviewed by Authorized Signatory

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

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

Ranchi-834002, Jharkhand, India





ULR No.:	T	C 1	1	5	1	5	2	4 0	0	0	0	0 1	1 1	6	1			
Disciplin	e: Chemical	are and a second			Group	: Atm	ospher	ic Pollut	tion	S	ub-Grou	p: Stac	k Emiss	ion				
Report Is	sue Date: 05-0	08-2024					1	Test Re	port N	0.: RN	-230714	00151	4					
Sample	D: 240801AP1	0002						Sample	Descri	ption:	Stack E	missio	n					
Challan	No /P.O. No : 4	5110128	80					Chailan	No./P	No. D	ate: 13-	07-202	3					
Issued to	o: M/s Tata St (Formerly T Gamaharia Seraikela-l	teel Limi ata Stee Phase-V Kharsaw	ited el Loi /, Ad van, .	ng Pro ityapu Jhark	oducts ur Indu hand-8	Limi stria	ited) I Area, 18	4					1+2					
Type of I	ndustry: Iron &	Steel		1910010-000	021001-0-0	2006-1420	1	Custom	er Rep	resent	tative: S	hweta	Kumar	is -				
Sample	Drawn by: IEM	Team	-					Samplin	ng Date	: 23-0	7-2024	12:13	pm to 1	12:47	pm)			
Protocol	CPCB Guidelin	e (LATS/S	80/20	113-14	& IS M	ethod	111255	Series	•	and the deside								
Field Me	teorological In	formatio	0	A Te	mn ("Cli	29	RH (%	1.64	wc	: Sem	i-Cloudy	W.I	D.: Eas	t to W	inst			
Cample I	Receiving Date	01.02.20	124	-	Tocting	Starte	ad+ 01-0	18-2024		Te	sting En	ded: 0	5-08-20	74				
sample	Receiving Date.	01-08-20	024		Gana	anal Phy	sical infor	mation		ie	sung en	ueu. o.	-00-20	2.4				
Stack Id	entification			Stack I	Height f	rom G	round	Level (n	n)	30								
Emission	n Due to	-		-	Port H	ole Hei	aht fro	m Gro	und Lev	el (m)	24.5		_					
Plat For	m	anent			-	Inner	Dimensi	ion of		1.4								
Ctack De	tack Description MBF-2 (R					-	Type	f Fuel I	Ised			_	RM	RMHS				
Chang of	f Stack	Circul	e fun	11.57		-	Quant	ity of F	iel	10000	inner (
Snape o	I SLOCK	Lincur	1			-	Drodu	ity of Pi	maelter	(Assess)								
Constru	ction material	werd				-	Produc	ction ca	pacity	Dee	Filter	_						
Samplin	gPort	Yes				_	Polluti	on con	troi De	vice (i	r any)	-	bag	Filter	_			
Flue Ga	s Temperature	(°C): 50	Flu	e Gas	Velocity	y (m/	s): 6.8	Flue	Gas Vo	lumet	ric Flow	Rate (Nm ³ /h): 336	60,3			
		-	1			Tes	t Result						the second second					
SI. NO.	Par	ameters			Test /	Metho	ods	Ur	nit	1	Resu	It		Norms	**			
1.	Particulates M	atter (PM))		15 1125	55 (Pa	rt-1)	mg/	Nm ³		21.5							
2.	Sulphur Dioxid	le (SO2)			IS 1125	55 (Pa	rt-2)	mg/	Nm ³		777				/			
3.	Oxides of Nitra	gen (NO ₂))		15 1125	55 (Pa	rt-7)	mg/	Nm ³									
4.	Carbon Dioxid	e (CO2)			15 132	270:19	992	36	v/v			1						
5.	Carbon Monor	cide (CO)			IS 137	270.19	992	pp	m		200	1		-	2			
б.	Oxygen (O ₂)	Cocolina de la			15 132	270:19	992	%	v/v						-			
	- Han - Sectore	Tractor				-End	of Report	t	-	1000000				2.10				
Env. Cor	ndition of Lab.	196:1966	ity is m	aintaini	ng Temper	rature	111.1.0.8	nd Nelato	ne mumic	LILY 651	5:36-HE AD-0	esting a	rea as pe	1.15				
Abbrevia	ation	MDL Mi	nimum	Detect	ian Limit.	BOL	Below D	election	Limit									
Norms**	is specified	***						an er der h	_	-	-		_					
Remark		***	_	_			_			_								
Sample	Drawn By: Rahu	I Singh & t	team									_						
ecific Contr	actual Notes -	contraction and the	and the second second						Revie	wed b	V	AU	thorize	d Sian	ato			

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

Ranchi-834002, Jharkhand, India





2 4 0 2 ULR No .: т C 1 5 1 5 0 0 0 0 1 1 6 Discipline: Chemical Group: Atmospheric Pollution Sub-Group: Stack Emission Test Report No.: RN-230714001S15 Report Issue Date: 05-08-2024 Sample Description: Stack Emission Sample ID: 240801AP11001 Challan No./P.No. Date: 13-07-2023 Challan No./P.O. No.: 4511012880 Issued to: M/s Tata Steel Limited (Formerly Tata Steel Long Products Limited) Gamaharia Phase-V, Adityapur Industrial Area, Seraikela-Kharsawan, Jharkhand-832108 Type of Industry: Iron & Steel Customer Representative: Shweta Kumari Sampling Date: 24-07-2024 (12:15 pm to 12:55 pm) Sample Drawn by: IEM Team Protocol: CPCB Guideline (LATS/80/2013-14) & IS Method 11255 Series W.C.: Semi-Cloudy W.D.: NE to SW Field Meteorological Information A. Temp.("C): 31 R.H. (%): 68 Testing Ended: 05-08-2024 Sample Receiving Date: 01-08-2024 Testing Started: 01-08-2024 General Physical Information Stack Height from Ground Level (m) Stack Identification Single 30 25 Port Hole Height from Ground Level (m) Emission Due to Furnace 2 Inner Dimension of Stack (m) Plat Form Permanent MBF-1 CAST HOUSE Type of Fuel Used Coke Stack Description Circular **Quantity of Fuel** Shape of Stack **Construction Material** Metal Production Capacity Sampling Port Available Pollution Control Device (if any) **Bag Filter** Flue Gas Volumetric Flow Rate (Nm³/hr): 61254.5 Flue Gas Temperature (°C): 40 Flue Gas Velocity (m/s): 5.9 Test Result Result Norms** SI. NO. Parameters Test Methods Unit IS 11255 (Part-1) mg/Nm^{*} 20.4 1 Particulates Matter (PM) 2 IS 11255 (Part-2) mg/Nm² Sulphur Dioxide (SO₁) ----____ mg/Nm³ 3. Oxides of Nitrogen (NO₂) IS 11255 (Part 7) IS 13270:1992 % v/v 4. Carbon Dioxide (CO₂) ----_ 5. Carbon Monoxide (CO) 15 13270:1992 ppm ----6 Oxygen (O₂) IS 13270:1992 % v/v --------End of Report-

Env. Condition of Lab.	196:1966(C)
Abbreviation	MDL: Minimum Detection Limit, BDL: Below Detection Limit
Norms** is specified	***
Remark	
Tested By: Akanksha Sou	rabh

Sample Drawn By: Rahul Singh & team

Specific Contractual Notes -	Reviewed by	Authorized Signatory
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Corporate office - A-8, Modi Heights, Opp.-All India Radio Station, Ratu Road, Ranchi, Jharkhand - 834001

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

Ranchi-834002, Jharkhand, India





ULR No.:	T	С	1	1	5	1	5	2	4	0	0	0)	0	0	1		1	6	3
Disciplin	e: Chemical					Gro	up: Ati	mosph	eric P	olluti	an		Su	b-Gro	up:	Staci	(Er	missi	on	
Report la	ssue Date: 0	5-08-20	024			10.00	1917-00-00		Tes	t Rep	ort N	o.:	RN-	23071	400	1516	j.			
Sample I	D: 240801A	211002	2						San	nple I	Descr	iptic	on: S	Stack	Emi	ssion				
Challan I	No./P.O. No.	: 45110	0128	80					Cha	illan I	No./P	.No	. Da	te: 13	3-07	-202	3			
Issued t	o: M/s Tata (Formerly Gamahar Seraikela	Steel Tata ia Pha -Khar	Limi Stee se-V	ited I Lor /, Adi an, J	ig Pri tyapi harki	oduct ur Inc	ts Lin Iustria 83210	nited) al Are 08	a,											
Type of I	Industry: Iron	& Ste	el				9-00-040-		Cus	tome	er Rep	res	enta	ative:	Shv	veta I	Kur	mari		
Sample	Drawn by: If	EM Tea	am						San	nplin	g Dat	e: 24	4-07	-2024	1 (10):58 a	m	to 11	1:32 a	m)
Protocol	: CPCB Guide	line (L	ATS/8	80/20	13-14	& 15	Metho	d 1125	5 Ser	ies										
Field Me	teorological	Inform	atio	n	A. Te	mp.(*	c): 31	R.H.	(%): 6	8	W.C	.: Se	mi-	Cloud	y.	W.D	.:	NE to	o SW	
Sample I	ample Receiving Date: 01-08-2024						g Star	ted: 01	-08-2	2024			Test	ting E	nde	d: 05	-08	3-202	4	
					- 10	G	eneral Ph	rysical Ini	formati	on										
Stack Id	entification	S	Single	1				Sta	ack H	el (m	1)		50							
Emission	n Due to	-	++			rt Hole Height from Ground Level)						
Plat For	m	A	Availa	able			er Dimension of Stack (m)									4.49				
Stack De	escription	S	inter	Plant	Dedu	sting	-	pe of Fuel Used								T	*****			
Shape o	f Stack	0	ircul	ar				Qu	antit	y of f	uel	_					T			
Constru	ction Materi	al R	RCC	-				Pr	oduction Capacity								T			
Samplin	g Port	Y	fes					Po	Illution Control Device (if any)								ESP			
Flue Ga	s Temperatu	re (°C):	96	Flu	e Gas	Veloc	ity (m,	/s):6.8	Flue Gas Volumetric Flow Rate (Nm ³ /hr):302228											
					121		Te	st Resu	It					-		_		_	_	
SI. NO.	1	Paramet	ters			Tes	t Meth	nods		Uni	t			Res	ult		_	N	lorms'	•
1.	Particulates	Matter	(PM)	k.		IS 11	255 (P	art-1)		mg/N	m		_	27	.9		_	-		
2.	Sulphur Dio	xide (SC	2)	_	-	15 11	255 (P	art-2)	-	mg/N	lm°	-	_		*		_	-		
3.	Oxides of N	trogen	(NO ₃)	1	-	15 11	255 (P	art-7)		mg/N	im"	-		-	-		_			
4.	4. Carbon Dioxide (CO ₂)					IS 1	3270:3	1992	-	% V,	NV	+			-	_	-			
5. Carbon Monoxide (CO)					15 1	3270:1	1992	-	ppr	n 6.	(444)					-				
6. Oxygen (O ₂)				-	12.1	52/U.1	of Ren	ort	70 V/	(V	-	-		-	_					
Env. Cor	ndition of La	b. 196	1 brato 6:1966	ry is ma i(C).	intaini	ng Tem	perature	278 270	and R	elativa	Homi	fity I	6525	% in al	l test	ing an	12.0	is per	15	
Abbrevia	ation	MD	H. Mi	nimum	mum Detection Limit, BDL: Below Detection Limit															
Norms**	is specified	***	8									-			-		_			
Remark	Service and the service of the servi								_	_		-					_			_

Tested By: Akanksha Sourabh

Sample Drawn By: Rahul Singh & team



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

Ranchi-834002, Jharkhand, India





						Te	est Re	port								
ULR No.	: T	C 1	1	5	1	5	2	4 0	0	0	0	0	1	1	6	1
Disciplin	e: Chemical				Grou	up: Atr	mosphe	ric Pollu	ition		Sub-Gr	oup: S	Stack	Emissi	on	
Report I	ssue Date: 05-0	08-2024			0.000			Test Re	port N	0.: R	N-2307	1400	1517			
Sample	D: 240801AP1	3001						Sample	Descri	iption	: Stack	Emis	sion			_
Challan	No./P.O. No.: 4	51101288	0					Challar	No./P	No.	Date: 1	3-07-	2023			
Issued t	o: M/s Tata Si (Formerly T Gamaharia Seraikela-K	eel Limit ata Stee Phase-V (harsawa	ted Lor , Adi	ng Pro ityapi harki	oduct ur Ind	ts Lim Iustria	nited) al Area 08		1							
Type of	Industry: Iron 8	Steel						Custon	ner Rep	rese	ntative	: Shw	eta K	umari	6	
Sample	Drawn by: IEM	Team	_					Sampli	ng Date	e: 26-	07-202	4 (11	:50 ar	n to 1	2:19 p	m)
Protocol	I: CPCB Guidelin	e (LATS/8	0/20	13-14	8 15 1	Metho	d 11259	5 Series							aucounate	-
Field Me	eteorological In	formation		A. Te	mp.(*C	: 31	R.H. (%): 67	W.C	.: Par	tly Sun	ny	W.D.	: East	to We	est
Sample	Receiving Date:	01-08-20	24		Testin	g Star	ted: 01-	08-2024	1	T	esting	Ender	d: 05-0	08-202	24	-
sample	incerting pare			1	Ge	neral Ph	visical info	rmation		-						-
Stack Id	entification	Single			1020	ana di	Stac	k Height	t from (Groun	nd Leve	el (m)		78		
Emissio	n Due to					Port	Hole He	eight fr	(m)	31						
Plat For	lat Form Permane			Inne				r Dimen	sion of		6.0	-	_			
Stack De	escription	Pellet P	lant	(Kiln Stack) Type				of Fuel	Used		Coal					
Shane o	fStack	Circula	ar.	Qu				ntity of	Fuel				_			
Constru	ction Material	RCC	**	Pro				luction	Canacit							
Comolio	a Dest	Var	-	_			Palle	tion Co	atrol D		ESP					
Sampin	IS POIL	Tes	-			-	For	ition co	incidi D	evice	(in any	"		c.Jr	-	
Flue Gas	Temperature	°C): 134	Flu	e Gas	Veloci	ity (m	(s): 8.0	Flue	Gas Vo	lume	tric Flo	w Ra	te (Nr	m³/hr)	:.5771	135
			-			Te	et Result	1			and other taxable					
SI NO	Par	ameters	_	-	Tes	t Meth	ods	U	nit	1	Re	sult	-		Vorms	••
1	Particulates M	atter (PM)	_	-	15 11	255 IP	art-1)	mg	/Nm ³	-	2	2.4				
2.	Sulphur Dioxid	e (\$0,1	-		15 11	255 (P	art-2)	mg	/Nm ³	1	8	6.2		-		_
3.	Oxides of Nitro	gen (NO ₂)			15 11	255 (P	art-7]	mg	/Nm ³	-	9	6.4		-		_
4.	Carbon Dioxid	e (CO2)	2		IS 1	3270:1	1992	%	v/v	1	1	6.8				
5.	Carbon Mono	de (CO)			IS 1	3270:1	992	P	pm			52				
6.	Oxygen (O ₂)	and the set of the set			IS 1	3270:1	992	% v/v 16.6								
		1000000000		www.		End	of Repo	rt	in and a second						121	_
Env. Co	ndition of Lab.	196:1946(y 13 /8. (C).	entern	ng temp	serature	: 17: 1 C	and netati	ve Humid	54Y 85	13 74 10 1	an tean	ug area	as per	15	
	ation	MDL: Min	umum	Detect	ion Lim	it, BDL	Below I	Detection	Limit			_				
Abbrevi				_	_						-	_	_	_		_
Abbrevia Norms**	is specified	and the second s														

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 Foal tabley of freedback/ complaints, please send on email at <u>universeccipanal.com</u> 	(Tauqeer Ahmad) \	(Dr. S. C. Jain)
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Page 1 of 1		list sites

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





ULR No.	T	C	1	1	T	5	1	5	2	4	0	0	0	0	0	1	1	6	6			
Disciplin	e: Chemical			-			Gro	up: At	mosp	heric l	Pollut	ion	S	ub-Gro	up: S	Stack	Emissi	on				
Report Is	ssue Date:	05-08	-2024					202		Te	st Rep	ort N	.: RN	-2307	400	1519						
Sample I	D: 240801A	P160	01							Sa	mple	Descri	ption	Stack	Emis	sion						
Challan I	No./P.O. No	.: 451	10128	880						Ch	allan	No./P	No. D	ate: 1	3-07-	2023						
Issued t	o: M/s Tata (Formeri Gamaha Seraikeli	a Stee ly Tat ria Pl a-Kha	el Lim ta Ste hase- arsaw	el Lo V, Ac	ong dity Jha	Pro	oduci ur Ind	ts Lin Iustri 83210	nitec ial Ai	l) rea,												
Type of I	industry: Irc	on & S	iteel			00000				Cu	stome	er Rep	resen	tative:	Shw	eta Ki	Imari					
Sample	Drawn by:	IEM T	eam						_	Sa	mplin	g Date	: 29-0	7-202	\$ (12	20 pm	n to 1	15 pm	1)			
Protocol	: CPCB Guid	leline	(LATS	80/2	013	-14)	& 151	Meth	od 11	255 Se	ries	-							-			
Field Me	teorologica	I Info	rmatic	n	A	. Te	mp.("	:): 28	R.F	4. (%): 1	63	W.C.	: Sem	i-Cloud	ly	W.D.:	NW	to SE				
ample Receiving Date: 01-08-2024							Testin	g Star	rted:	01-08-	2024		Te	sting E	ndec	1: 05-0	8-202	4	_			
Sample Receiving Date: 01-06-2024							Ge	eneral P	hysical	Informat	tion		1					704	_			
Stack Identification Single								00000	5	stack H	leight	from	Grou	nd Leve	el (m)	55					
Emission Due to Reheating									F	Port Ho	rt Hole Height from Ground Level (m							30				
Plat For	m		Perm	anen	t	-			1	nner D	imen		1.5		_							
Stack De	scription		WRA	ISTA	CK			-	1	vpe of	f Fuel		BF/L	DO	_							
Shape of	fStack		Circu	lar			-		(Duanti	ty of I	Fuel	_									
Constru	tion Mater	ial	Meta	al.		_			1	roduc	oduction Capacity							11112				
Samplin	e Port		Yes		-				1	ollutio	on Co	ntrol D	evice	(if any	1)		Non	e	_			
Serie	Bruit		1.6.5	-																		
Flue Ga	s Temperat	ure (*	C): 366	F	ue	Gas	Veloc	ity (m	r/s): 1 est Re	0.1 I sult	Flue G	ias Vo	umet	ric Flo	w Ra	te (Nr	n³/hr)	: 2904	2.7			
SI, NO,		Paran	neters		-		Tes	t Met	hods	T	Un	it	1	Res	ult			lorms*	•			
1.	Particulate	s Mat	ter (PM	1)			15 11	255 (F	art-1		mg/N	m		23	.4				-			
2.	Sulphur Di	oxide	(SO ₁)				15 11	255 (F	art-2		mg/N	im ³		51	.4							
З.	Oxides of I	Vitroge	en (NO	1			15 11	255 (#	art-7		mg/N	im ³		12	4.7			1444.7				
4.	Carbon Did	oxide (CO2)				15 1	3270:	1992		% v,	/v		10	.4							
5.	5. Carbon Monoxide (CO)				IS 1	3270:	1992		ppm BDL(MDL-0.2)				2)		***							
6. Oxygen (O ₂)					15 1	3270:	1992		% v,	/v		11	.6									
Env. Cor	dition of L	ab.	Laborato 196:196	ery is a	nain	tainir	ig Tem;	En	d of Re	C and	Relative	e Humid	17 65:	5 % in al	l texti	ng area	as per	is	_			
Abbrevia	tion	115	MDL M	in mur	n De	electi	ion Lim	it. BDI	Beld	w Dete	ction L	mit										
Norms**	is specified	1	***										_	_	-							

Tested By: Akanksha Sourabh

Sample Drawn By: Rahul Singh & team

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

Ranchi-834002, Jharkhand, India





														_	-		-	-	
ULR No.	: T	C	1	1	5	1	5	2	4	0	0	0	0	0	1	3	2	1	
Disciplin	mosp	spheric Pollution Sub-Group: Stack Emission																	
Report I	ssue Date: 0	6-07-2	2024	1			9000400		Te	st Rep	ort Ne	.: RN	-2307	1400	1\$22				
Sample	D: 240703A	0100	1				-		Sa	mple	Descri	ption	Stack	Emi	ssion				
Challan	No./P.O. No.	: 4511	0128	80					Challan No./P.No. Date: 13-07-2023										
Issued t	o: M/s Tata (Formerly Gamahar Seraikela	Steel Tata a Pha -Khar	Lim Stee ase-	ited el Lor V, Adi an, Jł	ig Pr tyap narkh	oduc ur Inc	ts Lin Iustri 8321(nited al Ar 08	l) 'ea,										
Type of	industry: Iron	8 Ste	eel		0.0000			101	Cu	stome	er Rep	resen	tative	: Shy	veta Ku	mari			
Sample	Drawn by: If	M Te	am						Sa	mplin	g Date	: 02-0	7-202	4 (10	:41 am	to 1	1:01 a	m)	
Protocol	: CPCB Guide	line (L	ATS/	80/20	13-14) & 15	Metho	od 11	255 Se	ries	-								
Field Me	teorological	Inform	natio	n	A. Te	mp.("	c): 27	R.F	1. (%): 1	69	W.C.	: Sem	i Cloud	fγ	W.D.:	NE -	SW		
Sample	Receiving Da	te: 03-	-07-2	024		Testin	g Star	rted: (03-07-	2024	1	Te	sting I	Ende	d: 06-0	7-202	24		
1 - P						G	eneral P	hysical	Informat	tion				144.50					
Stack Id	entification		Singl	e			arsonno	1	Stack H	Height	45								
Emission Due to Oven								1	Port H	rt Hole Height from Ground Level (m)									
Plat Form Permanent								1	Inner I	ner Dimension of Stack (m)									
Stack Description Coke Oven W						81		-	Type o	f Fuel	Used					Coa	al		
Shape o	f Stack		Circu	ılar				1	Quant	Quantity of Fuel									
Constru	ction Materi	al	Meta	31				Production Capacity							10000				
Samplin	g Port		Yes					1	Pollution Control Device (if any)							7327			
Flue Gas	Temperatur	e (°C):	163	Flue	Gas	Veloci	ty (m/	(s):8.5	5 Fl	ue Ga	s Volu	metri	c Flow	Rat	e (Nm ³	/hr):	13823	17.8	
	1					-		baction and				-			_	1 .	larme	••	
SI. NO.	1	'aramo	eters		-	Tes	st Met	nods		Un	IL I		Ke	suit	_		vorms		
1.	Particulates	Matte	r (PM	0	-	15 11	255 (P	art-1)		mg/N	em 3	-	7	6.3		-			
2. Sulphur Dioxide (SO ₂)				-	IS 11255 (Part-2)				mg/h	(m ¹	-	4	2.1	-					
Carbon Dioxide (CO.)					-	(5 11255 (Part-/)			-	95 U	10	-	42.1				100		
5 Carbon Monoxide (CO)						IS 13270:1992				Por	m	-	1	18		-			
6	Oxygen (O.	lovine	1001			IS	13270	1992		56 V	/v	1	8	.7					
M1	authen (o)	- 55	-	_			End	d of Re	port	-	3	-			_		a:		
Env. Co	ndition of La	b. 19	borato 96 196	sry is ma 6(C).	intein	ing Tem	peratur	e 27± 2	C and	Belativi	e Humid	ity 65±	5 % in a	îl test	ing area	as per	15		
Abbrevi	ation	M	DL M	inimum	Detec	lion Lin	nit, BOI	L Beld	w Dete	ction L	mit	_	_			_	_		
Norms**	is specified									_									

Remark

Tested By: Akanksha Sourabh

Sample Drawn By: Rahul Singh & team

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Reviewed by Authorized Signatory
T. Ahmad (5 g)
(Tauqeer Ahmaid) (Dr/S. C. Jain)
Technical Manager

Page 1 of 1

Corporate effice - 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



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LR No.: T C 1 1 5 1 5 2 4 0 0 0 1 3 2 Discipline: Chemical Group: Atmospheric Pollution Sub-Group: Stack Emission Test Report Issue Date: 06-07-2024 Test Report No.: RN-230714001523 ample ID: 240703AP01002 Sample Description: Stack Emission Challan No./P.O. No.: 4511012880 Challan No./P.No. Date: 13-07-2023 second second <t< th=""><th></th><th></th><th></th><th></th><th></th><th>le</th><th>st kep</th><th>JOIL</th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th></t<>						le	st kep	JOIL											
Nacipline: Chemical Group: Atmospheric Pollution Sub-Group: Stack Emission teport Issue Date: 06-07-2024 Test Report No.: RN-230714001523 ample ID: 240703AP01002 Sample Description: Stack Emission M/s Tata Steel Limited (Formerly Tata Steel Long Products Limited) Gamaharia Phase-V, Adityapur Industrial Area, Seraikela-Kharsawan, Jharkhand-832108 Ype of Industry: Iron & Steel Sample Description: Stack Emission teld Meteorological Information A. Temp.r(c): 27 R.H. (s): 69 W.C.: Semi Cloudy W.D.: NE – SW ample Receiving Date: 03-07-2024 Testing Started: 03-07-2024 Testing Ended: 06-07-2024 Testing Stack Height from Ground Level (m) 45 Emission Due to Oven Port Hole Height from Ground Level (m) 32 Part Form Permanent Inner Dimension of Stack (m) 2.9 Pat Kork deriver Quantity of Fuel Construction Material Metal Production Capacity Flue Gas Temperature (*C): 161 Flue Gas Velocity (m/s): 8.4 Flue Gas Volumetric Flow Rate (Nm ³ /hr):137190 Test Result Stack Description Coke Oven WHRB 2 Type of Fuel Used Coal Stack Description Material Metal Production Capacity Pat Form Permanent Result Flue Gas Temperature (*C): 161 Flue Gas Velocity (m/s): 8.4 Flue Gas Volumetric Flow Rate (Nm ³ /hr):137190 Test Result St. NO. Parameters Test Methods Unit Result Norms** St. Oxides of Nitrogen (NO ₂) IS 11255 (Part 2) mg/Nm ³ 82.3 2. Sulphur Dioxide (SO ₂) IS 11255 (Part 2) mg/Nm ³ 84.3 St. Carbon Monoxide (CO) IS 13270:1992 ppm 54 St. Condition of Lab. Laboratory Is matationg Temperature 32.2 C St. Condition of Lab. Laboratory Is matationg Temperature 22.2 C and Relative Rumidity 852.5 N in all ta	ULR No.:	T	C 1	1	5	1 5	2	4 0	0	0	0	0	1	3	2	2			
Report Issue Date: 06-07-2024 Test Report No.: RN-230714001523 ample ID: 240703AP01002 Sample Description: Stack Emission challan No./P.O. No.: 4511012880 Challan No./P.No. Date: 13-07-2023 seued to: M/s Tata Steel Limited (Formerly Tata Steel Long Products Limited) Gamaharia Phase-V, Adityapur Industrial Area, Seraikela-Kharsawan, Jharkhand-832108 Ype of Industry: Iron & Steel Customer Representative: Shweta Kumari Sample Drawn by: IEM Team State Meteorological Information A. Temp.4*(5): 27 Protocol: CPCB Guideline (LATS/80/2013-14) & IS Method 11255 Series Testing Endet: 06-07-2024 Testing Statted: 03-07-2024 Testing Endet: 06-07-2024 Testing Endet: 03-07-2024 Testing Ended: 06-07-2024 General Physical Information A. Temp.4*(5): 27 Stack Identification Single Stack Identification Single Stack Identification Single Port Hole Height from Ground Level (m) 32 Plat Form Permanent Inner Dimension of Stack (m) 2.9 Stack Description Coke Oven WHRB 2 Type of Fuel Used Coal Construction Material Metal Production Capacity Sampling Port Yes	Disciplin	e: Chemical				Group: Ate	mosphe	eric Pollution Sub-Group: Stack Emission											
ample ID: 240703AP01002 Sample Description: Stack Emission challan No./P.O. No:: 4511012880 Challan No./P.No. Date: 13-07-2023 ssued to: M/s Tata Steel Limited (Formerly Tata Steel Long Products Limited) Gamaharia Phase-V, Adityapur Industrial Area, Seraikela-Kharsawan, Jharkhand-832108 Customer Representative: Shweta Kumari Sype of Industry: Iron & Steel Customer Representative: Shweta Kumari Sampling Date: 02.07.2024 (11:46 am to 12:35 pm) rotocol: CPG Guideline (LATS/80/2013-14) & IS Method 11255 Series Sampling Date: 03.07.2024 (11:46 am to 12:35 pm) rotocol: CPG Guideline (LATS/80/2013-14) & IS Method 11255 Series Testing Ended: 06-07-2024 ield Meteorological Information A. Temp.(*C): 27 R.H. (%): 69 W.C.: Semi Cloudy W.D.: NE - SW ample Receiving Date: 03-07-2024 Testing Started: 03-07-2024 Testing Ended: 06-07-2024 Testing Ended: 06-07-2024 General Physical Information Single Stack Height from Ground Level (m) 45 Stack Identification Single Stack Height from Ground Level (m) 32 Stack Description Coke Oven WHRB 2 Type of Fuel Used Coal Construction Material Metal Production Capacity Stack Description Coke Oven WHRB 2 Fue Gas Volumetric Flow Rate (Nm*/hr):137190 Test Result Metal Production Capacity	Report Is	sue Date: 06-0	7-2024					Test Rep	ort No	RN:	-23071	14001	S23						
Challan No./P.O. No.: 4511012880 Challan No./P.No. Date: 13-07-2023 Secal to: M/s Tata Steel Limited (Formerly Tata Steel Long Products Limited) Gamaharia Phase-V, Adityapur Industrial Area, Seraikela-Kharsawan, Jharkhand-832108 Ype of Industry: Iron & Steel Customer Representative: Shweta Kumari Sample Drawn by: IEM Team Sampling Date: 02.07.2024 (11:46 am to 12:35 pm) irotocol: CPCB Guideline (LATS/80/2013-14) & IS Method 11255 Series W.C.: Semi Cloudy W.D.: NE - SW ield Meteorological Information A. Temp.4°C; 27 R.H. (%): 69 W.C.: Semi Cloudy W.D.: NE - SW ample Receiving Date: 03-07-2024 Testing Started: 03-07-2024 Testing Ended: 06-07-2024 General Physical Information Stack Height from Ground Level (m) 45 Single Stack Height from Ground Level (m) 32 Plat Form Pert Hole Height from Ground Level (m) 32 Stack Description Coke Oven WHRB 2 Type of Fuel Used Coal Construction Material Metal Production Capacity Sampling Port Yes Pollution Control Device (if any) Flue Gas Temperature (*C): 161 Flue Gas Velocity (m/s): 8.4 Flue Gas Volumetric Flow Rate (Nm ³ /hr):137190 Test Resui	Sample I	D: 240703AP01	002					Sample	Descrip	otion	Stack	Emis	sion						
ssued to: M/s Tata Steel Limited (Formerly Tata Steel Long Products Limited) Gamaharia Phase-V, Adityapur Industrial Area, Seraikela-Kharsawan, Jharkhand-832108 Ype of Industry: Iron & Steel iample Drawn by: IEM Team Sampling Date: 02.07.2024 (11:46 am to 12:35 pm) rotocol: CPCB Guideline (LATS/80/2013-14) & IS Method 11255 Series ield Meteorological Information A. Temp.(*C): 27 R.H. (%): 69 W.C.: Semi Cloudy W.D.: NE - SW ample Receiving Date: 03-07-2024 Testing Started: 03-07-2024 Testing Started: 03-07-2024 Testing Ended: 06-07-2024 Central Physical Information Stack Identification Single Stack Height from Ground Level (m) Stack Height from Ground Level (m) Stack Leght from Ground Level (m) Stack Leght from Ground Level (m) Stack Description Coke Oven WHRB 2 Type of Fuel Used Coal Construction Material Metal Production Capacity Flue Gas Temperature (*C): 161 Flue Gas Velocity (m/s): 8.4 Flue Gas Volumetric Flow Rate (Nm* ³ /hr):137190 Test Result Stack Gor Information Stack Gor Information Stack Gor Information Stack Gor Information Stack Gor Information Stack Stack Clincular Quantity of Fuel 	Challan M	No./P.O. No.: 4	511012880	0				Challan	No./P.I	No. D	ate: 1	3-07-2	2023						
ype of Industry: Iron & Steel Customer Representative: Shweta Kumari Sample Drawn by: IEM Team Sampling Date: 02.07.2024 (11:46 am to 12:35 pm) Protocol: CPCB Guideline (LATS/80/2013-14) & IS Method 11255 Series Iteld Meteorological Information A. Temp.(*C): 27 R.H. (%): 69 W.C.: Semi Cloudy W.D.: NE - SW ample Receiving Date: 03-07-2024 Testing Ended: 06-07-2024 Testing Ended: 06-07-2024 Testing Ended: 06-07-2024 General Physical Information Stack Height from Ground Level (m) 45 Emission Due to Oven Port Hole Height from Ground Level (m) 32 Plat Form Permanent Inner Dimension of Stack (m) 2.9 Stack Description Coke Oven WHRB 2 Type of Fuel Used Coal Shape of Stack Circular Quantity of Fuel Construction Material Metal Production Capacity Stack Description Coke Oven WHRB 2 Test Result Norms** Flue Gas Temperature (*C): 161 Flue Gas Velocity (m/s): 8.4 Flue Gas Volumetric Flow Rate (Nm ³ /hr):137190 Test Result Test Methods Unit Result Norms** Si. NO. Parameters Test Methods	issued to	o: M/s Tata Sto (Formerly Ta Gamaharia I Seraikela-Kl	eel Limite ata Steel Phase-V, harsawar	ed Lon Adit	g Pro tyapi arkh	oducts Lim ur Industria and-83210	nited) al Area 18												
Sampling Date: 02.07.2024 (11:46 am to 12:35 pm) Sampling Date: 02.07.2024 (11:46 am to 12:35 pm) Protocol: CPCB Guideline (LATS/80/2013-14) & IS Method 11255 Series ield Meteorological Information A. Temp.(*C): 27 R.H. (%): 69 W.C.: Semi Cloudy W.D.: NE - SW General Physical Information Stack Identification Single Stack Height from Ground Level (m) 45 Construction Material Plat Form Permanent Inner Dimension of Stack (m) 2.9 Stack Description Coke Oven WHRB 2 Type of Fuel Used Coal Construction Material Metal Production Capacity Sampling Port Yes Pollution Control Device (if any) Flue Gas Temperature (*C): 161 Flue Gas Velocity (m/s): 8.4 Flue Gas Volumetric Flow Rate (Nm³/hr):137190 Test Methods Unit Result Sinck Do Norde (CO) IS 1225 (Part-1) mg/Nm³ Since On Nonoxide (CO) IS 13270:1992 % v/v Since On Nonoxide (CO) IS 13270:1992 Since Device (if Ray)	Type of I	ndustry: Iron &	Steel					Custom	er Repr	esen	tative:	Shw	eta Ku	mari					
Protocol: CPCB Guideline (LATS/80/2013-14) & IS Method 11255 Series ield Meteorological Information A. Temp.(*C): 27 R.H. (%): 69 W.C.: Semi Cloudy W.D.: NE - SW ample Receiving Date: 03-07-2024 Testing Started: 03-07-2024 Testing Ended: 06-07-2024 General Physical Information 4. Testing Ended: 06-07-2024 General Physical Information Stack Identification Single Stack Height from Ground Level (m) 45 Bindication Colspan="2">Colspan="2"Colspan="2">Colspan="2"Colspa	Sample	Drawn by: IEM	Team	_	-			Samplin	g Date	: 02.0	7.2024	+ (11:	46 am	to 17	:35 p	m)			
Initial Meteorological Information A. Temp,(*C): 27 R.H. (%): 69 W.C.: Semi Cloudy W.D.: NE - SW iample Receiving Date: 03-07-2024 Testing Started: 03-07-2024 Testing Ended: 06-07-2024 General Physical Information Stack Height from Ground Level (m) 45 Stack Identification Single Stack Height from Ground Level (m) 32 Plat Form Permanent Inner Dimension of Stack (m) 2.9 Stack Description Coke Oven WHRB 2 Type of Fuel Used Coal Shape of Stack Circular Quantity of Fuel Construction Material Metal Production Capacity Sampling Port Yes Pollution Control Device (if any) Flue Gas Temperature (*C): 161 Flue Gas Velocity (m/s): 8.4 Flue Gas Volumetric Flow Rate (Nm³/hr):137190. Test Result Test Methods Unit Result Norms** 1. Particulates Matter (PM) IS 11255 (Part 1) mg/Nm³ 22.6 2. Sulphur Dioxide (SO ₂) IS 11255 (Part 2) mg/Nm³ 82.3 3. Oxides of Nitrogen (NO ₂) IS 13270:1992	Protocol	CPCB Guidelin	e (LATS/80	0/201	3-14	& IS Metho	d 1125	5 Series			Li Londo Gomb		ADVART HERE DATE	A CONTRACTOR OF A					
Stack Identification Single Testing Started: 03-07-2024 Testing Ended: 06-07-2024 General Physical Information Stack Identification Single Stack Height from Ground Level (m) 45 General Physical Information Stack Identification Single Stack Height from Ground Level (m) 32 Plat Form Permanent Inner Dimension of Stack (m) 2.9 Stack Description Coke Oven WHRB 2 Type of Fuel Used Coal Construction Material Metal Production Capacity Flue Gas Temperature (°C): 161 Flue Gas Velocity (m/s): 8.4 Flue Gas Volumetric Flow Rate (Nm³/hr):137190 Test Methods Unit Result Silphur Dioxide (SO ₂) IS 11255 (Part-1) mg/Nm³ 22.6 A Oxides of Nitrogen (NO ₂) IS 11255 (Part-1) mg/Nm³ 82.3 3. Oxides of Nitrogen (NO ₂) IS 11255 (Part-2) mg/Nm³ 86.2 </td <td>Field Me</td> <td>teorological Inf</td> <td>ormation</td> <td></td> <td>A. Te</td> <td>mp.("C1: 27</td> <td>R.H. (</td> <td>%): 69</td> <td>W.C.:</td> <td>Sem</td> <td>i Cloud</td> <td>ty y</td> <td>W.D.:</td> <td>NE -</td> <td>SW</td> <td></td>	Field Me	teorological Inf	ormation		A. Te	mp.("C1: 27	R.H. (%): 69	W.C.:	Sem	i Cloud	ty y	W.D.:	NE -	SW				
General Physical Information General Physical Information Stack Identification Single Stack Height from Ground Level (m) 45 Stack Identification Oven Port Hole Height from Ground Level (m) 32 Plat Form Permanent Inner Dimension of Stack (m) 2.9 Stack Description Coke Oven WHRB 2 Type of Fuel Used Coal Construction Material Metal Production Capacity Construction Material Metal Production Capacity Flue Gas Temperature (°C): 161 Flue Gas Velocity (m/s): 8.4 Flue Gas Volumetric Flow Rate (Nm ³ /hr):137190 Test Methods Unit Result Stack Meter (PM) IS 11255 (Part-1) mg/Nm ³ 22.6 I. Particulates Matter (PM) IS 11255 (Part-2) mg/Nm ³ 86.2	Sample	Receiving Date:	03-07-202	24	1	Testing Star	ted: 03	07-2024		Te	sting E	nded	: 06-0	7-202	4	_			
Stack Identification Single Stack Height from Ground Level (m) 45 Emission Due to Oven Port Hole Height from Ground Level (m) 32 Plat Form Permanent Inner Dimension of Stack (m) 2.9 Stack Description Coke Oven WHRB 2 Type of Fuel Used Coal Stack Description Coke Oven WHRB 2 Type of Fuel Used Coal Construction Material Metal Production Capacity Construction Material Metal Production Control Device (if any) Sampling Port Yes Pollution Control Device (if any) Flue Gas Temperature (*C): 161 Flue Gas Velocity (m/s): 8.4 Flue Gas Volumetric Flow Rate (Nm³/hr):137190 Test Result Test Methods Unit Result Norms** 1. Particulates Matter (PM) IS 11255 (Part-1) mg/Nm³ 82.3 2. Sulphur Dioxide (SO ₂) IS 11255 (Part-2) mg/Nm³ 82.3 3. Oxides of Nitrogen (NO ₂) IS 11255 (Part-7) mg/Nm³ 66.2 4. Carbon Dioxide (CO ₂) IS 13270:1992 psm 54 5. Carbon Monoxide (CO ₂) IS 13270:1992 psm 54	sample	receiving pares	00 07 202	1. T.		General Ph	hysical Infe	ormation		1.0.0					36				
Emission Due to Oven Port Hole Height from Ground Level (m) 32 Plat Form Permanent Inner Dimension of Stack (m) 2.9 Stack Description Coke Oven WHRB 2 Type of Fuel Used Coal Stack Description Coke Oven WHRB 2 Type of Fuel Used Coal Construction Material Metal Production Capacity Construction Material Metal Production Capacity Sampling Port Yes Pollution Control Device (if any) Flue Gas Temperature (*C): 161 Flue Gas Velocity (m/s): 8.4 Flue Gas Volumetric Flow Rate (Nm³/hr):137190 Test Methods Unit Result Norms** 1. Parameters Test Methods Unit Result Norms** 2. Sulphur Dioxide (SO ₃) IS 11255 (Part-1) mg/Nm³ 82.3 3. Oxides of Nitrogen (NO ₂) IS 11255 (Part-7) mg/Nm³ 86.2 4. Carbon Dioxide (CO) IS 13270:1992 % v/v 6.1 5. Carbon Monoxide (CO) IS 13270:1992 % v/v 9.6 6. Oxygen (O ₂) IS 13270:1992 % v/v 9.6 <	Stack Ide	entification	Single			250 BIO 199900	Sta	ck Heigh	t from	Grou	nd Lev	el (m)	45					
Plat Form Permanent Inner Dimension of Stack (m) 2.9 Stack Description Coke Oven WHRB 2 Type of Fuel Used Coal Shape of Stack Circular Quantity of Fuel Construction Material Metal Production Capacity Sampling Port Yes Pollution Control Device (if any) Flue Gas Temperature (°C): 161 Flue Gas Velocity (m/s): 8.4 Flue Gas Volumetric Flow Rate (Nm ³ /hr):137190 Test Result Sin No. Parameters Test Methods Unit Result Norms** 1. Particulates Matter (PM) IS 11255 (Part-1) mg/Nm ³ 22.6 2. Sulphur Dioxide (SO ₂) IS 11255 (Part-2) mg/Nm ³ 82.3 3. Oxides of Nitrogen (NO ₂) IS 11255 (Part-7) mg/Nm ³ 66.2 4. Carbon Dioxide (CO ₂) IS 13270:1992 % v/v 6.1 5. Carbon Monoxide (CO) IS 13270:1992 % v/v 9.6 6. Oxygen (O ₂) IS 13270:1992 % v/v 9.6 6. Oxygen (O ₂) IS 13270:1992 % v/v 9.6 <t< td=""><td>Emission</td><td>Due to</td><td>Oven</td><td></td><td></td><td></td><td>Po</td><td colspan="7">rt Hole Height from Ground Level (m)</td><td colspan="5">32</td></t<>	Emission	Due to	Oven				Po	rt Hole Height from Ground Level (m)							32				
Stack Description Coke Oven WHRB 2 Type of Fuel Used Coal Shape of Stack Circular Quantity of Fuel	Plat For	m	Permar	nent			Inr	ner Dimer		2.9									
Shape of Stack Circular Quantity of Fuel Construction Material Metal Production Capacity Sampling Port Yes Pollution Control Device (if any) Flue Gas Temperature (*C): 161 Flue Gas Velocity (m/s): 8.4 Flue Gas Volumetric Flow Rate (Nm³/hr):137190 Test Methods Unit Result Norms** 1. Parameters Test Methods Unit Result Norms** 2. Sulphur Dioxide (SO ₂) IS 11255 (Part-1) mg/Nm³ 22.6 2. Sulphur Dioxide (SO ₂) IS 11255 (Part-2) mg/Nm³ 82.3 3. Oxides of Nitrogen (NO ₂) IS 11255 (Part-7) mg/Nm³ 66.2 4. Carbon Dioxide (CO ₂) IS 13270:1992 % v/v 6.1 5. Carbon Monoxide (CO) IS 13270:1992 ppm 54 6. Oxygen (O ₂) IS 13270:1992 % v/v 9.6	Stack De	escription	Coke O)ven \	WHRE	32	Tv	pe of Fue	Used					Coa	d .				
Note of state Metal Production Capacity	Shane of	f Stack	Circula	r			Ou	antity of	Fuel	-	-					_			
Sampling Port Yes Pollution Control Device (if any) Flue Gas Temperature (°C): 161 Flue Gas Velocity (m/s): 8.4 Flue Gas Volumetric Flow Rate (Nm³/hr):137190 Test Methods Unit Result Norms** 1. Particulates Matter (PM) IS 11255 (Part-1) mg/Nm³ 82.3 2. Sulphur Dioxide (SO ₂) IS 11255 (Part-2) mg/Nm³ 82.3 3. Oxides of Nitrogen (NO ₂) IS 11255 (Part-7) mg/Nm³ 66.2 4. Carbon Dioxide (CO ₂) IS 13270:1992 % v/v 6.1 5. Carbon Monoxide (CO) IS 13270:1992 % v/v 9.6 6. Oxygen (O ₂) IS 13270:1992 % v/v 9.6 Env. Condition of Lab. Laboratory is maintaining Temperature 27:2 2° cand Reletive Humidity 65:5 % in all testing area as per 15 Mohemation MDE. Minimum Detection Limit, BDL. Below Detection Limit Remark Remark Tested By: Akanksha Sourabh	Construe	tion Material	Metal		_		Pro	oduction	Capacit	tv		-				_			
Flue Gas Temperature (°C): 161 Flue Gas Velocity (m/s): 8.4 Flue Gas Volumetric Flow Rate (Nm³/hr):137190. Test Result Si. No. Parameters Test Methods Unit Result Norms** 1. Particulates Matter (PM) 15 11255 (Part-1) mg/Nm³ 22.6 2. Sulphur Dioxide (SO ₂) 15 11255 (Part-2) mg/Nm³ 82.3 3. Oxides of Nitrogen (NO ₂) 15 11255 (Part-7) mg/Nm³ 66.2 4. Carbon Dioxide (CO ₂) 15 13270:1992 % v/v 6.1 5. Carbon Monoxide (CO) 15 13270:1992 % v/v 9.6 6. Oxygen (O ₂) 15 13270:1992 % v/v 9.6 Env. Condition of Lab. Lsboratory is maintaining Temperature 27: 2'C and Relative Humidity 55:5 % in all testing area as per 15 196.1956(Cl	Samplin	a Port	Ves	-			Po	llution Co	ntrol D	Device	e (if an	v)							
Flue Gas Temperature (°C): 161 Flue Gas Velocity (m/s): 8.4 Flue Gas Volumetric Flow Rate (Nm ³ /hr):137190 Test Result Si. NO. Parameters Test Methods Unit Result Norms** 1. Particulates Matter (PM) 15 11255 (Part-1) mg/Nm ³ 22.6 2. Sulphur Dioxide (SO ₂) 15 11255 (Part-2) mg/Nm ³ 82.3 3. Oxides of Nitrogen (NO ₂) 15 11255 (Part-7) mg/Nm ³ 56.2 4. Carbon Dioxide (CO ₂) 15 13270:1992 % v/v 6.1 5. Carbon Monoxide (CO) 15 13270:1992 ppm 54 6. Oxygen (O ₂) 15 13270:1992 % v/v 9.6 Env. Condition of Lab. Laboratory is maintaining Temperature 27: 2°C and Seletive Humidity 55:5 % in all testing area as per 15 Abbreviation Molt. Minimum Detection Limit, BDL: Below Detection Limit Seted By: Akanksha Sourabh	Samping	Bront	100	_	_														
Si. NO. Parameters Test Methods Unit Result Norms** 1. Particulates Matter (PM) IS 11255 (Part-1) mg/Nm ³ 22.6 2. Sulphur Dioxide (SO ₂) IS 11255 (Part-2) mg/Nm ³ 82.3 3. Oxides of Nitrogen (NO ₂) IS 11255 (Part-7) mg/Nm ³ 66.2 4. Carbon Dioxide (CO ₂) IS 13270:1992 % v/v 6.1 5. Carbon Monoxide (CO) IS 13270:1992 ppm 54 6. Oxygen (O ₂) IS 13270:1992 % v/v 9.6	Flue Gas	s Temperature	(°C): 161	Flue	Gas	Velocity (m,	/s): 8.4	Flue G	ias Vol	umet	ric Flo	w Rat	e (Nm	³ /hr)	:1371	90.9			
Si. NO. Parameters Test Methods Unit Result Norms** 1. Particulates Matter (PM) IS 11255 (Part-1) mg/Nm ³ 22.6 2. Sulphur Dioxide (SO ₂) IS 11255 (Part-2) mg/Nm ³ 82.3 3. Oxides of Nitrogen (NO ₂) IS 11255 (Part-7) mg/Nm ³ 66.2 4. Carbon Dioxide (CO ₂) IS 13270:1992 % v/v 6.1 5. Carbon Monoxide (CO) IS 13270:1992 ppm 54 6. Oxygen (O ₂) IS 13270:1992 % v/v 9.6 Env. Condition of Lab. Laboratory is maintaining Temperature 27± 2°C and Relative Humidity 65±5 % in all testing area as per 15 Abbreviation MDE: Minimum Detection Limit, BDL: Below Detection Limit Remark Carbon By: Akanksha Sourabh				-		Ta	ist Resul	t			_				-				
1. Particulates Matter (PM) IS 11255 (Part-1) mg/Nm ³ 22.6 2. Sulphur Dioxide (SO ₂) IS 11255 (Part-2) mg/Nm ³ 82.3 3. Oxides of Nitrogen (NO ₂) IS 11255 (Part-7) mg/Nm ³ 66.2 4. Carbon Dioxide (CO ₂) IS 13270:1992 % v/v 6.1 5. Carbon Monoxide (CO) IS 13270:1992 ppm 54 6. Oxygen (O ₂) IS 13270:1992 % v/v 9.6 Env. Condition of Lab. Laboratory is maintaining Temperature 27: 2°C and Relative Humidity 65:5 % in all texting area as per 15 Abbreviation MDE: Minimum Detection Limit, BDL: Below Detection Limit Second Remark env. Tested By: Akanksha Sourabh	SI. NO.	Para	ameters			Test Meth	nods	Un	it		Ret	sult		1	lorms	**			
2. Sulphur Dioxide (SO2) IS 11255 (Part-2) mg/Nm ² 82.3 3. Oxides of Nitrogen (NO2) IS 11255 (Part-7) mg/Nm ³ 66.2 4. Carbon Dioxide (CO2) IS 11255 (Part-7) mg/Nm ³ 66.2 5. Carbon Monoxide (CO) IS 13270:1992 % v/v 6.1 6. Oxygen (O2) IS 13270:1992 ppm 54 7. Oxides of Report IS 13270:1992 % v/v 9.6 7. Oxygen (O2) IS 13270:1992 % v/v 9.6 8. Oxygen (O2) IS 13270:1992 % v/v 9.6 6. Oxygen (O2) IS 13270:1992 % v/v 9.6 6. Oxygen (O2) Is 13270:1992 % v/v 9.6 6. Oxygen (O2) Is 0.13270:1992 % v/v 9.6 6. Oxygen (O2) MDE Minimum Detection Limit, BDL Below Detection Limit	1.	Particulates Ma	atter (PM)			IS 11255 (P	art-1}	mg/t	٧m³		22	2.6			++++				
3. Oxides of Nitrogen (NO2) IS 11255 (Part-7) mg/Nm² 66.2 4. Carbon Dioxide (CO2) IS 13270:1992 % v/v 6.1 5. Carbon Monoxide (CO) IS 13270:1992 ppm 54 6. Oxygen (O2) IS 13270:1992 % v/v 9.6 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 196:1956(C1 Abbreviation MDE: Minimum Detection Limit, BDL: Below Detection Limit Set Si in all testing area as per IS 196:1956(C1 Abbreviation MDE: Minimum Detection Limit, BDL: Below Detection Limit Set Bay: Akanksha Sourabh	2.	Sulphur Dioxide	e (SO ₂)			IS 11255 (P	art-2)	mg/t	Vm ²	_	82	2.3							
4. Carbon Dioxide (CO2) IS 13270:1992 % v/v 6.1 5. Carbon Monoxide (CO) IS 13270:1992 ppm 54 6. Oxygen (O2) IS 13270:1992 % v/v 9.6 End of Report Env. Condition of Lab. Laboratery is maintaining Temperature 27: 2°C and Relative Humidity 65::5 % in all testing area as per 15 Abbreviation MDE_Minimum Detection Limit, BDL_Below Detection Limit Norms** is specified Tested By: Akanksha Sourabh	3.	Oxides of Nitro	gen (NO ₂)			IS 11255 (P	art-7}	mg/1	Vm²	-	66	5.2				_			
5. Carbon Monoxide (CO) IS 13270:1992 ppm 54 6. Oxygen (O2) IS 13270:1992 % v/v 9.6 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 15 196:1956(C) Abbreviation MDL: Minimum Detection Limit, BDL: Below Detection Limit Norms** is specified Tested By: Akanksha Sourabh	4.	Carbon Dioxide	(CO ₂)	-	_	15 13270:1	1992	96 V	/v		6	.1			-				
6. Oxygen (O2) IS 13270:1992 % v/v 9.6 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 15 196:1956(C) Abbreviation MDE: Minimum Detection Limit, BDL: Below Detection Limit Norms** is specified Tested By: Akanksha Sourabh	5. Carbon Monoxide (CO) IS 13270:19							pp	m	-	5	4		-		_			
Env. Condition of Lab. Laboratory is maintaining Temperature 27± 2°C and Seletive Humidity 65±5 % in all testing area as per 15 196:1966(C) MDE: Minimum Detection Limit, BDL: Below Detection Limit Norms** is specified Remark Tested By: Akanksha Sourabh	б.	Oxygen (O2)	IS 13270:1	13270:1992 % v/v 9.6						L	+++								
Abbreviation MDE: Minimum Detection Limit, BDE: Below Detection Limit Norms** is specified Remark Tested By: Akanksha Sourabh	Env. Cor	ndition of Lab.	Laboratory	y is mai	Intaint	ng Temperature	e 27± 2°€	and Selativ	e Humidi	τ¥ 65±	5 % in al	I testi	ng area	as per	15				
Norms** is specified Remark Tested By: Akanksha Sourabh	Abbrevia	ation	MDE: Mini	imum I	Detect	tion Limit, BDL	Below	Detection L	. bimic	_		_							
Tested By: Akanksha Sourabh	Norms**	is specified	4++									_							
Sample Drawn By: Rahul Singh & team	Tested E Sample I	By: Akanksha Sot Drawn By: Rahul	irabh Singh & te	am				1			10								
ecific Contractual Notes - Reviewed by Autodotzed Signato	pecific Costs	actual Notes							Review	ved b	v flo	wonin	Ent Autor	Rized	Signa	ator			

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4

Test Report 5 2 4 0 3 2 1 5 1 0 0 0 0 1 ULR No .: т C 1 Group: Atmospheric Pollution Sub-Group: Stack Emission Discipline: Chemical Test Report No.: RN-230714001S25 Report Issue Date: 13-07-2024 Sample Description: Stack Emission Sample ID: 240710AP03001 Challan No./P.No. Date: 13-07-2023 Challan No./P.O. No.: 4511012880 Issued to: M/s Tata Steel Limited (Formerly Tata Steel Long Products Limited) Gamaharia Phase-V, Adityapur Industrial Area, Seraikela-Kharsawan, Jharkhand-832108 Customer Representative: Shweta Kumari Type of Industry: Iron & Steel Sampling Date: 09.07.2024 (12:13 pm to 01:03 pm) Sample Drawn by: IEM Team Protocol: CPCB Guideline (LATS/80/2013-14) & IS Method 11255 Series W.D.: NE - SW Field Meteorological Information A. Temp.("C): 29 R.H. (%): 65 W.C.: Partly Sunny Testing Ended: 13-07-2024 Sample Receiving Date: 10-07-2024 Testing Started: 10-07-2024 General Physical Information Stack Height from Ground Level (m) 79.7 Stack Identification Single 26.5 **Emission Due to** Port Hole Height from Ground Level (m) Boiler Inner Dimension of Stack (m) 3.6 Plat Form Permanent CPP 30 MW Type of Fuel Used Coal Stack Description Circular Quantity of Fuel ----Shape of Stack **Production Capacity** **Construction Material** RCC Yes Pollution Control Device (if any) ESP Sampling Port Flue Gas Volumetric Flow Rate (Nm³/hr):293437.3 Flue Gas Temperature (°C): 110 Flue Gas Velocity (m/s): 10.6 Test Result Test Methods Unit Result Norms** SI. NO. Parameters mg/Nm² 22.4 1. Particulates Matter (PM) IS 11255 (Part-1) mg/Nm³ IS 11255 (Part-2) 522.5 2. Sulphur Dioxide (SO₂) mg/Nm³ 245.8 IS 11255 (Part-7) Oxides of Nitrogen (NO₂) 3.

6.	Oxygen (O ₂)		IS 13270:1992	% v/v	9.6						
			End of Report	l+++							
Env. Co	indition of Lab.	Laboratory is mail 196:1966(C).	intaining Temperature 27± 2°C a	nd Relative Humidity	65±5 % in all testing are	a as per 15					
Abbrevi	iation	MDL: Minimum I	MDL: Minimum Detection Limit, BDL: Below Detection Limit								
Norms"	* is specified										
Remark		***									

% v/v

ppm

IS 13270:1992

IS 13270:1992

9.2

92

Tested By: Akanksha Sourabh

Sample Drawn By: Rahul Singh & team

Carbon Dioxide (CO₂)

Carbon Monoxide (CO)

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 In case of feedback/ complaints, please send an email at gm/emeco@gmail.com 	(Tauqeer Ahmad) (Dr. S. C. Jain)
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Institute for Environmental Management

Test Report



ULR No .: 5 1 5 2 4 0 0 0 3 3 T C 1 1 0 0 1 Discipline: Chemical Group: Atmospheric Pollution Sub-Group: Stack Emission Report Issue Date: 09-07-2024 Test Report No.: RN-230714001S24 Sample ID: 240706AP02001 Sample Description: Stack Emission Challan No./P.O. No.: 4511012880 Challan No./P.No. Date: 13-07-2023 Issued to: M/s Tata Steel Limited (Formerly Tata Steel Long Products Limited) Gamaharia Phase-V, Adityapur Industrial Area, Seraikela-Kharsawan, Jharkhand-832108 Customer Representative: Shweta Kumari Type of Industry: Iron & Steel Sampling Date: 05.07.2024 (10:33 am to 11:11 am) Sample Drawn by: IEM Team Protocol: CPCB Guideline (LATS/80/2013-14) & IS Method 11255 Series W.C.: Partly Sunny W.D.: East to West **Field Meteorological Information** A. Temp.(°C): 30 R.H. (%): 62 Testing Started: 06-07-2024 Testing Ended: 09-07-2024 Sample Receiving Date: 06-07-2024 General Physical Information Stack Height from Ground Level (m) Stack Identification 50 Single Port Hole Height from Ground Level (m) **Emission Due to** Furnace 30 Permanent Inner Dimension of Stack (m) 2.3 Plat Form MBF 1 Stove Stack Description Type of Fuel Used **BF Gas** Circular Shape of Stack **Quantity of Fuel** -----**Construction Material** RCC Production Capacity Sampling Port Yes Pollution Control Device (if any) Dry gas cleaning plant Flue Gas Volumetric Flow Rate (Nm³/hr):73883.2 Flue Gas Temperature (°C): 121 Flue Gas Velocity (m/s): 6.7 Test Result SI. NO. Test Methods Unit Norms** Parameters Result 5.8 1. Particulates Matter (PM) IS 11255 (Part-1) mg/Nm Sulphur Dioxide (SO₂) IS 11255 (Part-2) mg/Nm² 33.1 2 Oxides of Nitrogen (NO2) 3. IS 11255 (Part-7) mg/Nm[®] 62.4 ----

	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 1966(C).
Abbreviation	MDL Minimum Detection Limit, BDL: Below Detection Limit
Norms** is specified	
Remark	

% v/v

ppm

Sulu

8.4

6.4

54

IS 13270:1992

IS 13270:1992

IS 13270:1992

Tested By: Akanksha Sourabh

Oxygen (O₂)

Sample Drawn By: Rahul Singh & team

Carbon Dioxide (CO₂)

Carbon Monoxide (CO)

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				Tes	т керс	ort									
ULR No.:	: T	C 1	1 5	1 5	2 3	0	0	0	0	0	1	4	2	4	
Disciplin	e: Chemical			Group: Atm	ospheri	c Pollut	ion	Su	b-Gro	up: S	tack I	missi	ion		
Report Is	ssue Date: 14-0	9-2024		0.0000000000000000000000000000000000000	1	Test Rep	ort No	: RN-	2307	14001	S02				
Sample I	D: 240912AP02	001			5	Sample	Descrip	tion:	Stack	Emis	sion				
Challan I	No./P.O. No.: 30	000173714	/J02		(Challan	No./P.M	No. Da	te: 1	5-07-2	024				
Issued t	o: M/s Tata Str (Formerly Ta Gamaharia I Seraikela-K	eel Limite ata Steel I Phase-V, harsawar	d Long Pr Adityap n, Jhark	oducts Limi ur Industria hand-83210	ited) I Area, 8										
Type of	Industry: Iron &	Steel			(Custom	er Repr	esent	ative:	Kisht	or Pra	mani	ĸ		
Sample	Drawn by: IEM	Team			5	Samplin	g Date:	12-0	-202	4 (11:	12am	to 11	:42 ar	n)	
Protocol	: CPCB Guidelin	e (LATS/80	/2013-14) & IS Method	11255	Series &	& IS 13	270 S	eries	-					
Field Me	teorological Inf	ormation	A. Te	emp.(°C): 27	R.H. (%): 68	W.C.:	Semi	Cloud	iy I	W.D.:	Nort	h to S	outi	
Sample	Receiving Date:	12-09-202	4	Testing Starte	ed: 12-0	9-2024	- tomb in	Tes	ting E	inded	: 14-0	9-202	24		
				General Phy	sical Inform	mation	_					April 1 March 1 March 1	(1) (1) (1) (1) (1) (1) (1) (1) (1) (1)		
Stack Id	entification	Single			Stack	k Height	from G	Froun	d Levi	el (m)		78			
Emissio	n Due to		-		Port	t Hole Height from Ground Level (m)							31.2		
Plat For	m	Perman	ent		Inner	Dimen	sion of	Stack	(m)			6.19	95		
Stack De	escription	Sinter n	lant Proc	ess ESP	Type	of Fuel	Used					Bfg	as		
Shane o	f Stack	Circular	bricitioe	Contraction of the local diversion of the loc	Quar	atity of	Fuel	-						-	
Constru	ction Material	RCC	-		Prod	uction (anacity			-				_	
Constru	Culon Wateria	Vor			Pollu	tion Co	atrol D	ouica	lif an	1	_	ESD	-		
Sampin	ig Port	Tes			Folio	alon co	ind of D	carce	(n an	11		leger.		_	
Flue Ga	s Temperature	(°C): 143	Flue Ga	s Velocity (m/	(s): 7.7	Flue	Gas Vol	umet	ric Flo	w Rat	e (Nr	n³/hr): 5810)49	
				Tes	t Result										
SI, NO.	Para	ameters		Test Metho	ods	Un	it		Re	sult		1	Norms	••	
1.	Particulates Ma	atter (PM)		IS 11255 (Pa	rt-1)	mg/l	Nm ³		42	2.3					
2.	Sulphur Dioxide	e (SO ₂)		IS 11255 (Pa	rt-2)	mg/f	4m ³		58	3.3	_		***		
3.	Oxides of Nitro	gen (NO2)		IS 11255 (Pa	rt-7)	mg/l	Nm ^a		12	4.2		-			
4.	Carbon Dioxide	(CO2)		IS 13270:19	992	% v	/v		9	.8		-		_	
5.	Carbon Monox	ide (CO)		IS 13270:19	992	pp	m		3846					_	
б.	Oxygen (O ₂)	-		IS 13270:19	192 of Report	% v	/v	-	19	5.4	-	1		_	
Env. Co	ndition of Lab.	Laboratory	is maintain	ing Temperature	27± 2°C 81	nd Relativ	e Humidi	ty 55±5	% in a	li testir	ig area	as per	15	_	
Abbrevi	ation	MDL: Minin	num Detec	tion Limit, BDL:	Below De	etection 1	imit	_		1.5					
Norms**	is specified	+++	and the second	Martine and Constraints	10000000			-	-	_					
Remark	Du Akashaha Ca						_	_							
Sample	Drawn By: Rahu	Singh & tea	am	2											
Jecific Cont	ractual Notes: -					-	Keview	ed by	1.00		AUTH	onzec	1 Signa	1011	

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Ranchi-834002, Jharkhand, India





Discipline: Chemical Group: Arthospheric Ponutuch Test Report No.: RN-240715001504 Sample ID: 240909AP02001 Sample Description: Stack Emission Challan No./P.O. No.: 3000173714/J02 Challan No./P.No. Date: 15-07-2024 Issued to: M/s Tata Steel Limited (Formerly Tata Steel Long Products Limited) Garnaharia Phase-V, Adityapur Industrial Area, Seraikela-Kharsawan, Jharkhand-832108 Type of Industry: Iron & Steel Sample Drawn by: IEM Team Sampling Date: 04-09-2024 (11:05 am to 11:35 Protocol: CPC8 Guideline (LATS/80/2013-14) & IS Method 11255 Series Frield Meteorological Information A. Temp.(*C): 31 R.H. (%): 67 W.C.: Partly Sunny W.D.: SE to N Sample Receiving Date: 09-09-2024 Testing Started: 09-09-2024 Testing Ended: 11-09-2024 General Physical Information Stack Identification Single Stack Height from Ground Level (m) 30 Emission Due to Furnace Port Hole Height from Ground Level (m) 25 Plat Form Permanent Inner Dimension of Stack (m) 2.7 Stack Description MBF - 2 CAST HOUSE STACK Type of Fuel Used Coke Shape of Stack Circular Quantity of Fuel Sampling Port Available Pollution Control Device (if any) Bag Filt Flue Gas Temperature (*C): 51 Flue Gas Velocity (m/s):16.0 Flue Gas Volumetric Flow Rate (Nm ³ /hr): 2 Test Result St. NO. Parameters Test Methods Unit Result No 1. Particulates Matter (PM) IS 11255 (Part-1) mg/Nm ³ 26.6 2. Sulphur Dioxide (SO ₁) IS 11255 (Part-7) mg/Nm ³ 26.6 3. Oxdes of Nitrogen (NO ₂) IS 11255 (Part-7) mg/Nm ³ 26.6 4. Carbon Monoxide (CO) IS 13270:1392 % v/v Env. Condition of Lab. Leberstory Is maintaining Temperature Fuely Humidity 655 % in all testing area at per 15 Abbreviation MBC Minimum Detection Limit. Bot. Below Detection Limit Norma* Is agesfild Heimark Tested By: Xkanksha Sourabh Sample Dever By: Railwing Shoh & Haam	JLK NO.:	Chambred 1	0 1	1	2	-	3	4 1	+	U Instit			Sub	Group	. 610	ak En	alecio	*	
Report issue Date: 11-09-2024 Test Report No.: No.: 2007/300/S04 Sample ID: 240093AP02001 Sample Dizectription: Stack Emission Challan No./P.O. No.: 3000173714/J02 Challan No./P.No. Date: 15-07-2024 Issued to: M/s Tata Steel Limited (Formerly Tata Steel Long Products Limited) Gamaharia Phase-V, Adityapur Industrial Area, Seraikela-Kharsawan, Jharkhand-832108 Customer Representative: Kishor Pramanik Type of Industry: Iron & Steel Customer Representative: Kishor Pramanik Sample Drawn by: IEM Team Sampling Date: 04-09-2024 (11:05 am to 11:3 Protocol: CPCB Guideline (LATS/80/2013-14) & IS Method 11255 Series Field Meteorological Information Stack Identification Single Stack Height from Ground Level (m) Sample Drawn by: IEM Team Sample Receiving Date: 09-09-2024 Testing Ended: 11-09-2024 Stack Identification Single Stack Height from Ground Level (m) Single Stack Height from Ground Level (m) 30 Emission Due to Furnace Port Hole Height from Ground Level (m) 2.7 Stack Description MEF - 2 CAST HOUSE STACK Type of Fuel Used Coke Construction Material Metal Production Capacity Sampling Port Available Pollution Control Device (if any) Bag Filt Flue Gas Temperature (*C): 51 Flue Gas	Jiscipline	: Chemical				Grou	ib: Vr	mospher	IC POI	nuci	on M		Sub-	Group	, Sta	CKEN	112210	0	_
Sample Description: Stack Emission Challan No./P.O. No.: 3000173714/J02 Sample Description: Stack Emission Challan No./P.No. Date: 15-07-2024 Issued to: M/S Tata Steel Limited (Formerly Tata Steel Long Products Limited) Garnaharia Phase-V, Adityapur Industrial Area, Seraikela-Kharsawan, Jharkhand-832108 Type of Industry: Iron & Steel Sample Description: Stack Emission Stack Identification Single Stack Identification Single Stack Identification Single Stack Identification Single Port Hole Height from Ground Level (m) Stack Identification Single Stack Identification Single Port Hole Height from Ground Level (m) Stack Description MBF - 2 CAST HOUSE STACK Type of Fuel Used Construction Material Metal Production Capacity Stack Description MBF - 2 CAST HOUSE STACK Type of Fuel Used	leport iss	sue Date: 11-0	9-2024						lest	kep	OFT N	0.: R	(N-24)	Jr1500	1504		_		_
Challan No./P.O. No.: 3000173714/J02 Challan No./P.No. Date: 15-07-2024 issued to: M/S Tata Steel Limited (Formerly Tata Steel Long Products Limited) Gamaharia Phase-V, Adityapur Industrial Area, Seraikela-Kharsawan, Jharkhand-832108 Type of Industry: Iron & Steel Customer Representative: Kishor Pramanik Sampling Date: 04-09-2024 [11:05 am to 11:3 Protocol: CPCB Guideline (LATS/80/2013-14) & IS Method 11255 Series Field Meteorological Information A. Temp.(*C): 31 R.H. (%): 67 W.C.: Partly Sunny W.D.: SE to N Sample Receiving Date: 09-09-2024 Testing Started: 09-09-2024 Testing Ended: 11-09-2024 General Physical Information Stack Identification Single Stack Height from Ground Level (m) Some to Furnace Port Hole Height from Ground Level (m) Stack Description MBF - 2 CAST HOUSE STACK Type of Fuel Used Coke Shape of Stack Circular Quantity of Fuel Flue Gas Temperature (*C): 51 Flue Gas Velocity (m/s):16.0 Flue Gas Volumetric Flow Rate (Nm ³ /hr): 2 Test Result SI.NO. Parameters Test Methods Unit Result No Sampling Port Available Pollution Control Device (if any) Bag Filt Flue Gas Temperature (%C) S1 Flue Gas Velocity (m/s):16.0 Flue Gas Volumetric Flow Rate (Nm ³ /hr): 2 Carbon Dioxide (SO) Si S1225 (Part-1) mg/km ³ 22.6 Carbon Monxide (SO) Si S13270:1992 % v/v Condition of Lab Laboratory is maintaining Temperature 72 PC and Relative Humidity 6555 % in all testing area as per 15 Abbreviation MD: Minimum Detection Limit. BD: Below Detection Limit Norms*' is a specified Tested By: Akanksha Sourabh Asset	ample ID	: 240909AP02	001		-		_		Samp	ne L	Jescri	ptio	n: Sta	ACK ER	TISSIC	n			_
Saued to: M/s Tata Steel Long Products Limited) (Formerly Tata Steel Long Products Limited) Gamaharia Phase-V, Adityapur Industrial Area, Seraikela-Kharsawan, Jharkhand-832108 Type of Industry: Iron & Steel Customer Representative: Kishor Pramanik Sample Drawn by: IEM Team Sample Drawn by: IEM Team Sampling Date: 04-09-2024 (11:05 am to 11:3 Protocol: CPCB Guideline (LATS/80/2013-14) & IS Method 11255 Series Field Meteorological Information A. Temp.(*C): 31 R.H. (%): 67 W.C.: Partly Sunny W.D.: SE to N Sample Receiving Date: 09-09-2024 Testing Started: 09-09-2024 Testing Ended: 11-09-2024 General Physical Information Stack Height from Ground Level (m) 30 Stack Identification Single Stack Height from Ground Level (m) 25 Plat Form Permanent Inner Dimension of Stack (m) 2.7 Stack Description MBF - 2 CAST HOUSE STACK Type of Fuel Used Coke Shape of Stack Circular Quantity of Fuel Construction Material Metal Production Capacity Sampling Port Available Pollution Control Device (if any) Bag Filt Flue Gas Temperature (*C): 51 Flue Gas Velocity (m/s):16.0 F	hallan N	o./P.O. No.: 30	00017371	14/JO	2	-	_		Challan No./P.No. Date: 15-07-2024									_	
Type of Industry: Iron & Steel Customer Representative: Kishor Pramanik Sample Drawn by: IEM Team Sampling Date: 04-09-2024 (11:05 am to 11:35 Protocol: CPCB Guideline (LATS/80/2013-14) & IS Method 11255 Series Field Meteorological Information A. Temp.(*C): 31 R.H. (%): 67 W.C.: Partly Sunny W.D.: SE to N Sample Receiving Date: 09-09-2024 Testing Started: 09-09-2024 Testing Ended: 11:09-2024 General Physical Information Sample Receiving Date: 09-09-2024 Testing Ended: 11:09-2024 Stack Identification Single Stack Height from Ground Level (m) 30 Emission Due to Furnace Port Hole Height from Ground Level (m) 2.7 Stack Description MBF - 2 CAST HOUSE STACK Type of Fuel Used Coke Construction Material Metal Production Capacity Sampling Port Available Pollution Control Device (if any) Bag Filt Flue Gas Temperature (*C): 51 Flue Gas Velocity (m/s):16.0 Flue Gas Volumetric Flow Rate (Nm³/hr): 2 Stack Singer (No2) Is 11255 (Part-1) mg/Nm³ 26.6 2. Subplus Dioxide (SO2) Is 11255 (Part-2) mg/Nm³ 26.6 3. Oxides of Ni	ssued to	M/s Tata Sto (Formerly Ta Gamaharia I Seraikela-K	eel Limi ata Stee Phase-V harsawa	ted Lo , Ad	ng Pro lityapu Iharkh	oduct ur Ind	ts Lin Iustri 8321	nited) al Area, 08											
Sample Drawn by: IEM Team Sampling Date: 04-09-2024 (11:05 am to 11:35 Protocol: CPCB Guideline (LATS/80/2013-14) & IS Method 11255 Series Field Meteorological Information A. Temp. (*C): 31 R.H. (%): 67 W.C.: Partly Sunny W.D.: SE to N Sample Receiving Date: 09-09-2024 Testing Started: 09-09-2024 Testing Ended: 11-09-2024 Testing Ended: 11-09-2024 General Physical Information Stack Height from Ground Level (m) 30 Stack Identification Single Stack Height from Ground Level (m) 25 Plat Form Permanent Inner Dimension of Stack (m) 2.7 Stack Description MBF - 2 CAST HOUSE STACK Type of Fuel Used Coke Construction Material Metal Production Capacity Sampling Port Available Pollution Control Device (if any) Bag Filt Flue Gas Temperature (*C): 51 Flue Gas Velocity (m/s):16.0 Flue Gas Volumetric Flow Rate (Nm³/hr): 2 Test Result Test Result No 1 Particulates Matter (PM) IS 11255 (Part-1) mg/hm³ 2. Sulphur Dioxide (SO2) IS 112255 (Part-7) mg/hm³ 3. Oxides of Mitrogen (NO2) IS 11225 (Part-7) mg/hm³ 4. Carbon Dioxide (CO) IS 13270:1992 % v/v	ype of Ir	dustry: Iron &	Steel	in a constant	A STREET, STREE				Customer Representative: Kishor Pramanik										
Protocol: CPCB Guideline (LATS/80/2013-14) & IS Method 11255 Series Field Meteorological Information A. Temp.(*C): 31 R.H. (%): 67 W.C.: Partly Sunny W.D.: SE to N Sample Receiving Date: 09-09-2024 Testing Started: 09-09-2024 Testing Ended: 11-09-2024 General Physical Information 30 Stack Identification Single Stack Height from Ground Level (m) 30 Emission Due to Furnace Port Hole Height from Ground Level (m) 25 Plat Form Permanent Inner Dimension of Stack (m) 2.7 Stack Description MBF - 2 CAST HOUSE STACK Type of Fuel Used Coke Construction Material Metal Production Capacity	Sample C	Drawn by: IEM	Team						Samp	ling	Date	: 04	-09-2	024 (11:05	am	to 11	:39 ai	m)
Field Meteorological Information A. Temp.(*C): 31 R.H. (%): 67 W.C.: Partly Sunny W.D.: SE to N Sample Receiving Date: 09-09-2024 Testing Started: 09-09-2024 Testing Ended: 11-09-2024 General Physical Information Stack Height from Ground Level (m) 30 Stack Identification Single Stack Height from Ground Level (m) 25 Plat Form Permanent Inner Dimension of Stack (m) 2.7 Stack Description MBF - 2 CAST HOUSE STACK Type of Fuel Used Coke Shape of Stack Circular Quantity of Fuel Construction Material Metal Production Capacity Sampling Port Available Pollution Control Device (if any) Bag Filt Flue Gas Temperature (*C): S1 Flue Gas Velocity (m/s):16.0 Flue Gas Volumetric Flow Rate (Nm³/hr): 2 Test Result No 1 Particulates Matter (PM) IS 11255 (Part-1) mg/hm³ 26.6 3. Oxides of Nitrogen (No2) IS 113270:1992 % v/v 5. Carbon Dioxide (CO) IS 13270:1992 % v/v 6. Oxygen (protocol:	CPCB Guidelin	e (LATS/8	30/20	13-14)	& IS I	Metho	d 11255	Serie	s.									
Sample Receiving Date: 09-09-2024 Testing Started: 09-09-2024 Testing Ended: 11-09-2024 General Physical Information Stack Identification Single Stack Height from Ground Level (m) 30 Emission Due to Furnace Port Hole Height from Ground Level (m) 25 Plat Form Permanent Inner Dimension of Stack (m) 2.7 Stack Description MBF - 2 CAST HOUSE STACK Type of Fuel Used Coke Shape of Stack Circular Quantity of Fuel Construction Material Metal Production Capacity Sampling Port Available Pollution Control Device (if any) Bag Flit Flue Gas Temperature (*C): 51 Flue Gas Velocity (m/s):16.0 Flue Gas Volumetric Flow Rate (Nm³/hr): 2 Test Methods Unit Result No No. Parameters Test Methods Unit Result No Suphur Dioxide (SO2) IS 11255 (Part-1) mg/Nm³ 26.6	ield Met	eorological Inf	ormation	n	A. Te	mp.(*0	:): 31	R.H. (?): 67		W.C.	:Pa	rtly S	unny	W	.D.: :	SE to	NW	
General Physical Information Stack Identification Single Stack Height from Ground Level (m) 30 Emission Due to Furnace Port Hole Height from Ground Level (m) 25 Plat Form Permanent Inner Dimension of Stack (m) 2.7 Stack Description MBF - 2 CAST HOUSE STACK Type of Fuel Used Coke Shape of Stack Circular Quantity of Fuel Construction Material Metal Production Capacity Sampling Port Available Pollution Control Device (if any) Bag Filt Flue Gas Temperature (*C): 51 Flue Gas Velocity (m/s):16.0 Flue Gas Volumetric Flow Rate (Nm³/hr): 2 Test Result Test Result No 1 Particulates Matter (PM) IS 11255 (Part-1) mg/Nm³ 26.6 4 2. Sulphur Dioxide (CO2) IS 11255 (Part-7) mg/Nm³ 26.6 4 3. Oxides of Nitrogen (NO2) IS 11255 (Part-7) mg/Nm³ 26.6 4 4. Carbon Dioxide (CO2) IS 11255 (Part-7) mg/Nm³ 26.6 4 </td <td>ample R</td> <td>eceiving Date:</td> <td>09-09-20</td> <td>24</td> <td>1</td> <td>Testin</td> <td>g Star</td> <td>ted: 09-0</td> <td>9-20</td> <td>24</td> <td></td> <td></td> <td>Testin</td> <td>ng End</td> <td>ed: 1</td> <td>1-09</td> <td>-2024</td> <td>1</td> <td></td>	ample R	eceiving Date:	09-09-20	24	1	Testin	g Star	ted: 09-0	9-20	24			Testin	ng End	ed: 1	1-09	-2024	1	
Stack Identification Single Stack Height from Ground Level (m) 30 Emission Due to Furnace Port Hole Height from Ground Level (m) 25 Plat Form Permanent Inner Dimension of Stack (m) 2.7 Stack Description MBF - 2 CAST HOUSE STACK Type of Fuel Used Coke Shape of Stack Circular Quantity of Fuel Construction Material Metal Production Capacity Sampling Port Available Pollution Control Device (if any) Bag Filt Flue Gas Temperature (*C): S1 Flue Gas Velocity (m/s):16.0 Flue Gas Volumetric Flow Rate (Nm ³ /hr): 2 Test Result Test Methods Unit Result No 1 Particulates Matter (PM) IS 11255 (Part-1) mg/Nm ³ 26.6 2. Sulphur Dioxide (S0:) IS 11257 (Part-7) mg/Nm ³ 26.6 4 4. Carbon Dioxide (CO) IS 13270:1992 % v/v 5. Carbon Monoxide (CO) IS 13270:1992 ppm <			Activity of the	- AND	-	Ge	ineral Pl	hysical Info	mation	1						11			
Emission Due to Furnace Port Hole Height from Ground Level (m) 25 Plat Form Permanent Inner Dimension of Stack (m) 2.7 Stack Description MBF - 2 CAST HOUSE STACK Type of Fuel Used Coke Shape of Stack Circular Quantity of Fuel Construction Material Metal Production Capacity Sampling Port Available Pollution Control Device (if any) Bag Filt Flue Gas Temperature (*C): S1 Flue Gas Velocity (m/s):16.0 Flue Gas Volumetric Flow Rate (Nm³/hr): 2 Test Result Filte Gas Temperature (*C): S1 Flue Gas Velocity (m/s):16.0 Flue Gas Volumetric Flow Rate (Nm³/hr): 2 Test Methods Unit Result No 1 Particulates Matter (PM) IS 11255 (Part-1) mg/hm³ 26.3 2. Sulphur Dioxide (SO ₃) IS 11255 (Part-7) mg/hm³ 26.6 4. Carbon Dioxide (CO ₂) IS 13270:1992 % v/v 5. Carbon Monoxide (CO) IS 13270:1992 % v/v 6. Oxygen (O ₂) IS 13270:1992 % v/v	Stack Ide	ntification	Single					Stack	Heigh	t fr	om G	rour	nd Le	vel (m)	3	0		
Plat Form Permanent Inner Dimension of Stack (m) 2.7 Stack Description MBF - 2 CAST HOUSE STACK Type of Fuel Used Coke Shape of Stack Circular Quantity of Fuel Construction Material Metal Production Capacity Sampling Port Available Pollution Control Device (if any) Bag Filt Flue Gas Temperature (°C): 51 Flue Gas Velocity (m/s):16.0 Flue Gas Volumetric Flow Rate (Nm³/hr): 2 Test Result Si. NO. Parameters Test Methods Unit Result No 1 Particulates Matter (PM) IS 11255 (Part-1) mg/Nm³ 26.6 2.6 2. Sulphur Dioxide (So2) IS 11255 (Part-2) mg/Nm³ 26.6 4. 3. Oxides of Nitrogen (NO2) IS 13270:1992 % v/v 5. Carbon Monoxide (CO) IS 13270:1992 % v/v 5. Carbon Monoxide (CO) IS 13270:1992 % v/v 6. Oxygen (O2) IS 13270:1992 % v/v	Emission	Due to	Furna	ce			Port H	Hole Height from Ground Level (m)							2	5			
Stack Description MBF - 2 CAST HOUSE STACK Type of Fuel Used Coke Shape of Stack Circular Quantity of Fuel Construction Material Metal Production Capacity Sampling Port Available Pollution Control Device (if any) Bag Filt Flue Gas Temperature (°C): 51 Flue Gas Velocity (m/s):16.0 Flue Gas Volumetric Flow Rate (Nm³/hr): 2 Test Result Sin NO. Parameters Test Methods Unit Result No 1 Particulates Matter (PM) IS 11255 (Part-1) mg/Nm³ 22.6 2. 2. Sulphur Dioxide (SO2) IS 11255 (Part-2) mg/Nm³ 26.3 3 3. Oxides of Nitrogen (NO2) IS 11255 (Part-7) mg/Nm³ 26.6 4 4. Carbon Dioxide (CO2) IS 13270:1992 % v/v 5 5. Carbon Monoxide (CO) IS 13270:1992 % v/v 6. Oxygen (O2) IS 13270:1992 % v/v Env. Condition of Lab. Caboratory is maintaining T	Plat Forn	n	Perma	anent	t	Inner				Dimension of Stack (m)							2.7		
Shape of Stack Circular Quantity of Fuel Construction Material Metal Production Capacity Sampling Port Available Pollution Control Device (if any) Bag Filt Flue Gas Temperature (*C): 51 Flue Gas Velocity (m/s):16.0 Flue Gas Volumetric Flow Rate (Nm³/hr): 2 Test Result Flue Gas Temperature (*C): 51 Flue Gas Velocity (m/s):16.0 Flue Gas Volumetric Flow Rate (Nm³/hr): 2 Test Result Sint No. Parameters Test Methods Unit Result No 1 Particulates Matter (PM) IS 11255 (Part-1) mg/Nm³ 26.6 2 2.5 3 3 0xides of Nitrogen (NO2) IS 11255 (Part-7) mg/Nm³ 26.6 4 4 Carbon Dioxide (CO) IS 13270:1992 % v/v 5 Carbon Monoxide (CO) IS 13270:1992 ppm 5 Carbon Monoxide (CO) IS 13270:1992 % v/v	Stack De	scription	T HOUS	HOUSE STACK Type				of Fuel Used							oke.				
Construction Material Metal Production Capacity Sampling Port Available Pollution Control Device (if any) Bag Filt Flue Gas Temperature (°C): 51 Flue Gas Velocity (m/s):16.0 Flue Gas Volumetric Flow Rate (Nm³/hr): 2 Test Result Test Result No Parameters Test Methods Unit Result No 1 Particulates Matter (PM) IS 11255 (Part-1) mg/Nm³ 22.6 1 2. Sulphur Dioxide (SO2) IS 11255 (Part-2) mg/Nm³ 26.3 1 3. Oxides of Nitrogen (NO2) IS 11255 (Part-7) mg/Nm³ 26.6 1 4. Carbon Dioxide (CO2) IS 13270:1992 % v/v 1 5. Carbon Monoxide (CO) IS 13270:1992 gk v/v 1 6. Oxygen (O2) IS 13270:1992 % v/v 1 198:1966(C) MDL: Minimum Detection Limit. BDL: Below Detection Limit Normset is specified Remark -	Shape of				Quant	ity of	Fue	el	-				-		_				
Sampling Port Available Pollution Control Device (if any) Bag Filt Flue Gas Temperature (°C): 51 Flue Gas Velocity (m/s):16.0 Flue Gas Volumetric Flow Rate (Nm³/hr): 2 Test Result Sampling Port Flue Gas Velocity (m/s):16.0 Flue Gas Volumetric Flow Rate (Nm³/hr): 2 Test Result Sampling Port Nameters Test Methods Unit Result No 1 Particulates Matter (PM) IS 11255 (Part-1) mg/Nm³ 22.6 Image: Colspan="2">Colspan="2" Colspan="2" Colspan="2" Colspan="2" <th< td=""><td>Construc</td><td></td><td>_</td><td></td><td>Produ</td><td>ction</td><td>Cap</td><td>acity</td><td></td><td></td><td></td><td></td><td>-</td><td></td><td></td><td></td></th<>	Construc		_		Produ	ction	Cap	acity					-						
Flue Gas Temperature (°C): 51 Flue Gas Velocity (m/s):16.0 Flue Gas Volumetric Flow Rate (Nm³/hr): 2 Test Result Si. NO. Parameters Test Methods Unit Result No 1 Particulates Matter (PM) IS 11255 (Part-1) mg/Nm³ 22.6 2. Sulphur Dioxide (SO2) IS 11255 (Part-2) mg/Nm³ 26.3 3. Oxides of Nitrogen (NO2) IS 11255 (Part-7) mg/Nm³ 26.6 4. Carbon Dioxide (CO2) IS 13270:1992 % v/v 5. Carbon Monoxide (CO) IS 13270:1992 ppm 6. Oxygen (O2) IS 13270:1992 % v/v Env. Condition of Lab. Laboratory is maintaining Temperature 271 2°C and Relative Humidity 65±5 % in all testing area as per 15 Abbreviation MDL MDL Bolow Detection Limit Norms** is specified Remark Tested By: Akanksha Sourabh Sample Drawn By: Rabul Sinph & team	Sampling				Pollut	ion C	onti	ol De	vice	(if a	ny)		B	ag Fi	iter	_			
Flue Gas Temperature (°C): 51 Flue Gas Velocity (m/s):16.0 Flue Gas Volumetric Flow Rate (Nm³/hr): 2 Test Result SI. NO. Parameters Test Methods Unit Result No 1 Particulates Matter (PM) IS 11255 (Part-1) mg/Nm³ 22.6 1 2. Sulphur Dioxide (SO2) IS 11255 (Part-2) mg/Nm³ 26.3 1 3. Oxides of Nitrogen (NO2) IS 11255 (Part-7) mg/Nm³ 26.6 1 4. Carbon Dioxide (CO2) IS 13270:1992 % v/v 1 5. Carbon Monoxide (CO) IS 13270:1992 ppm 1 6. Oxygen (O2) IS 13270:1992 ppm 1			L'entre de					-				Columnative State						1	_
Si. NO. Parameters Test Methods Unit Result No 1. Particulates Matter (PM) IS 11255 (Part-1) mg/Nm³ 22.6 2. Sulphur Dioxide (SO ₂) IS 11255 (Part-2) mg/Nm³ 26.3 3. Oxides of Nitrogen (NO ₂) IS 11255 (Part-7) mg/Nm³ 26.6 4. Carbon Dioxide (CO ₂) IS 13270:1992 % v/v 5. Carbon Monoxide (CO) IS 13270:1992 g/nm 6. Oxygen (O ₂) IS 13270:1992 % v/v Env. Condition of Lab. Caboratory is maintaining Temperature 272 2°C and Relative Humidity 6525 % in all testing area as per 15 Abbreviation MDL< Minimum Detection Limit, BDL Below Detection Limit	Flue Gas	Temperature	(°C): 51	Flu	ie Gas	Veloc	ity (m	/s):16.0	Flue	e Ga	as Vol	ume	etric I	low R	late (Nm ³	/hr):	2940	95
SI. NO. Parameters Test Methods Unit Result No 1. Particulates Matter (PM) IS 11255 (Part-1) mg/Nm³ 22.6 2. Sulphur Dioxide (SO2) IS 11255 (Part-2) mg/Nm³ 26.3 3. Oxides of Nitrogen (NO2) IS 11255 (Part-7) mg/Nm³ 26.6 4. Carbon Dioxide (CO2) IS 13270:1992 % v/v 5. Carbon Monoxide (CO) IS 13270:1992 ppm 6. Oxygen (O2) IS 13270:1992 % v/v Env. Condition of Lab. Leboratory is maintaining Temperature 273 2°C and Relative Humidity 6525 % in all testing area as per 15 196:3966(C) Abbreviation MDL< Minimum Detection Limit, BDL, Below Detection Limit				1			T	est Result		-			1	_			0		
1. Particulates Matter (PM) IS 11255 (Part-1) mg/Nm ³ 22.6 2. Sulphur Dioxide (SO ₂) IS 11255 (Part-2) mg/Nm ³ 26.3 3. Oxides of Nitrogen (NO ₂) IS 11255 (Part-7) mg/Nm ³ 26.6 4. Carbon Dioxide (CO ₂) IS 13270:1992 % v/v 5. Carbon Monoxide (CO) IS 13270:1992 ppm 6. Oxygen (O ₂) IS 13270:1992 % v/v Env. Condition of Lab. Leboratory is maintaining Temperature 271 2°C and Relative Humidity 6515 % in all testing area as per 15 Abbreviation MDL: Minimum Detection Limit. BDL Below Detection Limit Norms** is specified Tested By: Akanksha Sourabh Sample Drawn By: Rabul Singh & team	5I. NO.	Para	ameters			Tes	t Met	hods		Uni	it			Result	t		N	orms	••
2. Sulphur Dioxide (SO2) IS 11255 (Part-2) mg/Nm3 26.3 3. Oxides of Nitrogen (NO2) IS 11255 (Part-7) mg/Nm3 26.6 4. Carbon Dioxide (CO2) IS 13270:1992 % v/v 5. Carbon Monoxide (CO) IS 13270:1992 ppm 6. Oxygen (O2) IS 13270:1992 % v/v Env. Condition of Lab. Laboratory is maintaining Temperature 272 2°C and Relative Humidity 6525 % in all testing area as per 15 Abbreviation MDL: Minimum Detection Limit. BDL: Below Detection Limit Norms** is specified Tested By: Akanksha Sourabh Sample Drawn By: Rabul Singh & team	1	Particulates Ma	atter (PM)	0		IS 11	.255 (P	Part-1)	n	ng/N	lm ³			22.6					
3. Oxides of Nitrogen (NO2) IS 11255 (Part-7) mg/Nm³ 26.6 4. Carbon Dioxide (CO2) IS 13270:1992 % v/v 5. Carbon Monoxide (CO) IS 13270:1992 ppm 6. Oxygen (O2) IS 13270:1992 % v/v Env. Condition of Lab. Laboratory is maintaining Temperature 273 2°C and Relative Humidity 6535 % in all testing area as per IS 196:1966(C). Abbreviation MDL: Minimum Detection Limit, BDL: Below Detection Limit Norms** is specified Tested By: Akanksha Sourabh Sample Drawn By: Rabul Singh & team	2.	Sulphur Dioxid	e (SO ₂)		2	15 11	255 (P	Part-2)	n	ng/N	lm ³	_		26.3	_			-	_
4. Carbon Dioxide (CO) IS 13270:1992 % v/v 5. Carbon Monoxide (CO) IS 13270:1992 ppm 6. Oxygen (O ₂) IS 13270:1992 % v/v 6. Oxygen (O ₂) IS 13270:1992 % v/v Env. Condition of Lab. Laboratory is maintaining Temperature 271 2°C and Relative Humidity 6515 % in all testing area as per 15 Abbreviation MDL Minimum Detection Limit, BDL, Below Detection Limit Norms** is specified Tested By: Akanksha Sourabh Sample Drawn By: Rabul Singh & team	3,	Oxides of Nitro	gen (NO2)			15 11	255 (P	art-7)	n	ng/N	lm³	-	_	26.6		_	_		_
S. Carbon Monoxide (CO) IS 13270:1992 ppm 6. Oxygen (O2) IS 13270:1992 % v/v Env. Condition of Lab. Env. Condition of Lab. Caboratory 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: Akanksha Sourabh Sample Drawn By: Rabul Singh & team	4.	Carbon Dioxide	(CO2)			IS 1	3270:	1992		% v,	/v		_		_	_			_
6. Oxygen (O2) IS 13270:1992 % v/v Env. Condition of Lab. Laboratory is maintaining Temperature 27: 2°C and Relative Humidity 65:5 % in all testing area as per 15 196:1966(C). Abbreviation MDL: Minimum Detection Limit. BDL: Below Detection Limit. MDL: Morms** is specified Tested By: Akanksha Sourabh Sample Drawn By: Rabul Singh & team	5,	Carbon Monox	ide (CO)		_	15 1	3270;	1992		ppr	n	-	-		_	_	_	Ada.	_
Env. Condition of Lab. Laboratory is maintaining Temperature 272 2°C and Relative Humidity 6525 % in all testing area as per 15 196:1966(C). Abbreviation MDL: Minimum Detection Limit, BDL: Below Detection Limit Norms** is specified Remark Tested By: Akanksha Sourabh Sample Drawn By: Rabul Singh & team	б.	Oxygen (O ₂)				15 1	3270:	1992		% v/	/v				-			344	_
Env. Condition of Lab. 196:1966(C). Abbreviation MDL: Minimum Detection Limit, BDL: Below Detection Limit Norms** is specified Remark Tested By: Akanksha Sourabh Sample Drawn By: Rabul Singh & team			Laborator	ry is n	iaintaini	ng Tem	peratur	a of kepo ∉ 27± 2°C	and Rel	ative	Humid	dity 6	515 %	in all te	sting	area a	s per l	5	-
Abbreviation MDL Minimum Detection Limit, BDL Below Detection Limit Norms** is specified Remark Tested By: Akanksha Sourabh Sample Drawn By: Rabul Singh & team	Env. Con	dition of Lab.	196:1966	tes.								012020			1000		002011		_
Remark Tested By: Akanksha Sourabh Sample Drawn By: Rabul Singh & team	Abbrevia	tion	MDL: MI	nimun	n Detect	bon Lin	HI, BDI	Reiow P	etectio	on L	imit -						_	-	-
Tested By: Akanksha Sourabh Sample Drawn By: Rabul Singh & team	Bamark	is specified		-	_		-		-	-	-		-	_					-
	Tested B Sample [y: Akanksha Soi Drawn By: Rahu	urabh I Singh & t	leam		1													
Becaused by Contemport Reter	a life Constant	induced Manager				_	_		1		Davis	an of the	l bur	1	-	uther	hori	Sign	2.00

 Any complaint about this report should be communicated in writing within 7 days of its issue 		
 total rabiity of institute for Environmental wanagement will be smeed to involve amount only. In case of feedback/ complaints, please send an email at <u>on-iemeco@omeil.com</u> 	(Tauqeer Ahmad) 🖾 💓 / 🗊 . 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 Omanization.	Technical Manager Director	

Page 1 of 1

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

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

								Amiber	nt Air Qu	ality Monitori	ıg						
				Sampl	ing on					-	-	Parar	neters				
SN.	Sampling location	Month	Report No.	Start	End	SO2 (ug/m3)	NO2 (ug/m3)	PM10 (ug/m3)	PM2.5 (ug/m3)	CO (ug/m3)	Ozone (ug/m3)	Lead (ug/m3)	Ammonia (ug/m3)	Benzene (ug/m3)	Benzo(a)pyrene (ng/m3)	Arsenic (ng/m3)	Nickel (ng/m3)
1			RN-230714001A1	02-04-2024	03-04-2024	22.3	44.5	152.4	28.9	BDL(MDL 1.8)	19.4	0.3	38.1	BDL (MDL- 0.06)	BDL (MDL0.18)	BDL (MDL-2)	BDL (MDL-4)
2	Plant North Side		RN-230714001A7	08-04-2024	09-04-2024	25.4	46.2	88.5	39.9	BDL(MDL 1.8)	22.5	0.2	42.5	BDL (MDL- 0.06)	BDL (MDL0.18)	BDL (MDL-2)	BDL (MDL-4)
3	Boundary		RN-230714001A13	15-04-2024	16-04-2024	30.5	54.9	130.2	48.3	BDL(MDL 1.8)	25.6	0.2	36.1	BDL (MDL- 0.06)	BDL (MDL0.18)	BDL (MDL-2)	BDL (MDL-4)
4			RN-230714001A19	23-04-2024	24-04-2024	26.4	52.3	98.7	48.3	BDL(MDL 1.8)	26.3	0.3	42.5	BDL (MDL- 0.06)	BDL (MDL0.18)	BDL (MDL-2)	BDL (MDL-4)
5			RN-230714001A2	02-04-2024	03-04-2024	25.4	42.7	233.9	78.4	BDL(MDL 1.8)	32.9	0.3	58.3	BDL (MDL- 0.06)	BDL (MDL0.18)	BDL (MDL-2)	BDL (MDL-4)
6	Plant West Side		RN-230714001A8	08-04-2024	09-04-2024	24.6	38.9	98.2	40.6	BDL(MDL 1.8)	32.6	0.3	55.4	BDL (MDL- 0.06)	BDL (MDL0.18)	BDL (MDL-2)	BDL (MDL-4)
7	Boundary		RN-230714001A14	15-04-2024	16-04-2024	29.4	46.2	276.4	86.2	BDL(MDL 1.8)	35.4	0.3	67.9	BDL (MDL- 0.06)	BDL (MDL0.18)	BDL (MDL-2)	BDL (MDL-4)
8		Apr-24	RN-230714001A20	23-04-2024	24-04-2024	31.6	42.9	162.4	58.5	BDL(MDL 1.8)	30.7	0.2	61.4	BDL (MDL- 0.06)	BDL (MDL0.18)	BDL (MDL-2)	BDL (MDL-4)
9		p. 2.	RN-230714001A3	02-04-2024	03-04-2024	24.9	39.1	119.5	38.4	BDL(MDL 1.8)	22.9	0.2	40.5	BDL (MDL- 0.06)	BDL (MDL0.18)	BDL (MDL-2)	BDL (MDL-4)
10	Plant East Side		RN-230714001A9	08-04-2024	09-04-2024	21.5	34.9	98.4	34.6	BDL(MDL 1.8)	28.9	0.2	42.6	BDL (MDL- 0.06)	BDL (MDL0.18)	BDL (MDL-2)	BDL (MDL-4)
11	Boundary		RN-230714001A15	15-04-2024	16-04-2024	18.9	32.4	168.9	61.5	BDL(MDL 1.8)	28.6	0.2	38.4	BDL (MDL- 0.06)	BDL (MDL0.18)	BDL (MDL-2)	BDL (MDL-4)
12			RN-230714001A21	23-04-2024	24-04-2024	24.5	36.9	172.9	68.5	BDL(MDL 1.8)	30.9	0.2	35.4	BDL (MDL- 0.06)	BDL (MDL0.18)	BDL (MDL-2)	BDL (MDL-4)
13			RN-230714001A4	02-04-2024	03-04-2024	23.6	50.5	121.4	29.4	BDL(MDL 1.8)	32.7	0.3	44.9	BDL (MDL- 0.06)	BDL (MDL0.18)	BDL (MDL-2)	BDL (MDL-4)
14	Plant South Side		RN-230714001A10	08-04-2024	09-04-2024	29.3	52.6	94.9	48.2	BDL(MDL 1.8)	36.1	0.2	56.7	BDL (MDL- 0.06)	BDL (MDL0.18)	BDL (MDL-2)	BDL (MDL-4)
15	Boundary		RN-230714001A16	15-04-2024	16-04-2024	28.3	49.1	163.4	659	BDL(MDL 1.8)	32.7	0.2	54.6	BDL (MDL- 0.06)	BDL (MDL0.18)	BDL (MDL-2)	BDL (MDL-4)
16			RN-230714001A22	23-04-2024	24-04-2024	30.4	51.2	105.6	42.5	BDL(MDL 1.8)	36.4	0.2	62.0	BDL (MDL- 0.06)	BDL (MDL0.18)	BDL (MDL-2)	BDL (MDL-4)
17	Diant Nanth Side		RN-230714001A1	16.05.2024	07-05-2024	20.1	38.5	145.6	26.4	BDL(MDL 1.8)	17.2	0.3	36.2	BDL (MDL- 0.06)	BDL (MDL0.18)	BDL (MDL-2)	BDL (MDL-4)
18	Plant North Side		RN-230714001A7	16-05-2024	17-05-2024	22.7	40.5	92.4	35.4	BDL(MDL 1.8)	19.2	0.3	32.4	BDL (MDL- 0.06)	BDL (MDL0.18)	BDL (MDL-2)	BDL (MDL-4)
19	Boundary		RN-230714001A13	21-05-2024	22-05-2024	20.7	52.4	121.7	45.2	BDL(MDL 1.8)	23.7	0.2	38.4	BDL (MDL- 0.06)	BDL (MDL0.18)	BDL (MDL-2)	BDL (MDL-4)
20			RN-230714001A19	27-05-2024	28-05-2024	20.0	40.1	108.4	51.2	BDL(MDL 1.8)	22.0	0.3	55.2	BDL (MDL- 0.06)	BDL (MDL0.18)	BDL (MDL-2)	BDL (MDL-4)
21	Plant West Side		RN-230714001A2	16 05 2024	17 05 2024	21.0	30.4	214.2	45.1	BDL(MDL 1.8)	20.3	0.3	50.1	BDL (MDL- 0.06)	BDL (MDL0.18)	BDL (MDL-2)	BDL (MDL-4)
22	Boundary		RN-230714001A14	21-05-2024	22-05-2024	22.4	40.5	282.4	74.0	BDL(MDL 1.8)	33.4	0.3	52.4 63.7	BDL (MDL- 0.06)	BDL (MDL0.18)	BDL (MDL-2)	BDL (MDL-4)
23	Doundary		RN-230714001A14	27-05-2024	22-03-2024	20.4	40.7	186.0	55.1	BDL(MDL 1.8)	28.3	0.3	55.1	BDL (MDL- 0.06)	BDL (MDL0.18)	BDL (MDL-2)	BDL (MDL-4)
25		May-24	RN-230714001A3	06-05-2024	07-05-2024	20.2	37.2	97.5	34.5	BDL(MDL 1.8)	20.5	0.2	45.7	BDL (MDL- 0.06)	BDL (MDL0.18)	BDL (MDL-2)	BDL (MDL-4)
26	Plant East Side		RN-230714001A9	16-05-2024	17-05-2024	18.4	36.1	114.9	36.5	BDL(MDL 1.8)	25.4	0.2	44 7	BDL (MDL- 0.06)	BDL (MDL0.18)	BDL (MDL-2)	BDL (MDL-4)
27	Boundary		RN-230714001A15	21-05-2024	22-05-2024	15.4	33.9	172.8	55.2	BDL(MDL 1.8)	26.1	0.2	42.5	BDL (MDL- 0.06)	BDL (MDL0.18)	BDL (MDL-2)	BDL (MDL-4)
28			RN-230714001A21	27-05-2024	28-05-2024	22.4	34.9	168.2	59.1	BDL(MDL 1.8)	28.9	0.2	36.8	BDL (MDL- 0.06)	BDL (MDL0.18)	BDL (MDL-2)	BDL (MDL-4)
29			RN-230714001A4	06-05-2024	07-05-2024	25.6	46.2	118.4	32.4	BDL(MDL 1.8)	28.4	0.3	42.1	BDL (MDL- 0.06)	BDL (MDL0.18)	BDL (MDL-2)	BDL (MDL-4)
30	Plant South Side		RN-230714001A10	16-05-2024	17-05-2024	28.4	48.2	96.4	51.9	BDL(MDL 1.8)	25.7	0.2	53.7	BDL (MDL- 0.06)	BDL (MDL0.18)	BDL (MDL-2)	BDL (MDL-4)
31	Boundary		RN-230714001A16	21-05-2024	22-05-2024	26.1	44.1	165.2	68.2	BDL(MDL 1.8)	26.4	0.2	51.6	BDL (MDL- 0.06)	BDL (MDL0.18)	BDL (MDL-2)	BDL (MDL-4)
32			RN-230714001A22	27-05-2024	28-05-2024	25.1	47.3	108.7	45.6	BDL(MDL 1.8)	29.5	0.2	58.1	BDL (MDL- 0.06)	BDL (MDL0.18)	BDL (MDL-2)	BDL (MDL-4)
33			RN-230714001A1	08-06-2024	09-06-2024	22.3	40.9	151.2	29.1	BDL(MDL 1.8)	19.4	0.3	38.3	BDL (MDL- 0.06)	BDL (MDL0.18)	BDL (MDL-2)	BDL (MDL-4)
34	Plant North Side		RN-230714001A4	15-06-2024	16-06-2024	24.3	42.3	96.1	39.3	BDL(MDL 1.8)	21.5	0.3	34.7	BDL (MDL- 0.06)	BDL (MDL0.18)	BDL (MDL-2)	BDL (MDL-4)
35	Boundary		RN-230714001A10	21-06-2024	22-06-2024	28.1	50.3	132.4	48.2	BDL(MDL 1.8)	25.9	0.2	40.2	BDL (MDL- 0.06)	BDL (MDL0.18)	BDL (MDL-2)	BDL (MDL-4)
36			RN-230714001A16	27-06-2024	28-06-2024	26.3	46.5	114.2	53.1	BDL(MDL 1.8)	24.5	0.3	36.9	BDL (MDL- 0.06)	BDL (MDL0.18)	BDL (MDL-2)	BDL (MDL-4)
37	Plant West Side		RN-230714001A5	15-06-2024	16-06-2024	24.5	38.9	99.4	51.2	BDL(MDL 1.8)	25.8	0.3	50.3	BDL (MDL- 0.06)	BDL (MDL0.18)	BDL (MDL-2)	BDL (MDL-4)
38	Boundary		RN-230714001A11	21-06-2024	22-06-2024	25.9	40.2	263.3	62.3	BDL(MDL 1.8)	28.3	0.3	61.3	BDL (MDL- 0.06)	BDL (MDL0.18)	BDL (MDL-2)	BDL (MDL-4)
39	Zoundury	Jun-24	RN-230714001A17	27-06-2024	28-06-2024	26.9	38.6	196.4	58.1	BDL(MDL 1.8)	26.4	0.2	57.3	BDL (MDL- 0.06)	BDL (MDL0.18)	BDL (MDL-2)	BDL (MDL-4)
40	Plant East Side		RN-230714001A6	15-06-2024	16-06-2024	20.3	38.1	96.8	39.1	BDL(MDL 1.8)	23.6	0.2	42.2	BDL (MDL- 0.06)	BDL (MDL0.18)	BDL (MDL-2)	BDL (MDL-4)
41	Boundary		RN-230714001A12	21-06-2024	22-06-2024	18.3	34.5	179.3	58.2	BDL(MDL 1.8)	24.5	0.2	40.2	BDL (MDL- 0.06)	BDL (MDL0.18)	BDL (MDL-2)	BDL (MDL-4)
42			RN-230714001A18	27-06-2024	28-06-2024	24.6	39.3	172.9	61.2	BDL(MDL 1.8)	26.1	0.2	34.7	BDL (MDL- 0.06)	BDL (MDL0.18)	BDL (MDL-2)	BDL (MDL-4)
43	Plant South Side		RN-230714001A7	15-06-2024	16-06-2024	25.1	40.3	98.3	54.2	BDL(MDL 1.8)	22.5	0.2	50.4	BDL (MDL- 0.06)	BDL (MDL0.18)	BDL (MDL-2)	BDL (MDL-4)
44	Boundary		KN-230714001A13	21-06-2024	22-06-2024	24.9	42.3	172.4	66.1	BDL(MDL 1.8)	25.4	0.2	48.3	BDL (MDL- 0.06)	BDL (MDL0.18)	BDL (MDL-2)	BDL (MDL-4)
45			RN-230714001A19	27-06-2024	28-06-2024	23.7	41.3	131.4	48.2	BDL(MDL 1.8)	27.3	0.2	55.1	BDL (MDL- 0.06)	BDL (MDL0.18)	BDL (MDL-2)	BDL (MDL-4)
40	Plant North Side		RN-230714001A1	02-07-2024	09-07 2024	19.0	38.3	148.0	20.5	BDI (MDI 1.8)	10.8	0.3	35.7	BDL (MDL- 0.06)	BDL (MDL0.18)	BDL (MDL-2)	BDL (MDL-4)
41	Boundary		RN-230714001A12	16-07 2024	17-07 2024	21.0	39.3	93.3	30.3	BDI (MDL 1.8)	10.7	0.3	36.6	BDL (MDL 0.06)	BDL (MDL0.18)	BDL (MDL-2)	BDL (MDL-4)
40	Boundary		RN-230714001A13	26.07.2024	27.07.2024	24.5	40.7	120.0	44.0	BDL(MDL 1.8)	22.3	0.2	30.0	BDL (MDL- 0.06)	BDL (MDL0.18)	BDL (MDL-2)	BDL (MDL-4)
50			RN-230714001A19	20-07-2024	03-07-2024	10.5	43.0	211.6	49.0 64.3	BDL(MDL 1.8) BDI (MDI 1.8)	21.2	0.3	53.4	BDL (MDL- 0.06) BDL (MDL- 0.06)	BDL (MDL0.18)	BDL (MDL-2)	BDL (MDL-4)
51	Plant West Side		RN-230714001A2	08-07-2024	09-07-2024	21.7	36.1	211.0	48.4	BDI (MDI 1.8)	23.1	0.3	47.5	BDL (MDL- 0.06)	BDL (MDL0.18)	BDL (MDL-2)	BDL (MDL-4)
52	Boundary		RN-230714001A14	16-07-2024	17-07-2024	221.7	36.6	259.7	58.6	BDL(MDL 1.8)	23.4	0.3	57.7	BDL (MDL- 0.06)	BDL (MDL0.18)	BDL (MDL-2)	BDL (MDL-4)
53			RN-230714001A20	26-07-2024	27-07-2024	23.4	35.0	192.9	54.6	BDL(MDL 1.8)	22.9	0.2	53.8	BDL (MDL- 0.06)	BDL (MDL0 18)	BDL (MDL-2)	BDL (MDI-4)
54		Jul-24	RN-230714001A3	02-07-2024	03-07-2024	21.7	34.6	94.9	31.8	BDL(MDL 1.8)	20.8	0.2	43.1	BDL (MDL- 0.06)	BDL (MDL0.18)	BDL (MDL-2)	BDL (MDL-4)
55	Plant East Side		RN-230714001A9	08-07-2024	09-07-2024	17.5	35.3	93.8	36.3	BDL(MDL 1.8)	20.8	0.2	39.4	BDL (MDL- 0.06)	BDL (MDL0.18)	BDL (MDL-2)	BDL (MDL-4)
56	Boundary		RN-230714001A15	16-07-2024	17-07-2024	17.7	30.9	166.2	54.6	BDL(MDL 1.8)	20.8	0.2	36.6	BDL (MDL- 0.06)	BDL (MDL0.18)	BDL (MDL-2)	BDL (MDL-4)
57			RN-230714001A21	26-07-2024	27-07-2024	21.1	35.8	162.8	57.7	BDL(MDL 1.8)	22.6	0.2	31.2	BDL (MDL- 0.06)	BDL (MDL0.18)	BDL (MDL-2)	BDL (MDL-4)
58			RN-230714001A4	02-07-2024	03-07-2024	23.5	43.6	115.8	29.7	BDL(MDL 1.8)	25.8	0.3	39.5	BDL (MDL- 0.06)	BDL (MDL0.18)	BDL (MDL-2)	BDL (MDL-4)
59	Plant South Side		RN-230714001A10	08-07-2024	09-07-2024	22.3	37.5	95.5	51.4	BDL(MDL 1.8)	19.7	0.2	47.6	BDL (MDL- 0.06)	BDL (MDL0.18)	BDL (MDL-2)	BDL (MDL-4)
60	Boundary		RN-230714001A16	16-07-2024	17-07-2024	21.3	38.7	168.8	62.5	BDL(MDL 1.8)	21.8	0.2	44.7	BDL (MDL- 0.06)	BDL (MDL0.18)	BDL (MDL-2)	BDL (MDL-4)
61	-		RN-230714001A22	26-07-2024	27-07-2024	20.2	37.8	127.9	44.7	BDL(MDL 1.8)	23.8	0.2	51.6	BDL (MDL- 0.06)	BDL (MDL0.18)	BDL (MDL-2)	BDL (MDL-4)
62	Plant West Side Boundary		RN-230714001A1	28-08-2024	29-08-2025	21.90	38.60	65.70	31.20	BDL(MDL 1.8)	24.70	0.20	49.10	BDL (MDL- 0.06)	BDL (MDL0.18)	BDL (MDL-2)	BDL (MDL-4)
63	Plant East Side Boundary	Aug-24	RN-230714001A2	28-08-2024	29-08-2025	23.40	40.90	56.20	32.70	BDL(MDL 1.8)	20.90	0.30	34.70	BDL (MDL- 0.06)	BDL (MDL0.18)	BDL (MDL-2)	BDL (MDL-4)

64	Plant South Side Boundary		RN-230714001A3	28-08-2024	29-08-2025	22.50	35.70	48.70	26.20	BDL(MDL 1.8)	21.60	0.30	48.20	BDL (MDL- 0.06)	BDL (MDL0.18)	BDL (MDL-2)	BDL (MDL-4)
65			RN-240715001A1	07-09-2024	08-09-2024	20.9	41.0	148.6	26.5	BDL(MDL 1.8)	20.2	0.30	20.90	BDL (MDL- 0.06)	BDL (MDL0.18)	BDL (MDL-2)	BDL (MDL-4)
66	Plant North Side	Sep-24	RN-240715001A7	12-09-2024	13-09-2024	23.6	42.0	93.3	36.5	BDL(MDL 1.8)	22.4	0.30	23.60	BDL (MDL- 0.06)	BDL (MDL0.18)	BDL (MDL-2)	BDL (MDL-4)
67	Boundary		RN-240715001A13	20-09-2024	21-09-2024	26.4	49.4	128.8	44.6	BDL(MDL 1.8)	25.7	0.20	26.40	BDL (MDL- 0.06)	BDL (MDL0.18)	BDL (MDL-2)	BDL (MDL-4)
68			RN-240715001A19	24-09-2024	25-09-2024	24.6	45.5	110.7	49.6	BDL(MDL 1.8)	24.9	0.30	24.60	BDL (MDL- 0.06)	BDL (MDL0.18)	BDL (MDL-2)	BDL (MDL-4)
69			RN-240715001A2	07-09-2024	08-09-2024	21.4	38.5	211.6	64.3	BDL(MDL 1.8)	29.1	0.30	21.40	BDL (MDL- 0.06)	BDL (MDL0.18)	BDL (MDL-2)	BDL (MDL-4)
70	Plant West Side		RN-240715001A8	12-09-2024	13-09-2024	23.5	38.6	99.6	48.4	BDL(MDL 1.8)	27.1	0.30	23.50	BDL (MDL- 0.06)	BDL (MDL0.18)	BDL (MDL-2)	BDL (MDL-4)
71	Boundary		RN-240715001A14	20-09-2024	21-09-2024	24.2	39.3	259.7	58.6	BDL(MDL 1.8)	28.1	0.30	24.20	BDL (MDL- 0.06)	BDL (MDL0.18)	BDL (MDL-2)	BDL (MDL-4)
72			RN-240715001A20	24-09-2024	25-09-2024	25.2	37.5	192.9	54.6	BDL(MDL 1.8)	26.6	0.16	25.20	BDL (MDL- 0.06)	BDL (MDL0.18)	BDL (MDL-2)	BDL (MDL-4)
73			RN-240715001A3	07-09-2024	08-09-2024	23.6	37.3	94.9	31.8	BDL(MDL 1.8)	24.2	0.20	23.60	BDL (MDL- 0.06)	BDL (MDL0.18)	BDL (MDL-2)	BDL (MDL-4)
74	Plant East Side		RN-240715001A9	12-09-2024	13-09-2024	19.3	37.8	93.8	36.3	BDL(MDL 1.8)	24.5	0.20	19.30	BDL (MDL- 0.06)	BDL (MDL0.18)	BDL (MDL-2)	BDL (MDL-4)
75	Boundary		RN-240715001A15	20-09-2024	21-09-2024	19.6	33.6	166.2	54.6	BDL(MDL 1.8)	24.2	0.15	19.60	BDL (MDL- 0.06)	BDL (MDL0.18)	BDL (MDL-2)	BDL (MDL-4)
76			RN-240715001A21	24-09-2024	25-09-2024	22.9	38.3	162.8	57.7	BDL(MDL 1.8)	26.3	0.20	22.90	BDL (MDL- 0.06)	BDL (MDL0.18)	BDL (MDL-2)	BDL (MDL-4)
77			RN-240715001A4	07-09-2024	08-09-2024	25.4	46.3	115.8	29.7	BDL(MDL 1.8)	29.2	0.30	25.40	BDL (MDL- 0.06)	BDL (MDL0.18)	BDL (MDL-2)	BDL (MDL-4)
78	Plant South Side		RN-240715001A10	12-09-2024	13-09-2024	24.1	40.0	95.5	51.4	BDL(MDL 1.8)	23.4	0.20	24.10	BDL (MDL- 0.06)	BDL (MDL0.18)	BDL (MDL-2)	BDL (MDL-4)
79	Boundary		RN-240715001A16	20-09-2024	21-09-2024	23.2	41.4	168.8	62.5	BDL(MDL 1.8)	25.2	0.20	23.20	BDL (MDL- 0.06)	BDL (MDL0.18)	BDL (MDL-2)	BDL (MDL-4)
80			RN-240715001A22	24-09-2024	25-09-2024	22.0	40.3	127.9	44.7	BDL(MDL 1.8)	27.5	0.20	22.00	BDL (MDL- 0.06)	BDL (MDL0.18)	BDL (MDL-2)	BDL (MDL-4)



Institute for Environmental Management



								T	est F	Repo	rt					121				
ULR No	.:	Т	С	1	1	5	1	5	2	4	0	0	0	0	0	1	1	2	4	
Discipline: Chemical Group: Atr								tmo	ospheric Pollution Sub-Group: Ambient Air											
Report Issue Date: 18-07-2024									Test Report No.: RN-230714001A07											
Sample ID: 240715AP09001									Sample Description: Ambient 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 Long Products Limited)																				
Gamaharia Phase-V, Adityapur Industrial Area, Seraikela-Kharsawan, Jharkhand-832108																				
Type of Industry: Iron & Steel Customer Representative: Shweta Kumari																				
Sample Drawn by: IEM Team								Sam	pling	Date:	08-07	-2024	to 09	-07-20)24					
Protoco	l: CPCB Gui	delin	e(NAA	AQMS	/36/2	012-3	13) &	IS N	letho	d 518	2 Seri	ies								
Sampling Location: STATION-1 PLANT NORTH SIDE BOUNDARY																				
Field Meteorological Information A. Temp.(°C): 31						31	R.H.	R.H.(%): 68 W.C.: Semi			-Cloudy W.D.: NV				o SE					
Sample Receiving Date: 15-07-2024 Testing St						Star	ted: 1	ed: 15-07-2024 Testing Ended: 18-07-2024												
						287		Tes	st Res	ults			1							
SI. No.	Parameters				Test Metho				d Unit			Unit		Result				Norr	ns**	
1.	Particulate	Matte	r (PM ₁	0)	IS 51	82 Pa	art 23:	2006	RA 2	017	h	ig/m ³		93.3			-	10)0	
2.	2. Particulate Matter (PM _{2.5})				IS 5182 Part 24:				2019		h	ig/m ³		36.5				6	0	
3.	3. Sulphure Dioxide (SO ₂)				IS 5182 Part 02: 2001				RA 2	RA 2017 µg/m ³				21.8				8	0	
4. Nitrogen Dioxide (NO ₂)					IS 5182 Part 06: 2006				6 RA 2017 μg/m ³				39.5				8	0		
5. Ammonia (NH ₃)					IS 5182 Part 25:				2018 µg/m ³			-	31.9				40)0		
6. Ozone (O ₃)				IS 5182 Part 09:				1974 µg/m ³				18.7				18	30			
7. Arsenic (As)			USEPA 10 3.2: 1				1999	999 ng/m ³				BDL (MDL-2)				·	-			
8. Lead (Pb)				IS 5182 Part 22:				2004	μg/m ³				0.3				1.	0		
9. Nickel (Ni)					IS 5182 Part 26:				2020		ng/m ³			BDL (MDL-4)				-	-	
				A.				End	of Re	eport-								_		
Envi Co	ndition of I	ah	Lab	orator	ry is n	nainta	aining	g Ter	npera	ature	27±2	°C and	Rela	tive H	umidi	ty 65±	5 % i	n all		

Remark	Sample Comply with prescribed specification Except Parameter PM10 & PM2.5
Norms** is Specified	National Ambient Air Quality Standards (NAAQS), 2009.
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: Akanksha Sourabh

Sample Drawn By: Rahul Singh & Team

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 Four lability of institute of 2 million and a generating and a generating of feedback/ complaints, please send an email at <u>gm.iemeco@gmail.com</u> 	(Tauqeer Ahmad)	. S. C. Jain) ∰
On the basis of Quality Checked and Technical data verified by the Authorized signatory, the report	Technical Manager	Director
is issued by the Director of the Organization.	roominour man host	
Page 1 of 2	Manc	

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




Te	st	Re	DO	rt
	-			-

Discipli	ne: Chemical		Group: Atm	ospheric Pollutio	n	Sub-Group:	Ambient A	r			
Report	Issue Date: 18-0	7-2024		Test Report No.: RN-230714001A07							
Sample	ID: 240715AP09	0001		Sample Descri	ption:	Ambient Air					
Challan	No./P.O. No.: 4	511012880		Challan No./ P	No. D	ate: 13-07-2023					
Issued	to:										
	M/s Tata Ste	el Limited									
	(Formerly Ta	ta Steel Lon	g Products Limite	ed)							
	Gamaharia P	hase-V, Adi	tyapur Industrial /	Area,							
	Seraikela-Kh	arsawan, Jh	arkhand-832108								
Type of	f Industry: Iron &	Steel		Customer Rep	resenta	ative: Shweta Ku	mari				
Sample	Drawn by: IEM	Геат		Sampling Date	e: 08-07	7-2024 to 09-07-2	2024				
Protoco	ol: CPCB Guidelin	e(NAAQMS	/36/2012-13) & IS	Method 5182 Se	ries						
Sampli	ng Location: STA	TION-1 PLAN	IT NORTH SIDE BOU	JNDARY	100						
Field N	leteorological Inf	formation	A. Temp.(°C): 31	R.H.(%): 68	W.C.	: Semi-Cloudy	W.D.: NW	to SE			
Sample	Receiving Date:	15-07-2024	Testing Sta	rted: 15-07-2024	1	Testing Ended	: 18-07-202	4			
	-		Te	est Results							
SI. No.	Parame	ters	Test Metho	bd	Unit	Res	ult	Limits			
10.	Benzene (C ₆ H ₆)		IS 5182 Part 11	: 2006	µg/m ³	BDL (MD	DL-0.06)				
11.	Benzo (a) Pyrene Particulate Phas	e (Bap) e Only	IS 5182 Part 12	2004	ng/m ³	BDL (MD	DL-0.18)				
12.	Carbon Monoxid	e	IEM/SOP/Air-0	1:2022	mg/m ³	BDL(MI	DL-1.8)				
			En	d of Report							
Env.Co	ondition of Lab.	Laborator testing are	y is maintaining Te a as per IS 196:19	emperature 27± 66(C).	2°C and	d Relative Humid	ity 65±5 %	in all			
Abbrev	viation	MDL: Mini	mum Detection Lin	nit, BDL:Below D	etectio	on Limit					
Norms	** is Specified	National Am	al Ambient Air Quality Standards (NAAQS), 2009.								

Remark N/A Tested By: Akanksha Sourabh

Sample Drawn By: Rahul Singh & Team

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 Fotal liability of institute for Environmental management will be innited to involved amount only. In case of feedback/ complaints, please send an email at om.iemeco@gmail.com 	(Taugeer Ahmad)	(Dres/ 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
Page 2 of 2		Manchi

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





						Т	est Rep	ort									
ULR No.	.: Т	С	1	1	5	1	5 2	4 0	0	0	0	0	1	1	2	5	
Discipli	ne: Chemical				Gro	up: Atm	nospheric	Pollutio	n		Sub-Gro	up: A	mbie	nt Air			
Report	Issue Date: 18-	07-202	4				Test Re	port No	o.: RN-2	2307	14001A0)8					
Sample	ID: 240715AP	9002					Sample	e Descri	ption: /	Ambi	ent Air						
Challan	No./P.O. No.:	451101	2880				Challar	n No./ P	.No. Da	ate: 1	3-07-20	23					
Issued	to:																
	M/s Tata S	teel L	imite	b	-												
	(Formerly	Tata S	teelL	.ong	Prod	ucts L	rial Area										
	Gamaharia	Phas	e-v, A	lbar	ipur khar	1110USL	108	,									
	Seraikeia-	\IIdi Se	awan,	Jilai	кпат	10-052					Churche	Kuna	o ri				
Type of	Industry: Iron	& Steel					Custon	ner Rep	resenta	ative	Shweta	Kum	ari				
Sample	Drawn by: IEN	1 Team					Sampli	ng Date	: 08-07	-202	4 to 09-0	57-20	24				
Protoco	ol: CPCB Guidel	ine(NA	AQMS	/36/2	012-1	13) & IS	Method 5	182 Sei	ries								
Samplin	ng Location: ST	ATION-	2 PLA	NT WE	ST SI	DE BOU	NDARY	6.0		0					O OE		
Field M	eteorological I	nforma	tion	A. T	emp.	(° C) : 31	R.H.(%)	: 68	W.C.:	Sem	II-Cloudy		W.D.:	2024	0 SE		
Sample	Receiving Dat	e: 15-0	7-2024	•	Te	sting St	arted: 15-	07-2024		Tes	ting End	ded:	18-07	-2024			
				1		T	est Result	:S		-							
SI. No.	Param	eters		0	Te	est Meth	od		Unit			Resu	lt		Norn	ns**	
1.	Particulate Mat	ter (PM	10)	IS 51	182 Pa	art 23:20	06 RA 2017	7	µg/m°			99.6			10	0	
2.	Particulate Mar	ter (PM	2.5)		IS 518	2 Part 2	4: 2019	1.0-20	µg/m ³			48.4			60)	
3.	Sulphure Dioxi	de (SO ₂)	IS 51	82 Pa	rt 02: 20	01 RA 201	7	µg/m³	n ³ 2					80	5	
4.	Nitrogen Dioxid	le (NO2)		IS 51	82 Pa	rt 06: 20	06 RA 201	7	µg/m³	1		36.1			8	0	
5.	Ammonia (NH;)			IS 518	32 Part 2	5: 2018		µg/m³			47.5			40	0	
6.	Ozone (O ₃)			1	IS 518	32 Part 0	9: 1974	-	µg/m³	_		23.4			18	0	
7.	Arsenic (As)		2		USEF	PA 10 3.2	2: 1999		ng/m³		BD	L (MD)L-2)			-	
8.	Lead (Pb)				IS 518	32 Part 2	2: 2004		µg/m ³		3.52	0.3		1	1.	0	
9.	Nickel (Ni)				IS 518	32 Part 2	6: 2020		ng/m ³	-	BD	L (MD)L-4)			-	
	5					Er	nd of Repo	ort									
Env.Co	ndition of Lab	Lab tes	orato ting an	ry is n ea as	nainta per I	aining T S 196:1	<mark>'emp</mark> eratu 966(C).	re 27±	2°C and	d Rela	tive Hu	midit	y 65±	:5 % i	n all		
Abbrev	Abbreviation MDL: M					DL: Minimum Detection Limit, BDL:Below Detection Limit											
Norms	** is Specified	Nat	Vational Ambient Air Quality Standards (NAAQS), 2009.														
Remark	(San	ample Comply with prescribed specification Except Parameter PM ₁₀ & PM _{2.5}														

Tested By: Akanksha Sourabh

Sample Drawn By: Rahul Singh & Team

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







			Te	est Report								
Discipli	ne: Chemical		Group: Atm	ospheric Pollutic	n	Sub-Group:	Ambient A	ir				
Report	Issue Date: 18-0	7-2024		Test Report No.: RN-230714001A08								
Sample	ID: 240715AP09	002		Sample Descri	ption: A	mbient Air						
Challan	No./P.O. No.: 45	511012880		Challan No./ F	.No. Da	te: 13-07-2023						
Issued	to: M/s Tata St (Formerly Ta Gamaharia I Seraikela-K	eel Limitec ata Steel L Phase-V, A harsawan,	l ong Products Lir dityapur Industr Jharkhand-8321	nited) ial Area, 08								
Type of	f Industry: Iron &	Steel		Customer Rep	resenta	tive: Shweta Ku	mari					
Sample	Drawn by: IEM	Team		Sampling Date	e: 08-07	-2024 to 09-07-	2024					
Protoco	ol: CPCB Guidelin	e(NAAQMS	/36/2012-13) & IS I	Method 5182 Se	ries							
Sampli	ng Location: STA	TION-2 PLAN	T WEST SIDE BOUN	IDARY								
Field N	leteorological Inf	formation	A. Temp.(°C): 31	R.H.(%): 68	W.C.:	Semi-Cloudy	W.D.: NW	to SE				
Sample	Receiving Date:	15-07-2024	Testing Sta	rted: 15-07-2024	4	Testing Ended	: 18-07-202	4				
			Te	st Results								
SI. No.	Paramet	ters	Test Metho	od	Unit	Res	sult	Limits				
10.	Benzene (C ₆ H ₆)		IS 5182 Part 11	: 2006	µg/m ³	BDL (MI	DL-0.06)					
11.	Benzo (a) Pyrene Particulate Phase	e (Bap) e Only	IS 5182 Part 12	: 2004	ng/m ³	BDL (MI	DL-0.18)					
12.	Carbon Monoxid	e	IEM/SOP/Air-01	:2022	mg/m ³	BDL(M	DL-1.8)					
			En	d of Report								
Env.Co	ondition of Lab.	Laborator testing ar	aboratory is maintaining Temperature 27± 2°C and Relative Humidity 65±5 % in all esting area as per IS 196:1966(C).									
Abbrev	viation	MDL: Mini	imum Detection Lin	ion Limit, BDL:Below Detection Limit								
Norms	** is Specified	National An	nbient Air Quality Stan	dards (NAAQS), 20	09.							
Remar	k	N/A										

Tested By: Akanksha Sourabh

Sample Drawn By: Rahul Singh & Team

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 In case of feedback/ complaints, please send an email at <u>gm.iemeco@gmail.com</u> 	(Tauqeer Ahmad) 🚺 🦪 /(Dr/ S. C. Jain)
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Page 2 of 2	and

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





					/		1	lest R	еро	rt								
ULR No.	.:	г С		1	1	5	1 5	5 2	4	0	0	0	0	0	1	1	2	6
Discipli	ne: Chemical					Gro	up: Atm	ospheric Pollution Sub-Group: Ambient Air										
Report	Issue Date: 18		Test	Repo	rt No.	:RN-2	23071	4001A	09									
Sample	ID: 240715AF	09003						Sam	ple D	escrip	tion: A	Ambie	ent Air					
Challan	No./P.O. No.	45110	128	380				Chal	lan N	o./ P.I	No. Da	nte: 13	3-07-20)23				
Issued	to:																	
	M/s Tata	Steel	Lim	itec	ł													
	(Formerly	Tata	Ste	el L	ongl	Prod	ucts Li	mited)	_									
	Gamahar	a Pha	se-	V , A	ditya	ipur i	naustr		ea,									
	Seraikela	Knars	aw	an,	Jnar	knan	0-0321	00						1055				
Type of	Industry: Iror	& Ste	el			_		Cust	omer	Repre	esenta	tive:	Shweta	a Kum	nari			
Sample	Drawn by: IE	M Tear	n					Sam	pling	Date:	08-07	-2024	to 09-	07-20)24			
Protoco	ol: CPCB Guide	line(N	AAC	QMS,	/36/2	012-1	.3) & IS I	Metho	d 518	2 Seri	es							
Samplin	ng Location: S	TATION	I-3 F	PLAN	NT EAS	ST SID	E BOUN	DARY										
Field M	eteorological	Inform	atio	on	A. Te	emp.(°C): 31	R.H.	(%): 6	8	W.C.:	Semi	-Cloud	у	W.D.:	: NW t	o SE	
Sample	Receiving Da	te: 15-)7-2	2024		Tes	ting Sta	rted: 1	5-07-	2024		Test	ting En	ded:	18-07	-2024		
					18	3	Te	est Res	ults			5						
SI. No.	Para	neters			10	Те	st Metho	bd		ι	Jnit			Resu	lt		Norn	ns**
1.	Particulate Ma	atter (PI	/ 10)	N	IS 51	82 Pa	rt 23:200	6 RA 20	017	μ	g/m ³			93.8	3		10	0
2.	Particulate Ma	atter (PI	A _{2.5})		1	S 518	2 Part 24	: 2019		μ	g/m ³		de la	36.3	3		60	С.
3.	Sulphure Diox	ide (SC	2)		IS 51	82 Pa	rt 02: 200	1 RA 20	017	μ	g/m ³		1				80	С.
4.	Nitrogen Diox	ide (NC	2)		IS 51	82 Pa	rt 06: 200	6 RA 2	017	μ	g/m ³			35.3	3		80	C
5.	Ammonia (NH	l ₃)			1	S 518	2 Part 25	: 2018		μ	g/m ³	8		39.4	1		40	0
6.	Ozone (O ₃)				1	S 518	2 Part 09	: 1974		μ	g/m ³			20.8	3		18	0
7.	Arsenic (As)					USEP	A 10 3.2:	1999		n	g/m ³		BD	L (M	DL-2)			
8.	Lead (Pb)				1	S 518	2 Part 22	: 2004		μ	g/m ³		1	0.2			1.	0
9.	Nickel (Ni)					S 518	2 Part 26	: 2020		n	g/m ³		BD	L (M	DL-4)			
							En	d of Re	port-									
Env.Co	ndition of Lat	La	bor	ator g ar	y is m ea as	nainta per IS	ining Te	empera 66(C).	ture	27± 20	°C and	Rela	tive Hu	midi	ty 65±	±5 % i	n all	
		Le	SCILL	0	Abbreviation MDL: Minimum Dete													
Abbrev	iation	M	DL:	Mini	imum	Detec	ction Lir	nit, BD	L:Bel	ow De	tectio	n Lim	it	12		_	_	
Abbrev Norms*	iation * is Specified	M	DL:	Mini al An	imum nbient	Detec Air Qu	ction Lir ality Stan	nit, BD dards (N	L:Bel	ow De 5), 2009	tectio 9.	n Lim	it					

Tested By: Akanksha Sourabh

Sample Drawn By: Rahul Singh & Team

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

Institute for Environmental Management

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			1	est Report								
Discipli	ine: Chemical		Group: Atm	ospheric Pollutio	n	Sub-Group	: Ambient A	ir				
Report	Issue Date: 18-0	7-2024		Test Report No.: RN-230714001A09								
Sample	ID: 240715AP09	9003		Sample Descr	iption:	Ambient Air						
Challan	No./P.O. No.: 4	511012880		Challan No./ I	P.No. Da	ate: 13-07-2023						
Issued	to:	M =5 (22) (22) //										
	M/s Tata St (Formerly T Gamaharia Seraikela-K	eel Limited ata Steel L Phase-V, A harsawan,	i ong Products Li dityapur Industi Jharkhand-8321	mited) rial Area, 08								
Type of	f Industry: Iron &	Steel		Customer Rep	resenta	ative: Shweta K	umari					
Sample	Drawn by: IEM	Team		Sampling Date	e: 08-07	7-2024 to 09-07-	-2024					
Protoco	ol: CPCB Guidelin	e(NAAQMS	/36/2012-13) & IS	Method 5182 Se	ries							
Sampli	ng Location: STA	TION-3 PLAN	T EAST SIDE BOUN	IDARY		20.5						
Field N	leteorological Int	formation	A. Temp.(°C): 31	R.H.(%): 68	W.C.:	Semi-Cloudy	W.D.: NW	to SE				
Sample	Receiving Date:	15-07-2024	Testing Sta	arted: 15-07-202	4	Testing Ende	d: 18-07-202	4				
		0	T	est Results	-		u					
SI. No.	Parame	ters	Test Meth	od	Unit	Re	sult	Limits				
10.	Benzene (C ₆ H ₆)		IS 5182 Part 11	1: 2006	µg/m ³	BDL (M	DL-0.06)					
11.	Benzo (a) Pyren Particulate Phas	e (Bap) e Only	IS 5182 Part 12	2: 2004	ng/m ³	BDL (M	DL-0.18)					
12.	Carbon Monoxid	e	IEM/SOP/Air-0	1:2022	mg/m ³	BDL(N	1DL-1.8)					
			En	d of Report		082						
Env.Co	ondition of Lab.	Laborator testing are	aboratory is maintaining Temperature 27± 2°C and Relative Humidity 65±5 % in all esting area as per IS 196:1966(C).									
Abbrev	viation	MDL: Mini	DL: Minimum Detection Limit, BDL:Below Detection Limit									
Norms	** is Specified	National An	National Ambient Air Quality Standards (NAAQS), 2009.									
Remar	k	N/A										

Tested By: Akanksha Sourabh

Sample Drawn By: Rahul Singh & Team

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						٦	est Re	eport	t								
ULR No.	: Т	С	1	1	5	1	5 2	4	0	0	0	0	0	1	1	2	7
Disciplin	ne: Chemical				Gro	oup: Atr	nosphei	ric Pol	lution		Su	b-Gro	oup: A	mbie	nt Air		
Report I	ssue Date: 18	07-202	4				Test	Repo	rt No.	:RN-23	80714	001A	10				
Sample	ID: 240715AP	09004					Sam	ple D	escrip	tion: An	nbien	t Air					
Challan	No./P.O. No.:	451103	12880				Chal	lan N	o./ P.I	No. Date	e: 13-	07-20)23				
Issued	to:																
	M/s Tata S	Steel L	imite	d			teres to be add										
	(Formerly	Tata S	teel L	ong	Prod	ucts L	imited)									
	Gamanaria	A Phas	e-v, A	Aditya	apur	1110US	108	ea,									
	Seraikeia-	Anars	awan,	Jilai	кпа	10-052	100		_								
Type of	Industry: Iron	& Stee		-			Cust	omer	Repr	esentati	ve: S	nweta	a Kum	ari			
Sample	Drawn by: IEN	1 Team					Sam	pling	Date:	08-07-2	2024 t	:0 09-	07-20)24			
Protoco	I: CPCB Guide	ine(NA	AQMS	5/36/2	2012-3	13) & IS	Metho	d 518	2 Seri	es							
Samplin	g Location: ST	ATION	-4 PLA	NT SO	UTH S	SIDE BO	UNDAR	Y				21 1					
Field M	eteorological I	nforma	ation	A. T	emp.	(°C): 31	R.H.	(%): 6	8	W.C.: 5	semi-0		y	W.D.:	NVV to) 5E	
Sample	Receiving Dat	e: 15-0	7-2024	1	Te	sting St	arted: 1	.5-07-	2024		lesti	ng En	aea:	18-07-	-2024		
				-		7	est Res	ults	-		-		_		-		
SI. No.	Param	eters		P	Т	est Meth	od		1	Jnit	Result				Norn	ns**	
1.	Particulate Ma	tter (PM	10)	IS 5	182 Pa	art 23:20	06 RA 2	017	μ	g/m°	95.5			-	10	0	
2.	Particulate Ma	tter (PM	2.5)		IS 518	32 Part 2	4: 2019		μ	g/m°	_		51.4			60)
3.	Sulphure Diox	de (SO2	2)	IS 51	82 Pa	art 02: 20	01 RA 2	017	μ	g/m°	1000		22.3			80)
4.	Nitrogen Dioxi	de (NO ₂)	IS 51	82 Pa	art 06: 20	06 RA 2	017	μ	g/m°			37.5)		8)
5.	Ammonia (NH	3)			IS 518	32 Part 2	5: 2018		μ	g/m°			47.6)		40	0
6.	Ozone (O ₃)			L KO	IS 518	32 Part C	9: 1974		μ	g/m [°]	-		19.7			18	0
7.	Arsenic (As)			2	USEF	PA 10 3.2	2: 1999		n	g/m³	_	BD	L (ME	DL-2)			
8.	Lead (Pb)		13.4		IS 518	32 Part 2	2: 2004		μ	g/m³		2	0.2			1.	0
9.	Nickel (Ni)				IS 518	32 Part 2	6: 2020		n	g/m³		BD	L (MD)L-4)			•
		- d-				E	nd of Re	eport-							_		
Env.Co	ndition of Lab	Lał	orato	ry is n	nainta	aining 7	'empera	iture	27±2	°C and F	Relati	ve Hu	midit	ty 65±	:5 % i	n all	
Abbrow	iation	tes	ting ai	ea as	Det e	5 196:1	mit BD	L·Bel	ow De	tection	Limi	t	1				
Abbreviation MDL: Minim Norms** is Specified National Amb					nhient Air Quality Standards (NAAOS) 2009												
Remark	Norms** is Specified National Ambient Air Quality S								tion	Except H	Param	neter	PM10	& PM:	2.5		
Tested	By: Akanksha	ourabh	inpre e	unpry	mich	produt	and ap				1.0		-	1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 -			

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







								lan	
Discipli	ine: Chemical		Group: Atmospheric Po			Sub-Group: Ambient Air			
Report	Issue Date: 18-0	7-2024		Test Report N	No.: RN-	230714001A10			
Sample	ID: 240715AP09	004	04 Sample Description: Ambient Air						
Challar	No./P.O. No.: 4	511012880		Challan No./	P.No. D	ate: 13-07-2023	£ ==		
Issued	to:								
	M/s Tata St (Formerly Ta Gamaharia I Seraikela-Kl	eel Limited ata Steel L Phase-V, A harsawan,	d .ong Products Lin Adityapur Industr Jharkhand-8321	mited) ial Area, 08					
Type of	f Industry: Iron &	Steel		Customer Re	present	ative: Shweta Ki	umari		
Sample	Drawn by: IEM	Team		Sampling Dat	te: 08-07	7-2024 to 09-07-	-2024		
Protoc	ol: CPCB Guidelin	e(NAAQMS	/36/2012-13) & IS I	Method 5182 S	eries		N		
Sampli	ng Location: STA	TION-4 PLA	NT SOUTH SIDE BOL	INDARY					
Field N	leteorological Inf	formation	A. Temp.(°C): 31	R.H.(%): 68	W.C.	: Semi-Cloudy	W.D.: NW	to SE	
Sample	Receiving Date:	15-07-2024	Testing Sta	rted: 15-07-202	24	Testing Ender	d: 18-07-202	4	
			Te	st Results	21.5				
SI. No.	Paramet	ers	Test Metho	bd	Unit	Re	sult	Limits	
10.	Benzene (C ₆ H ₆)		IS 5182 Part 11	: 2006	µg/m ³	BDL (M	DL-0.06)		
11.	Benzo (a) Pyrene Particulate Phase	e (Bap) e Only	IS 5182 Part 12	: 2004	ng/m ³	BDL (M	DL-0.18)		
12.	Carbon Monoxid	e	EM/SOP/Air-01:2022 m			BDL(M	IDL-1.8)		
			En	d of Report		3-1	100		
Env.Co	ondition of Lab.	Laboratory is maintaining Temperature 27± 2°C and Relative Humidity 65±5 % in all testing area as per IS 196:1966(C).							
Abbrev	viation	MDL: Minimum Detection Limit, BDL:Below Detection Limit							
Norms	** is Specified	National Ar	nbient Air Quality Stan	dards (NAAQS), 2	009.				
Remar	k	N/A			1.1.1.1.1.1.1				

Tested By: Akanksha Sourabh

Sample Drawn By: Rahul Singh & Team

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|--|

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





Installation of New Bag Filter at MBF-2 RMHs

Adequate APCS have been Installed at different

Covered shed with concreted floor for storage and handling of raw materials



Sewage Treatment Plant (250 KLD)



Effluent Treatment Plant (7200KLD)



Battery of Mist Beams installed in Blast Furnace Raw Material Yards





Rain gun Sprinklers and dust suppression systems across the plant



Annexure-4



Green Belt developed inside the Plant





Annexure - 5

48.2

µg/m³



3.



Test Report

Disciplin	e: Chemical	Group: Atm	ospheric Pollutio	on	Sub-Group	: Work Env	vironment
Report I	ssue Date: 25-07-2024		Test Report N	lo.: RN-2307	30714001FE02		
Sample	ID: 240722AP13001		Sample Descr	ription: Worl	k Zone Air		
Challan	No./P.O. No.: 4511012880		Challan No./	P.No. Date:	13-07-2023		
Issued t	o: M/s Tata Steel Limite (Formerly Tata Steel L Gamaharia Phase-V, A Seraikela-Kharsawan,	d Long Products Lin Adityapur Industr , Jharkhand-8321	mited) ial Area, 08				
Type of	Industry: Iron & Steel	n & Steel Customer Representative: Shweta Kumari					
Sample	Drawn by: IEM Team		Sampling Dat	e: 15-07-202	24		
Protoco	: CPCB Guideline(NAAQMS,	/36/2012-13) & IS N	lethod 5182 Ser	ries			
Samplin	g Location: DRI 1,2 & 3 NEAF	R PSB			The second s		
Field Me	eteorological Information	A. Temp.(°C): 30	R.H.(%): 65	W.C.: Par	tly Sunny	W.D.: N\	N to SE
Sample	Receiving Date: 22-07-2024	Testing Sta	rted: 22-07-202	.4 Te	sting Ende	d: 25-07-20	24
		Te	est Results				
SI. No.	Parameters	Test Method		Unit		Result	Norms**
1.	Suspended Particulate Matter (SPM)	IS 5182 F	IS 5182 Part 04		3	1623.5	
2.	Sulphure Dioxide (SO ₂)	IS 5182 Part-02: 2001 RA 2017		µg/m ³	3	32.5	

4.	Carbon Monox	tide (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).						in all
Abbrev	iation	MDL: Minim	um Detection Limit, BDL: Belov	w Detection Limit		
Norms** is Specified						
Remark	Remark					

IS 5182 Part-06: 2006 RA 2017

Tested By: Akanksha Sourabh

Sample Drawn By: Rahul Singh & Team

Nitrogen Dioxide (NO₂)

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

Ranchi-834002, Jharkhand, India





Discipline: Chemical		Group: Atm	ospheric Polluti	on	Sub-Group	: Work Env	vironment	
Report Issue Date: 25-07-2024			Test Report N	lo.: RN-	230714001FE0	01FE05		
Sample ID: 240722AP13004			Sample Desc	ription:	Work Zone Air			
Challan No./P.O. No.: 451101288	0		Challan No./	P.No. D	ate: 13-07-2023			
Issued to: M/s Tata Steel Limited (Formerly Tata Steel Long Products Limited) Gamaharia Phase-V, Adityapur Industrial Area, Seraikela-Kharsawan, Jharkhand-832108						÷		
Type of Industry: Iron & Steel			Customer Re	presen	tative: Shweta k	Kumari		
Sample Drawn by: IEM Team			Sampling Dat	e: 15-07	7-2024			
Protocol: CPCB Guideline(NAAQN	15/36/201	12-1 <mark>3) & IS</mark> M	lethod 5182 Ser	ries				
Sampling Location: : DRI 4,5 NEA	R PSB DISI	PATCH ROOM	Л					
Field Meteorological Information	A. Ter	mp.(°C): 30	R.H.(%): 65	W.C.:	Partly Sunny	W.D.: NV	V to SE	
Sample Receiving Date: 22-07-20	2024 Testing Started: 22-07-2024 Testing Ended: 25-07-2024			24				
		Te	st Results					
SI. No. Parameters	167.75	Test Method			Unit	Result	Norms**	

0.000			and the second sec	1041.041722800.0000000	1
1.	Suspended Particulate Matter (SPM)	IS 5182 Part 04	µg/m ³	1598.2	
2.	Sulphure Dioxide (SO ₂)	IS 5182 Part-02: 2001 RA 2017	µg/m ³	31.2	
3.	Nitrogen Dioxide (NO ₂)	IS 5182 Part-06: 2006 RA 2017	µg/m³	55.7	
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: Akanksha Sourabh

Sample Drawn By: Rahul Singh & Team

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





Discipline: Chemical		Group: Atm	ospheric Pollutio	on	Sub-Grou	p: Work Envir	ronment
Report Issue Date: 25-07-2024			Test Report N	o.: RN-230	714001FE0	6	
Sample ID: 240722AP22001			Sample Descr	iption: Wor	k Zone Air		
Challan No./P.O. No.: 45110128	30		Challan No./ I	P.No. Date:	13-07-2023	3	
Issued to: M/s Tata Steel Limite (Formerly Tata Steel Gamaharia Phase-V, Seraikela-Kharsawar	d Long Pro Adityapu I, Jharkh	oducts Limite ur Industrial and-832108	ed) Area,				
Type of Industry: Iron & Steel Customer Representative: Shweta Kumari							
Sample Drawn by: IEM Team Sampling Date: 17-07-2024							
Protocol: CPCB Guideline(NAAQI	MS/36/20)12-13) & IS N	Aethod 5182 Ser	ies		dan.	
Sampling Location: MBF-2 NEAR	CAST HO	USE PLATFOF	M				
Field Meteorological Informatio	n A. Te	emp.(°C): 31	R.H. (%): 68	W.C.: Par	rtly Sunny	W.D.: NE	to SW
Sample Receiving Date: 22-07-20	024	Testing Sta	rted: 22-07-202	4 Te	esting Ende	d: 25-07-202	4
		Te	est Results				
SI. No. Parameters		Test Me	ethod	Unit		Result	Norms**
1. Particulate Matter (PM ₁₀)	IS	5182 Part 23:	2006 RA 2017	µg/m ³		978.2	
2. Sulphure Dioxide (SO ₂)	IS	IS 5182 Part-02: 2001 RA 2017		µg/m ³		28.4	
3. Nitrogen Dioxide (NO ₂)	IS	IS 5182 Part-06: 2006 RA 2017		µg/m ³		51.3	
4. Lead (Pb)		IS 5182 F	Part-22	µg/m ³		0.08	
5. Carbon Monoxide (CO)	- 68	IEM/SOP/	2022/01	mg/m	n <mark>3</mark> B	DL(MDL-1.8)	
1	N.H.	En	d of Report	0			

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: Akanksha Sourabh

Sample Drawn By: Rahul Singh & Team

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is issued by the Director of the Organization.	roomined manager,	
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Laboratory Site - H.No. – A-13, Saket Vihar, Near Sohrai Bhawan, Harmu Housing Colony, Ranchi-834002, Jharkhand, India





Disciplin	ne: Chemical	Group: Atm	mospheric Pollution Sub-Group: Work Environment					
Report	ssue Date: 25-0	7-2024		Test Report N	lo.: RN-23	30714001FE	10	
Sample	ID: 240722AP24	002		Sample Desci	ription: W	ork Zone Air	•	
Challan	No./P.O. No.: 45	511012880		Challan No./	P.No. Dat	e: 13-07-202	23	
Issued	to: M/s Tata Stee (Formerly Ta Gamaharia P Seraikela-Kh	el Limited ta Steel Lor hase-V, Ad arsawan, J	ng Products Limite ityapur Industrial / harkhand-832108	ed) Area,				
Type of	Industry: Iron &	Steel		Customer Re	presenta	tive: Shweta	a Kumari	
Sample	Drawn by: IEM	Team		Sampling Dat	e: 19-07-2	2024		
Protoco	I: CPCB Guideline	e(NAAQMS/	/36/2012-13) & IS N	lethod 5182 Ser	ries			
Samplin	g Location: MBF	-1 NEAR CA	ST HOUSE PLATFOR	M	8			
Field Meteorological Information A. Temp.(°C): 32 R.H.(%): 65 W.C.: Partly Sunny W.D.: NW to SE						/ to SE		
Sample	Receiving Date:	22-07-2024	Testing Sta	rted: 22-07-202	4	Testing End	ed: 25-07-202	.4
			Te	est Results	-		1	
SI. No.	Paramet	ers	Test Me	thod	U	nit	Result	Norms**
1.	Particulate Matt	ter (PM ₁₀)	IS 5182 Part 23:2	2006 RA 2017	hð	/m ³	978.3	
2.	Sulphure Dioxi	de (SO ₂)	IS 5182 Part-02: 3	2001 RA 2017	µg/m ³		29.1	
3.	Nitrogen Dioxi	de (NO ₂)	IS 5182 Part-06: 2	2006 RA 2017	µg/m ³		55.2	
4.	Lead (P	b)	IS 5182 F	Part-22	hð	/m ³	0.07	
5.	Carbon Monox	ide (CO)	IEM/SOP/2	2022/01	mg	/m3	BDL(MDL-1.8)	
			End	d of Report		and at the		
Env. Co	ndition of Lab.	Laborator testing ar	y is ma <mark>intaining Te</mark> ea as per IS 196:19	mperature 27± 66(C).	2°C and F	lelative Hun	nidity 65±5 %	in all
Abbrevi	ation	MDL: Mini	imum Detection Lin	nit, BDL: Below	Detection	Limit		
Norms*	' is Specified							

Tested By: Akanksha Sourabh

Sample Drawn By: Rahul Singh & Team

- -

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







Disciplin	Discipline: Chemical Group: A				ospheric Polluti	on	Sub-Grou	p: Work Envir	onment	
Report Is	ssue Date: 25-0	7-2024			Test Report N	lo.: RN	-230714001FE	11		
Sample I	D: 240722AP24	003			Sample Desci	ription:	Work Zone Air			
Challan I	No./P.O. No.: 45	511012880			Challan No./	P.No. D	ate: 13-07-202	3		
Issued to	o: M/s Tata Sto (Formerly Ta Gamaharia I Seraikela-Kl	eel Limite ata Steel L Phase-V, <i>I</i> narsawan,	d ₋ong F Aditya , Jharl	Products Li pur Industr khand-8321	mited) ial Area, 08					
Type of I	ndustry: Iron &	Steel			Customer Re	preser	tative: Shweta	Kumari		
Sample Drawn by: IEM Team					Sampling Date: 19-07-2024					
Protocol	: CPCB Guideline	e(NAAQMS	/36/20	12-13) & IS N	lethod 5182 Sei	ries		-		
Sampling	g Location: COK	E OVEN NE	AR DISE	PATCH AREA				-		
Field Me	teorological Inf	ormation	A. Te	mp.(°C): 32	R.H.(%): 65	W.C.	: Partly Sunny	W.D.: NW	to SE	
Sample F	Receiving Date:	22-07-2024	1	Testing Sta	rted: 22-07-202	.4	Testing Ende	ed: 25-07-202	4	
				Te	est Results					
SI. No.	Paramet	ers	12	Test Me	thod	Unit		Result	Norms**	
1.	Particulate Mat	ter (PM ₁₀)	IS	5182 Part 23:	2006 RA 2017	µg/m ³		1612.6		
2.	Sulph <mark>ur</mark> e Dioxi	de (SO ₂)	IS	5182 Part-02:	2001 RA 2017		µg/m ³	30.5		
3.	Nitrogen Dioxi	de (NO ₂)	IS 5182 Part-06: 2		2006 RA 2017		µg/m ³	54.3		
4.	Carbon Monox	ide (CO)	IEM/SOP/2022/01		2022/01	mg/m3		DL(MDL-1.8)		
			-	En	d of Report					
Env. Cor	ndition of La <mark>b.</mark>	Laborator testing ar	ry is m ea as p	aintaining Te per IS 196:19	emperature 27± 66(C).	2°C an	d Relative Hum	idity 65±5 %	in all	

rested by: Akanksha Sourabh	Tested	By:	Akanksha	Sourabh	
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Norms** is Specified

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Sample Drawn By: Rahul Singh & Team

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

Ranchi-834002, Jharkhand, India





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Test Report

Disciplin	ne: Chemical	Group: Atm	mospheric Pollution Sub-Group: Work Environment					
Report I	ssue Date: 25-07-2024		Test Report N	o.: RN-2307140	01FE13			
Sample	ID: 240722AP27001		Sample Description: Work Zone Air					
Challan	No./P.O. No.: 4511012880		Challan No./ P.No. Date: 13-07-2023					
Issued t	:0:							
	M/s Tata Steel Limite	d						
	(Formerly Tata Steel I	ong Products Li	mited)					
	Gamaharia Phase-V, /	Adityapur Industr	nal Area,					
	Seraikeia-Milaisawaii	Jilai Kilailu-032 i	Customer Des	and the second sec	hunte Kumeri			
Type of	Industry: Iron & Steel		Customer Re	oresentative: 5	nweta Kumari			
Sample	Drawn by: IEM Team		Sampling Date: 20-07-2024					
Protoco	I: CPCB Guideline(NAAQMS	/36/2012-13) & IS N	Aethod 5182 Seri	es	-			
Samplin	g Location: : SMS 1 & 2 NEA	AR EAF PLATFORM		3				
Field Me	eteorological Information	A. Temp.(°C): 29	R.H.(%): 64	W.C.: Semi-Cl	oudy W.D	.: West to East		
Sample	Receiving Date: 22-07-2024	Testing Sta	rted: 22-07-2024	Testin	g Ended: 25-0	7-2024		
		Te	est Results		-			
SI. No.	Parameters	Test Me	thod	Unit	Result	Norms**		
1.	Particulate Matter (PM ₁₀)	IS 5182 Part 23:2	2006 RA 2017	µg/m ³	1245.8	3		
2.	Sulphure Dioxide (SO ₂)	IS 5182 Part-02:	2001 RA 2017	µg/m ³	28.9			
3.	Nitrogen Dioxide (NO ₂)	IS 5182 Part-06:	2006 RA 2017	µg/m ³	54.1			
4.	Lead (Pb)	IS 5182 F	Part-22	µg/m ³	0.07			
5.	Carbon Monoxide (CO)	IEM/SOP/2	2022/01	mg/m3	BDL(MDL-1	1.8)		
		En	d of Report		E			

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: Akanksha Sourabh

Sample Drawn By: Rahul Singh & Team

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







Disciplin	ne: Chemical	Group: Atm	tmospheric Pollution Sub-Group: Work Environment					
Report I	ssue Date: 25-0	7-2024		Test Report No	o.: RN-230	714001FE1	6	
Sample	ID: 240722AP27	004		Sample Descri	ption: Wor	k Zone Air		
Challan	No./P.O. No.: 45	511012880		Challan No./ P	No. Date:	13-07-2023	3	
Issued t	to: M/s Tata Sto (Formerly Ta Gamaharia I Seraikela-Kl	eel Limite ata Steel L Phase-V, A narsawan,	d .ong Products Li Adityapur Industr Jharkhand-8321	mited) ial Area, 08				
Type of	Industry: Iron &	Steel		Customer Rep	resentative	e: Shweta k	(umari	
Sample Drawn by: IEM Team Sampling Date: 20-07-2024								
Protoco	I: CPCB Guideline	e(NAAQMS	/36/2012-13) & IS N	lethod 5182 Seri	es			
Samplin	g Location: SMS	-3 EAF PLAT	FORM					
Field Me	eteorological Inf	ormation	A. Temp.(°C): 29	R.H.(%): 64	W.C.: Ser	mi-Cloudy	W.D.: We	st to East
Sample	Receiving Date:	22-07-2024	Testing Sta	rted: 22-07-2024	t Te	esting Ende	d: 25-07-202	4
	1		Te	est Results			1	
SI. No.	Paramet	ers	Test Me	thod	Unit		Result	Norms**
1.	Particulate Matt	ter (PM ₁₀)	IS 5182 Part 23:	2006 RA 2017	µg/m	3	1328.2	
2.	Sulphure Dioxi	de (SO ₂)	IS 5182 Part-02:	2001 RA 2017	µg/m	3	32.6	
3.	Nitrogen Dioxi	de (NO ₂)	IS 5182 Part-06:	2006 RA 2017	µg/m	3	54.2	
4.	Lead (P	b)	IS 5182 F	Part-22	µg/m	3	0.08	
5.	Carbon Monox	tide (CO)	IEM/SOP/2	2022/01	mg/m	в в	DL(MDL-1.8)	
I		1	En	d of Report		E.		1
Env. Co	ndition of Lab.	Laborator testing ar	ry is ma <mark>intaining Te</mark> ea as per IS 196:19	emperature 27± 2 66(C).	2°C and Rel	lative Humi	dity 65±5 %	in all

 Abbreviation
 MDL: Minimum Detection Limit, BDL: Below Detection Limit

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Tested By: Akanksha Sourabh

Sample Drawn By: Rahul Singh & Team

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







Discipline: Chemical	Group: Atm	ospheric Pollutio	n	Sub-Group	: Work Env	vironment			
Report Issue Date: : 05-08-2024		Test Report No.: RN-230714001FE18							
Sample ID: 240801AP12002		Sample Description: Work Zone Air							
Challan No./P.O. No.: 4511012880		Challan No./ F	P.No. Date: 1	3-07-2023					
Issued to: M/s Tata Steel Limited (Formerly Tata Steel Lo Gamaharia Phase-V, Ac Seraikela-Kharsawan, J	ong Products Limit dityapur Industrial Jharkhand-832108	ed) Area,							
Type of Industry: Iron & Steel		Customer Re	presentative	e: Shweta k	Kumari				
Sample Drawn by: IEM Team		Sampling Date	e: 24-07-202	4					
Protocol: CPCB Guideline(NAAQMS	/36/2012-13) & IS N	Aethod 5182 Ser	ies						
Sampling Location: Sinter Plant Net	ar Crusher Area								
Field Meteorological Information	A. Temp.(°C): 31	R.H.(%): 68	W.C.: Sem	i-Cloudy	W.D.: NE	E to SW			
Sample Receiving Date: 01-08-2024	4 Testing Sta	rted: 01-08-2024	4 Tes	sting Ended	l: 05-08-20	24			
	Te	est Results			-				
SI. No. Parameters	Test Me	ethod	Unit		Result	Norms**			

01. 110.	T di di li cicio	loot motilou	onne	nooun		
1.	Particulate Matter (PM ₁₀)	IS 5182 Part 23:2006 RA 2017	µg/m ³	175 <mark>0</mark> .6	<u>1110</u> %	
2.	Sulphure Dioxide (SO ₂)	IS 5182 Part-02: 2001 RA 2017	µg/m ³	35.6		
3.	Nitrogen Dioxide (NO ₂)	IS 5182 Part-06: 2006 RA 2017	µg/m ³	66.7		
4.	Carbon Monoxide (CO)	IEM/SOP/2022/01	mg/m3	BDL(MDL-1.8)		
	6	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: Akanksha Sou	urabh

Sample Drawn By: Rahul Singh & Team

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







BDL(MDL-1.8)

mg/m3

Test Report

Disciplin	ne: Chemical	Group: Atm	ospheric Pollutio	n Sub-Gro	up: Work Env	vironment					
Report	Issue Date: 05-08-2024		Test Report No.: RN-230714001FE20								
Sample	ID: 240801AP14002		Sample Descri	ption: Work Zone Ai	f						
Challan	No./P.O. No.: 4511012880		Challan No./ P	.No. Date: 13-07-20	23						
Issued	to: M/s Tata Steel Limited (Formerly Tata Steel Lo Gamaharia Phase-V, Ad Seraikela-Kharsawan, J	ng Products Limite lityapur Industrial / Iharkhand-832108	ed) Area,			9					
Type of	Industry: Iron & Steel	-	Customer Rep	resentative: Shweta	Kumari						
Sample	Drawn by: IEM Team		Sampling Date	: 26-07-2024							
Protoco	I: CPCB Guideline(NAAQMS	/36/2012-13) & IS N	Aethod 5182 Seri	es	1						
Samplin	g Location: PELLET PLANT N	NEAR ESP HOPPER									
Field M	eteorological Information	A. Temp.(°C): 31	R.H.(%): 67	W.C.: Partly Sunny	W.D.: Ea	ast to West					
Sample	Receiving Date: 01-08-2024	Testing Sta	rted: 01-08-2024	Testing End	ed: 05-08-20	24					
		Te	est Results		1 1						
SI. No.	Parameters	Test Me	ethod	Unit	Result	Norms**					
1.	Particulate Matter (PM ₁₀)	IS 5182 Part 23:2	2006 RA 2017	µg/m ³	1324.5						
2.	Sulphure Dioxide (SO ₂)	IS 5182 Part-02:	2001 RA 2017	µg/m ³	30.1						
3.	Nitrogen Dioxide (NO ₂)	IS 5182 Part-06:	2006 RA 2017	µg/m ³	54.2						

	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		

IEM/SOP/2022/01

Tested By: Akanksha Sourabh

4.

Sample Drawn By: Rahul Singh & Team

Carbon Monoxide (CO)

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

Annexure - 6





Test Report

		1		1.00					1			
ULR No.: T	C 1	1	5	1	5	2	3 0	0	0 0 0) 2 7 7 .		
Discipline: Chemical				Grou	p: Wat	er			Sub-Group: G	round Water		
Report Issue Date: 04-07	-2024						Test Re	port No	.: RN-230714001	GW1		
Sample ID: 240701WA02	001 & 240	701RC01	001				Sample	Descrip	otion: Ground Wa	ater - Bore well		
Challan No./P.O. No.: 45	11012880						Challan	No./P.	No. Date: 13-07-2	2023		
M/s Tata Ste M/s Tata Ste (Formerly T Gamaharia Seraikela-K	el Limite ata Steel Phase-V, harsawai	d Long P Adityap	roduc our In hand-	cts Li Idusti -8321	mited rial Ar 08) ea,						
Type of Industry: Iron &	Steel	ing officiaria	inarra	COMI			Custom	er Renr	esentative: Shure	ta Kumari		
Sample Drawn by: IFM T	eam						Samplin	og Date	28-06-2024			
Protocol: CPCB Guideline	& IS Meth	od 3025 F	Part-01	1			Sampin	Boute	20 00 2024			
Sampling Location: BAGA	NPDDA				1939		11					
Sample Receiving date: (1-07-2024		Te	esting	Starte	d: 01-07	-2024		Testing Ended	04-07-2024		
			1.0	Build	Te	st Result-		_	resting chucu.	04 07 2024		
SI. Tested Deser		11-14					180.00	No	orms**			
No.	eters	Unit		Method No.		0.	Acceptable		Permissible	Results		
1. PH Value			15	S 3025	6 (Part	- 11)	6.5 t	0 8.5	No Relaxation	6.9		
2. Conductivity		µs/cm	IS	5 3025	(Part -	- 14)	7	- 19		625		
3. Turbidity		NTU	15	S 3025	(Part	- 10)			5	<1		
4. Colour		Hazen	IS	S 3025	i (Part ·	- 04)	5	5	15	<5		
5. Odour	100 Tel 1		IS	S 3025	(Part	- 05)	Agree	eable	Agreeable	Agreeable		
6. Total Dissolved So	lids	mg/l	IS	S 3025	(Part	- 16)	50	00	2000	448		
7. Calcium (as Ca)		mg/I IS 3025 (Part - 40) 75 200							51			
8. Total Alkalinity (as	CaCO3)	mg/l	IS	S 3025	(Part -	- 23)	20	00	600	184		
9. Total Hardness (as	CaCO3)	mg/l	15	S 3025	6 (Part	-21)	20	00	600	178		
10. Chloride (as Cl)	1.1.1	mg/l	IS	5 3025	(Part -	- 32)	25	0	1000	38		
11. Sulphate (as SO ₄)	1.1.1	mg/l	IS	\$ 3025	(Part -	- 24)	20	0	400	52		
12. Magnesium (as Mg	g)	mg/l	APH	IA 350	0 Mg E	3. 2017	3	D	100	13		
13. Copper	5	mg/l	AF	PHA 3	111 B.:	2017	0.0)5	1.5	BDL (MDL - 0.02)		
14. Chromium	m mg/l				111 B.:	2017	0.0)5	No Relaxation	BDL (MDL - 0.005)		
15. Lead	in the	mg/l	AF	PHA 3	111 B.2	2017	0.0	01	No Relaxation	BDL (MDL - 0.07)		
16. Zinc		mg/l	AF	PHA 3	111 B.2	2017	5		15	1.8		
17. Nickel		mg/l	AF	PHA 3	111 B.2	2017	0.	3	No Relaxation	BDL (MDL- 0.03)		
18. Mercury		mg/l	APHA 3112 C.2017 0.001						No Relaxation	BDL (MDL - 0.0008)		
19. Arsenic		mg/l	AF	PHA 3:	114 C.2	2017	0.0	01	No Relaxation	BDL (MDL - 0.002)		
20. Manganese		mg/l	AP	PHA 3:	111 B.2	2017	0.	1	No Relaxation	BDL (MDL - 0.04)		
					End	Report	-					
nv. Condition of Lab.	196:196	56(C).	ntainin	ig lemp	perature	e 27± 2°C	and Rela	tive Hum	idity 65±5 % in all to	esting area as per IS		
bbreviation	MDL: M	linimum De	etection	n Limit	, BDL: B	elow Det	ection Li	nit				
emark	IS 1050 Sample	Comply w	ith pre	escribe	d speci	fication.	1					
Tested By: Neema Kumari	0 Terre											
Sample Drawn By: Ranul Singh	& leam											
cific Contractual Notes: -							1	Chool	ad by	Authorized Cignoton		
The laboratory accepts responsit	pility for conten	t of this repor	rt.					Check	led by	Authonized Signatory		
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THE REPORT OF REPORTED FOR LIVIN	a oppoil of am	iemeco	an only.	(Taugeer Ahmad)								
In case of feedback/ complaints,	please send al	remai al qui	1.Iemecou	amail.	com		1 11	augeel	miniquip	un p. C. Jaill		
In case of feedback/ complaints, he basis of Quality Checked and T sued by the Director of the Organiz	echnical data ation.	verified by th	e Author	rized sig	. <u>com</u> natory, th	e report	Te	chnical	Managere	Director		

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





The state of the			Teserice	porc						
Discip	oline: Chemical		Group: Water	Sub-Group: Ground Water						
Repo	rt Issue Date: 04-07-20	124		Test Report No.: RN-230714001GW1						
Samp	le ID: 240701WA0200	1 & 240701RC	01001	Sample Descripti	on: Ground Water - B	ore well				
Chall	an No./P.O. No.: 45110	012880		Challan No./P.No	. Date: 13-07-2023					
Issue	ed to: M/s Tata Steel (Formerly Tata Gamaharia Ph Seraikela-Kha	Limited a Steel Long ase-V, Adity rsawan, Jha	g Products Limited) yapur Industrial Area, arkhand-832108	and at						
Туре	of Industry: Iron & Ste	el		Customer Repres	entative: Shweta Kun	nari				
Samp	le Drawn by: IEM Tear	n		Sampling Date: 2	8-06-2024					
Proto	col: CPCB Guideline& I	S Method 302	25 Part-01							
Samp	ling Location: BAGANP	DDA	100 million (100 million)	and the second second	22					
Samp	le Receiving date: 01-0	7-2024	Testing Started: 01-0	7-2024	Testing Ended: 04-07	-2024				
			Test Result	[
SI.	Tested Parameter	Unit	Method No.	N	orms**	Reculte				
No.			G	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	0.43				
4.	Iron	mg/l	APHA 3111 B.2017	1.0	No Relaxation	0.34				
			END Repor	t						
Env. Lab.	Condition of	Laboratory area as per	is maintaining Temperatu IS 196:1966(C).	re 27± 2°C and Re	ative Humidity 65±5	5 % in all testing				
Abbr	eviation	MDL: Minim	num Detection Limit, BDL:	Below Detection I	.imit					
Norm	is** is Specified	IS 10500 :20	012	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1						
Rema	ark	Sample Cor	nply with prescribed spe	cification.						

Tested By: Neema Kumari

Sample Drawn By: Rahul Singh & Team

Specific Contractual Notes: -	Checked by	Authonzed Signatory
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In 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

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

Ranchi-834002, Jharkhand, India



i Calleri



Director

Test Report

							_	1															
ULR	No.: T	C	1 :	1	5	1	5	2	3	0	0	0	0	0		0	7	7	1				
Disci	oline: Chemical				0	Group	p: Wa	iter				Sub	Group	: Gro	ound	Wa	ter		10,000				
Repo	rt Issue Date: 04-07	-2024							Tes	t Repo	rt No.	: RN-2	30714	001G	W2								
Samp	le ID: 240701WA02	002 & 2	240701	RC010	002				Sam	nple De	script	tion: G	round	Wat	er -	Bore	well						
Chall	an No./P.O. No.: 45	110128	80				-		Cha	llan No	./P.N	lo. Dat	e: 13-0	07-20)23								
Issu	ed to:																						
	M/s Tata Ste	el Lim	ited	-																			
	(Formerly I	ata Ste	el Lor	ng Pi	roduci	ts Li	mite	d)															
	Gamanana Soraikola K	hareav	van li	nyap	and S	1USU 8324	ng A	rea,															
Type	of Industry: Iron &	Steel	vall, JI	Idiki	ianu-o	0321	00	1.2.1	Cue	tomor	Popro	contat	ivo: C	hunt	a Ku	mari							
Samo	le Drawn by: IEM T	aam							Sam	anling	hepre	20 06	2024	iwet	d NU	man							
Droto	col: CDCR Guideline	8 IC Ma	thod 2	025 0	art 01		-	× ·	San	iping i	Jate:	28-06-	2024	an es									
Fioto	ling Location: IUAP	COVINE		025 P	ant-01		1			-	-				-								
Samp	la Paceiving datas	1 07 20	224		Tor	ting	Ctort	ad: 01 0	7 202	14		Testi		lad. C	14.0	7 201	24						
Samp	ie Receiving date: 0	1-07-20	124		Tes	ung	Starte	ed: UI-U	/-202	24		Testin	ng Enc	iea: c)4-0,	1-202	24						
SI							1	est nesult-	1	01.000	No	rms**	-		1	-							
No	Tested Param	eters	U	nit	19	Met	hod I	No.	0	ccental	hle	Por	niscih	ما	-		Res	ults					
1	PH Value		-		IS	3025	(Part	t - 11)	6	5 to 8	5	No R	elavat	ion			6	6					
2	Conductivity		115	/cm	IS	3025	(Part	- 14)				NOT	Clavar	ion	-		2:	22					
2	Turbidity		μs, N	TU	IS	3025	(Part	t = 10)		1			E		-		20	1					
1	Colour			700	IS	2025	(Part	t - 10)	-	E			15	_	-			1	12000				
5	Odour		na	12em	15	2025	(Part	- 05)	Δ	grooph	10	Aar	15		-		Agro	5 Coble					
5.	Total Dissolund So	lide			15	2025	(Part	105	A	greeab	ie	Agr	eeabl	e	-	eable							
0.	Calcium (ac Ca)	nus		18/1 a/l	15	2025	(Pari	- 10)	-	500	-	4	2000		-	2							
1.	Total Alkalinity (as	C=C03		1g/1	15	3025	(Pari	(-40)	-	75	-	-	200	-	-								
0.	Total Alkalinity (as	Cacos		1g/1	15	3025 (Part - 23) 200 600					-	/2											
9.	Chlorido (as Cl)	cacus) m	ig/1	15	3025	(Par	t-21)	-	200			600		-	52							
10.	Chloride (as Cl)	(as Cl) mg/l IS 3025 (Part - 32)				- 32)	-	250		1000 22						2							
11.	Sulphate (as SO ₄)	ulphate (as SO ₄)				ulphate (as SO ₄) mg/l				g/1 IS 3025 (Part - 24)				200	200 400					18			
12.	iviagnesium (as ivig	Aagnesium (as Mg) m				gnesium (as Mg) mg/l AP					IU IVIg	B. 2017		30 100					-	4			
13.	Copper		m	g/1	AP	HA 3	111 B	.2017	-	0.05	-	NL D	1.5		-	BDL	(MD	L-0.	02)				
14.	Chromium		m	g/1	AP	HA 3	111 B	.2017	-	0.05	-	NO RE	elaxati	on		BDL	(MDL	0.0	105)				
15.	Lead		m	g/1	AP	HA 3	111 8	.2017	-	0.01		No Re	elaxati	on		BDL	(MD	L - 0.0	07)				
16.	Zinc	_	m	g/1	API	HA 3	111 B	.2017	-	5			15		-	1122291	1.	4					
17.	NICKEI		m	g/1	API	HA 3	111 B	.2017		0.3	elaxati	on		BDL	. (MD	L- 0.0)3)						
18.	Mercury	- 20	m	g/I	API	HA 3	112 C	.2017	_	0.001		No Re	elaxati	on	E	3DL (MDL	- 0.00	008)				
19.	Arsenic		m	g/l	API	HA 3:	114 C	.2017		0.01		No Re	elaxati	on		BDL	(MDL	0.0)02)				
20.	Manganese		m	g/I	API	HA 3:	111 B	.2017		0.1		No Re	elaxati	on		BDL	(MD	L - 0.0	04)				
	and the second	1.1.1			tal-t-	Terre	Er	nd Report-		Datati		11. C. T.	F . 61 .			1.000							
Env. C	condition of Lab.	196:	1966(C)	s mair	itaining	remp	Jeratu	re 2/± 2"(. and	Relative	Humi	aity 65±	5 % 10	all te	sting	area	as pe	r IS					
Abbre	viation	MDL	.: Minim	um De	tection	Limit	, BDL:	Below De	tectio	on Limit				_									
Remar	k Specified	IS 10	0500 :20 nle Com	12 ply w	ith nres	scribe	d sne	cification															
Testec	By: Neema Kumari	3411	Pic com	piy w	ien pres		a spe	entration															
Sampl	e Drawn By: Rahul Singh	& Team																					
pecific C	Contractual Notes: -	ullity for an	ntont of the	in mon	+					C	heck	ed by	1	Ton	mAy	thor	ized	Signa	atory				
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3. This	report is intended for only gu	uidance an	d not for le	egal pu	rpose or f	or adve	ertiseme	ent.		T	Ar	nod	ASI	C	-	10	218	40					
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6 In ca	se of feedback/ complaints	nlease ser	nanayeme	il at am	iemecolo	Damail	com	nount only.		(Tai	deer	Ahma	d	5	1	TDE	SC	lair	2)				

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

is issued by the Director of the Organization.

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





Discip	pline: Chemical		Group: Water	Sub-Group: Ground Water							
Repo	rt Issue Date: 04-07-20	24		Test Report No.: RN-230714001GW2							
Samp	le ID: 240701WA02002	2 & 240701RC	01002	Sample Description: Ground Water - Bore well							
Challa	an No./P.O. No.: 45110	12880	and the second	Challan No./P.No	. Date: 13-07-2023						
Issue	ed to: M/s Tata Steel (Formerly Tata Gamaharia Ph Seraikela-Kha	Limited Steel Long ase-V, Adity sawan, Jha	Products Limited) apur Industrial Area, rkhand-832108								
Туре	of Industry: Iron & Ste	el		Customer Repres	entative: Shweta Kun	nari					
Samp	le Drawn by: IEM Tear	n	and the second second	Sampling Date: 2	8-06-2024						
Proto	col: CPCB Guideline& I	6 Method 302	5 Part-01								
Samp	ling Location: JHARGO	VINDPUR		183	1.1						
Samp	le Receiving date: 01-0	7-2024	Testing Started: 01-0	7-2024	Testing Ended: 04-07-	-2024					
			Test Result								
SI.	Tostad Paramotor	Unit	Method No.	N	orms**	Pequite					
No.	resteu Parameter	Onic	mediod No.	Acceptable	Permissible	Results					
1.	Taste		IS 3025 (Part - 07)	Agreeable	Agreeable	Agreeable					
2.	Nitrite Nitrogen	mg/l	IS 3025 (Part - 34)		S	BDL (MDL 0.1)					
3.	Fluoride (as F)	mg/l	APHA 4500 F D. 2017	1.0	1.5	0.42					
4.	Iron	mg/l	APHA 3111 B.2017	1.0	No Relaxation	0.29					
			END Repor	t							
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).									
Abbr	eviation	MDL: Minim	num Detection Limit, BDL:	Limit, BDL: Below Detection Limit							
Norm	ns** is Specified	IS 10500 :20	012								
Rema	ark	Sample Con	nply with prescribed spe	cification.							

Tested By: Neema Kumari

Sample Drawn By: Rahul Singh & Team

Specific Contractual Notes: -	Checked by	Authorized Signatory							
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5. Total liability of Institute for Environmental Management will be limited to invoiced amount only.	1								
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rage 2 ui 2									
Laboratory Site - H.No. – A-13, Saket Vihar, Near Sohrai Bhawan, Harmu Housing Colony,									

Ranchi-834002, Jharkhand, India





			1 2 1	-		1		-		1 1 1				
ULR	No.: T	C 1	1	5	1	5	2	3	0 0	0 0 0	0 0 7 7 4			
Disci	pline: Chemical				Grou	p: Wa	ter			Sub-Group: G	iround Water			
Repo	rt Issue Date: 04-0	7-2024						Test Report No.: RN-230714001GW3						
Samp	ole ID: 240701WA0	2003 & 24	0701RC01	003				Sample Description: Ground Water - Bore well						
Chall	an No./P.O. No.: 4	511012880)					Cha	llan No./P	No. Date: 13-07-2	2023			
issu	M/s Tata St M/s Tata St (Formerly Gamaharia Seraikela-ł	eel Limito Tata Stee Phase-V Charsawa	ed I Long Pi , Adityap In, Jharki	rodu our In hand	cts L dust -8321	imiteo rial A 108	d) rea,							
Γνρε	of Industry: Iron &	Steel	ing offering	indirid		Cust	omer Ren	resentative: Shwa	ata Kumari					
Samp	le Drawn by: IEM	Team			1			Sam	nling Date	· 28-06-2024				
Proto	col: CPCB Guidelin	e& IS Meth	od 3025 P	Part-0	1			Jum	philip Date	20-00-2024				
Samp	ling Location: NEE	MDIH	100 0020 1	ure o.	-	-		Sett 2 - 2	1					
Samp	le Receiving date:	01-07-202	4	Te	esting	Starte	nd: 01-07	-202	4	Testing Ended	04-07-2024			
amp	ie neeeling date.	01 07 202	-		seing	Te	est Result	-202	т	resting chueu.	. 04-07-2024			
SI.	Table			1					N	orms**				
No.	lested Parar	neters	Unit	27	Method No.		Ac	ceptable	Permissible	Results				
1.	PH Value			19	S 3025	5 (Part	- 11)	6	.5 to 8.5	No Relaxation	7.5			
2.	Conductivity		µs/cm	15	5 3025	5 (Part	- 14)				590			
3.	Turbidity		NTU	19	S 3025	5 (Part	- 10)	1	1 .	5	<1			
4.	Colour		Hazen	15	5 3025	5 (Part	- 04)	1	5	15	<5			
5.	Odour		15	5 3025	5 (Part	- 05)	A	greeable	Agreeable	Agreeable				
6.	Total Dissolved So	Dissolved Solids mg/l					- 16)		500	2000	425			
7.	Calcium (as Ca)	lcium (as Ca) mg/l			5 3025	5 (Part	- 40)	-	75	200	60			
8.	Total Alkalinity (a	15	5 3025	6 (Part	- 23)	-	200	600	192					
9.	Total Hardness (a	15	S 302	5 (Part	-21)		200	600	188					
10.	Chloride (as Cl)	mg/l	15	5 3025	6 (Part	- 32)		250	1000	32				
11.	Sulphate (as SO ₄)	15	5 3025	6 (Part	- 24)		200	400	45					
12.	Magnesium (as M	1g)	mg/l	APH	IA 350	00 Mg	B. 2017		30	100	9			
13.	Copper		mg/l	A	PHA 3	111 B.	.2017		0.05	1.5	BDL (MDL - 0.02)			
14.	Chromium		mg/l	A	PHA 3	111 B.	2017		0.05	No Relaxation	BDL (MDL - 0.005)			
15.	Lead		mg/l	A	PHA 3	111 B.	2017		0.01	No Relaxation	BDL (MDL - 0.07)			
16.	Zinc		mg/l	A	PHA 3	111 B.	2017		5	15	1.5			
17.	Nickel		mg/l	AI	PHA 3	111 B.	2017		0.3	No Relaxation	BDL (MDL- 0.03)			
18.	Mercury		mg/l	A	PHA 3	112 C.	2017		0.001	No Relaxation	BDL (MDL - 0.0008)			
19.	Arsenic		mg/l	A	PHA 3	114 C.	2017		0.01	No Relaxation	BDL (MDI - 0.002)			
20.	Manganese		mg/l	A	PHA 3	111 B	2017	1	0.1	No Relaxation	BDI (MDI -0.04)			
Contraction of the						En	d Report	-						
nv. C	ondition of Lab.	Labora	tory is main	ntainin	gTem	peratur	e 27± 2°C	and F	lelative Hur	nidity 65±5 % in all t	esting area as per IS			
bbre	viation	196:19 MDL: M	166(C). Minimum De	tection	n Limit	BDI:	Below Det	ection	n limit					
orms	** is Specified	IS 105	00:2012				- are et ard t							
emar	k Bv: Neema Kumari	Sampl	e Comply w	ith pro	escribe	ed spec	ification.							
Sampl	e Drawn By: Rahul Singl	h & Team												
cific C	ontractual Notes: -								Chec	ked by any	Autorized Signaton			
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the bas sued b	is of Quality Checked and y the Director of the Organ	Technical data ization.	verified by the	e Author	rized sig	inatory, t	he report	Technical Manager Director						
	Cornorate office	e - A-8 M	di Height	e Onn	A 11 1	India D	adio Stat	ion	Rate Road	Ranchi Iboulthau	4 994001			

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





Disci	oline: Chemical		Group: Water		Sub-Group: Ground	b-Group: Ground Water					
Repo	rt Issue Date: 04-07-20	24		Test Report No.: RN-230714001GW3							
Samp	le ID: 240701WA02003	3 & 240701RC	01003	Sample Description: Ground Water - Bore well							
Chall	an No./P.O. No.: 45110	12880		Challan No./P.N	o. Date: 13-07-2023						
Issue	ed to: M/s Tata Steel (Formerly Tata Gamaharia Ph Seraikela-Khai	Limited Steel Long ase-V, Adity sawan, Jha	g Products Limited) yapur Industrial Area, arkhand-832108								
Туре	of Industry: Iron & Stee	el	8	Customer Repre	sentative: Shweta Kun	nari					
Samp	le Drawn by: IEM Tear	n	and the second sec	Sampling Date: 2	28-06-2024						
Proto	col: CPCB Guideline& I	S Method 302	25 Part-01								
Samp	ling Location: NEEMDI	н									
Samp	le Receiving date: 01-0	7-2024	Testing Started: 01-0	7-2024	Testing Ended: 04-07-	-2024					
			Test Result								
SI.	Tested Parameter	Unit	Method No	P	lorms**	Reculto					
No.	resteur arameter	Onic	incuriou inc.	Acceptable	Permissible	Results					
1.	Taste		IS 3025 (Part - 07)	Agreeable	Agreeable	Agreeable					
2.	Nitrite Nitrogen	mg/l	IS 3025 (Part - 34)		- 28	BDL (MDL 0.1)					
3.	Fluoride (as F)	mg/l	APHA 4500 F D. 2017	1.0	1.5	0.51					
4.	Iron	mg/l	APHA 3111 B.2017	1.0	No Relaxation	0.32					
			END Repor	t							
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).									
Abbr	eviation	MDL: Minin	num Detection Limit, BDL:	Below Detection	Limit						
Norm	s** is Specified	IS 10500 :2012									
Rema	ark	Sample Cor	mply with prescribed spe	cification.							

Tested By: Neema Kumari

Sample Drawn By: Rahul Singh & Team

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Page 2 of 2 orporate office - A-8, Modi Heights, OppAll India Radio Station, Ratu Road, Ranchi, Jharkhand 884001									
Laboratory Site - H.No. – A-13, Saket Vihar, Near Sohrai Bhawan, Harmu Housing Colony, Ranchi-834002, Jharkhand, India									





Discin	oline: Chemical			Group: Water		Sub-Group: Gro	und Water				
Repo	rt Issue Date: 04-07-	2024			Test Report No	.: RN-230714001G	W4				
Samp	le ID: 240701WA020	004 & 240	701RC010	004	Sample Description: Ground Water - Bore well						
Challa	an No./P.O. No.: 45:	1010303			Challan No./ P	No. Date: 04-07-20)22				
ssue	ed to:			1111							
	M/s Tata Ste (Formerly Ta Gamaharia I Seraikela-Kl	el Limite ata Steel Phase-V narsawa	d Long Pi Adityap n, Jharki	oducts Limited) ur Industrial Area, and-832108							
vpe	of Industry: Iron & S	teel		au"	Customer Rep	resentative: Shweta	Kumari				
amp	le Drawn by: IEM Te	eam			Sampling Date	: 28-06-2024					
roto	col: CPCB Guideline	& IS Meth	od 3025 P	art-01							
amp	ling Location: JHAR	HULI		die 1	The second second		1				
amp	le Receiving date: 0	1-07-2024		Testing Started: 01-0	7-2024	Testing Ended: 0	4-07-2024				
				Test Result	V/ 100 000						
SI.	Tested Deven		1 In th	Mathed No.	N	orms**	Decile				
No.	Tested Param	eters	Unit	Method No.	Acceptable	Permissible	Results				
1.	PH Value		-	IS 3025 (Part - 11)	6.5 to 8.5	No Relaxation	7.3				
2.	Conductivity		µs/cm	IS 3025 (Part - 14)		122	270				
3.	Turbidity		NTU	IS 3025 (Part - 10)	1	5	<1				
4.	Colour		Hazen	IS 3025 (Part - 04)	5	15	<5				
5.	Odour			IS 3025 (Part - 05)	Agreeable	Agreeable	Agreeable				
6.	Total Dissolved Sol	ids	mg/l	IS 3025 (Part - 16)	500	2000	185				
7.	Calcium (as Ca)		mg/l	IS 3025 (Part - 40)	75	200	17				
8.	Total Alkalinity (as	CaCO3)	mg/l	IS 3025 (Part - 23)	200	600	68				
9.	Total Hardness (as	CaCO3)	mg/l	IS 3025 (Part -21)	200	600	50				
10.	Chloride (as Cl)		mg/l	IS 3025 (Part - 32)	250	1000	28				
11.	Sulphate (as SO ₄)	1.125	mg/l	IS 3025 (Part - 24)	200	400	25				
12.	Magnesium (as Mg)	mg/l	APHA 3500 Mg B. 2017	30	100	BDL (MDL - 1.0)				
13.	Copper		mg/l	APHA 3111 B.2017	0.05	1.5	BDL (MDL - 0.02)				
14.	Chromium		mg/l	APHA 3111 B.2017	0.05	No Relaxation	BDL (MDL - 0.005)				
15.	Lead		mg/l	APHA 3111 B.2017	0.01	No Relaxation	BDL (MDL - 0.07)				
16.	Zinc		mg/l	APHA 3111 B.2017	5	15	1.8				
17.	Nickel		mg/l	APHA 3111 B.2017	0.3	No Relaxation	BDL (MDL- 0.03)				
18.	Mercury		mg/l	APHA 3112 C.2017	0.001	No Relaxation	BDL (MDL - 0.0008)				
19	Arsenic	1	mg/l	APHA 3114 C.2017	0.01	No Relaxation	BDL (MDI - 0.002)				
20	Manganese		mg/l	APHA 3111 B 2017	0.1	No Relaxation	BDL (MDL - 0.04)				
20.	ManBanese			End Report	0.1	No riciaxación	000 (MDC 0.04)				
nv C	ondition of Lab	Labora	tory is main	ntaining Temperature 27± 2°	C and Relative Hur	nidity 65±5 % in all tes	ting area as per IS				
bbre	viation	196:19 MDI - N	66(C). linimum De	tection limit BDL: Below D	etection Limit						
orms	** is Specified	15 1050	0 :2012	teetton enne, oper below of	rection crime						
emar	k Rut Nooma Kumat	Sample	Comply w	ith prescribed specification	1,						
sampl	e Drawn By: Rahul Singh	& Team									
cific C	Contractual Notes: -				Cher	ked by	Authorized Signator				
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In ca	se of feedback/ complaints, j	echnical data	n email at gm	e Authorized signatory, the report	(Tauqeer Anmad) (12) C. Jain)						
sued b	by the Director of the Organiz	ation.	Tormed by th	a nationada signatory, the report	Technical Manager						

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





Discip	oline: Chemical		Group: Water	Sub-Group: Ground Water						
Repo	rt Issue Date: 04-07-20	24		Test Report No.: RN-230714001GW4						
Samp	le ID: 240701WA02004	4 & 240701R0	01004	Sample Description: Ground Water - Bore well						
Challa	an No./P.O. No.: 45110)10303		Challan No./ P.No	D. Date: 04-07-2022					
Issue	ed to: M/s Tata Steel (Formerly Tata Gamaharia Ph Seraikela-Khai	Limited Steel Long ase-V, Adity rsawan, Jha	g Products Limited) yapur Industrial Area, arkhand-832108							
Туре	of Industry: Iron & Stee	el		Customer Repres	entative: Shweta Kun	nari				
Samp	le Drawn by: IEM Tear	n		Sampling Date: 28-06-2024						
Proto	col: CPCB Guideline& I	S Method 302	25 Part-01	ST.						
Samp	ling Location: JHARKHU	JLI	28							
Samp	le Receiving date: 01-0	7-2024	Testing Started: 01-0	7-2024	Testing Ended: 04-07	-2024				
			Test Result							
SI.	Tested Parameter	Unit	Method No.	N	Norms**					
No.	resteur arameter	Onit	Method 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	0.56				
4.	Iron	mg/l	APHA 3111 B.2017	1.0	No Relaxation	0.28				
			END Repor	t		Annanderse c-				
Env. Condition of Laboratory is mainta area as per IS 196:15			is maintaining Temperatur IS 196:1966(C).	re 27± 2°C and Re	lative Humidity 65±5	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.

Tested By: Neema Kumari

Sample Drawn By: Rahul Singh & Team

Specific Contractual Notes: -	Checked by	Authorized Signatory							
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5. Total liability of Institute for Environmental Management will be limited to invoiced amount only.		in ter							
6. In case of feedback/ complaints, please send an email at gm.iemeco@gmail.com	(Taugeer Ahmad)	(, fr/S.C. Jain)							
On the basis of Quality Checked and Technical data verified by the Authorized signatory, the report	TashaiashMasaa	2.							
is issued by the Director of the Organization.	i echnical ivianager	Director							
Page 2 of Corporate office - A-8, Modi Heights, OppAll India Radio Station, Ratu Road, Ranchi, Iharkhand Rasano									
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Telephone City IT Mr. 1 10 C 1 (17)	T11								

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

Month Sampling		Bonort No	Someling on	- U	TSS	BOD	COD	O&G	NH3	CN-	Phenol
Month	location	Report No.	Sampning on	ampning on ph		(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)
Apr-24	ETP OUTLET	RN-230714001WW2	15-04-2024	7.4	23	6	68	4.1	4.8	BDL(MDL0.02)	0.3
May-24	ETP OUTLET	RN-230714001WW2	30-05-2024	7.9	25	8	72	5.0	7.0	BDL(MDL0.02)	0.2
Jun-24	ETP OUTLET	RN-230714001WW2	28-06-2024	7.2	45	6	73	4.8	6.4	BDL(MDL0.02)	0.4
Jul-24	ETP OUTLET	RN-230714001WW2	18-07-2024	7.8	39	8	68	4.4	5.9	BDL(MDL0.02)	0.3
Aug-24	ETP OUTLET	RN-230714001WW2	30-08-2024	7.9	32	10	60	4.2	5.0	BDL(MDL0.01)	0.2

Effluent Treated Water Quality Report





		T	6	1	1	Г	1	F	2	4	0	0	T	0	0	0	1	1	7	0
ULK	NO.:		C			5	1	5		4	0	0	1							
Disc	ipline: Chemi	cal			G	roup:	Pollut	ion &	Env	ironmer	IT			Suc	-Gro	up: \	vaste	e wate	r	
Rep	ort Issue Date	e: 25-	-07-20	024						Tes	Test Report No.: RN-230714001WW2									
Sam	Sample ID: 240722PE03002										nple	Descr	ipti	on:	Wast	e Wa	ter (I	Effluer	it)	
Challan No./P.O. No.: 4511012880									Cha	llan	No./I	P.N	o. D	ate: 1	13-07	-2023	3			
Issu	Issued to:																			
M/s Tata Steel Limited																				
(Formerly Tata Steel Long Products Limited)																				
Gamaharia Phase-V, Adityapur Industrial Area, Seraikela-Kharsawan, Jharkhand-832108																				
Type of Industry: Iron & Steel											ner R	epres	sent	ativ	e: Sh	weta	Kum	ari		
Sam	ple Drawn by	IEN	Л Теа	m						Sampli	ng Da	ate: 1	8-0	7-20	24					
Protocol: CPCB Guideline& IS Method 3025 Part-01																				
Sampling Location: ETP OUTLET																				
Sam	nle Receiving	date	p. 77-	07-20	124		Testin	g Star	ted:	22-07-2	024		T	esti	ng En	ded:	25-0	7-2024		
Jun		, auto		07 20				Te	st Re	esult			1.		.0					
SI. No.	Te	ested	Para	mete	rs	E.S.		Unit		Me	Method No.				Norn	1S**		Re	sults	
1.	pH value at 2	25°C			2					IS 30	25 (Pa	art-11	L)		5.5-	9.0		_	7.8	
2.	Total Susper	nded	Solid	s (TSS	5)			mg/l		IS 302	25 (Pa	art-17	7)		10	0		-14	39	
3.	Biochemical	Oxy	gen D	emar	d (BO	D)	125	mg/l		IS 302	25 (Pa	art-44	1)		30	C			8.0	
4.	Chemical Ox	ygen	Dem	and (COD)			mg/l		IS 30	25 (Pa	art-58	3)		25	0			68	
						100		Enc	of R	eport							_			
Env	Condition of	Lab.	ab. Laboratory is maintaining Temperature 27± 2°C and Relative Humidity 65±5 % in all testing area as per IS 196:1966(C).																	
Abb	reviation		1	MDL-	Minim	um D	etecti	on Lii	nit,]	BDL - B	elow	Detec	ctio	n Li	mit				5	
Nori	ns** is Specif	ied	1	As per	r the E	nviro	nmen	tal (P	rote	ction) R	ule -	1986	5	-						
Rem	ark	Sample Comply with prescribed specification.																		

Tested By: Mahendranath Mahto

Sample Drawn By: Rahul Singh & Team

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





Discipline: Chemical	Group: Pollution & Environment	Sub-Group: Waste Water			
Report Issue Date: 25-07-2024	Issue Date: 25-07-2024 Test Report No.: RN-230714001W				
Sample ID: 240722PE03002	Sample Des	Sample Description: Waste Water (Effluent)			
Challan No./P.O. No.: 4511012880	: 4511012880 Challan No./ P.No. Date: 13-07-2023				
M/s Tata Steel Limited					
(Formerly Tata Steel Lon Gamaharia Phase-V, Adit Seraikela-Kharsawan, Jha	g Products Limited) tyapur Industrial Area, arkhand-832108				
(Formerly Tata Steel Lon Gamaharia Phase-V, Adir Seraikela-Kharsawan, Jha Type of Industry: Iron & Steel	g Products Limited) tyapur Industrial Area, arkhand-832108 Customer Rep	esentative: Shweta Kumari			
(Formerly Tata Steel Lon Gamaharia Phase-V, Adit Seraikela-Kharsawan, Jha Type of Industry: Iron & Steel Sample Drawn by: IEM Team	g Products Limited) tyapur Industrial Area, arkhand-832108 Customer Rep Sampling Date	resentative: Shweta Kumari : 18-07-2024			
(Formerly Tata Steel Lon Gamaharia Phase-V, Adit Seraikela-Kharsawan, Jha Type of Industry: Iron & Steel Sample Drawn by: IEM Team Protocol: CPCB Guideline& IS Method	g Products Limited) tyapur Industrial Area, arkhand-832108 Customer Rep Sampling Date d 3025 Part-01	esentative: Shweta Kumari : 18-07-2024			
(Formerly Tata Steel Lon Gamaharia Phase-V, Adit Seraikela-Kharsawan, Jha Type of Industry: Iron & Steel Sample Drawn by: IEM Team Protocol: CPCB Guideline& IS Method Sampling Location: ETP OUTLET	g Products Limited) tyapur Industrial Area, arkhand-832108 Customer Rep Sampling Date d 3025 Part-01	esentative: Shweta Kumari : 18-07-2024			

SI. No.	Tested Parameters	Unit	Method No.	Limit	Results
5.	Ammonical Nitrogen as N	mg/l	IS 3025 (Part-34)	50	5.9
6.	Phenols as C ₆ H ₅ OH	mg/l	IS 3025 (Part-43)	1	0.3
7.	Oil & Grease	mg/l	IS 3025 (Part-39)	10	4.4
8.	Cyanide as CN	mg/l	IS 3025 (Part-27)	0.2	BDL(MDL-0.02)
		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			
Limit is Specified	As per the Environmental (Protection) Rule - 1986			
Remark	Sample Comply with prescribed specification.			

Tested By: Mahendranath Mahto

Sample Drawn By: Rahul Singh & Team

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

Ranchi-834002, Jharkhand, India

Someling on	Plant North Side Boundary		Plant South Side Boundary		Plant East Side Boundary		Plant West Side Boundary	
Samping on	Day Time	Night Time	Day Time	Night Time	Day Time	Night Time	Day Time	Night Time
Apr-24	68.9	51.2	71.4	59.7	70.5	64.5	61.2	55.5
May-24	69.4	53.9	70.3	60.4	72.4	62.4	63.2	58.6
Jun-24	72.3	55.6	65.2	59.7	73.4	60.5	72.3	61.3
Jul-24	71.2	55.8	65.8	60.5	70.8	64.3	68.5	62.3
Aug-24	67.4	54.0	64.7	60.5	67.0	62.5	62.0	58.7
Sep-24	69.3	55.6	66.6	62.4	68.4	64.1	63.9	60.3

Ambient Noise Monitoring Report




								Те	st R	eport									
ULR No.:		Т	C	1	1	5	1	5	2	4	0	0	0	0	0	1	1	4	2
Discipline	: Chemi	cal		Group	: Atn	hosph	neric P	ollut	ion	Sub-Group: Ambient Noise Levels (Excluding Vibration)									
Report Issue Date: 25-07-2024 Test Report No.: RN-230714001N1																			
Sample ID	Sample ID: 240722AP21001 Sample Description: Ambient Noise																		
Challan N	o./P.O.	No.: 4	451101	2880						Challar	No.	/ P.No	. Date	e: 13-0	07-20	23			
Issued to	:																		
	M/s Ta	ta St	eel Lin	nited															
	(Forme	erly T	ata Ste	ello	na P	rodu	cts Li	mite	d)										
	Gamat	aria	Phase	V Ac	litva	our Ir	dust	rial A	rea										
	Seraik	ela-K	harsa	wan .	lhark	hand	1-832	108	iica,										
	Utrain		0.01	in any c	man	mane				<u> </u>				0		V.			
Type of In	dustry:	Iron a	& Steel	-						Custon	ner R	epres	entati	ve: Si	nweta	Kuma	iri		
Sample D	rawn by	: IEM	1 Team							Sampli	ng D	ate: 16	5-07-2	024 to	o 17-0)7-202	.4		
Protocol:	Protocol: CPCB Guideline & IS Method 9989:1981																		
Sampling	Locatio	n: STA	TION-1	PLAN	T NO	RTH SI	DE BO	UND	ARY		24				_				
Field Met	eorolog	ical Ir	nforma	tion	A. 1	Temp	.(°C):	30	R.H.	(%): 66	W	I.C.: Se	mi-Cl	oudy	W	.D.: W	lest to	East	2
Sample Re	eceiving	Date	: 22-07	7-2024	1	Tes	ting S	tarte	d: 22	-07-2024		Te	sting	Ende	d: 25-	07-20	24		
		1			-			Te	st Res	ult						1	-		
SI. No		P	aramet	er	10		Me	thod		Uni	t	Day	Time	N	ight T	ime	No	orms**	r.
	-			-	-						-						1		
1.	Equiv	alent	Sound	Level	(Leq)		IS 99	89:19	81	dB(A	dB(A) 71.2 55.8				3	Da Nig	y - 75 ht - 70	0	
L			0.00			_	1	End	d of Re	ports			120						
Note: -	_		100		19-5-1							15	50						
1. Day time sh	all mean f	rom 6.0	00 a.m. to	10.00 p	.m.														
2. Night time	shal <mark>l m</mark> ean	from 1	0.00 p.m.	to 6.00	a.m.														
3. Mixed cate	gories of a	reas <mark>ma</mark>	y be decl	ared as	one of	the fou	r above	menti	oned ca	tegories by	the co	mpetent	authori	ty.					
4. dB(A) Leq d	enotes the	e time w	veighted a	average	of the	level of	sound i	n decit	oels on s	cale A whic	h is re	latable to	o humar	hearing	g.		and to be	francia	
5.A decider i	actoristics	of the k	human ea	easured	I. A , I	n aB(A)	Leq, de	notes	the freq	uency weigi	iting ir	n the me	asurem	entorno	oise and	corresp	onds to	rrequer	тсу
6.Leg: It is an	energy me	an of th	ne noise le	evel. ove	er a spe	cified r	period.												
													-						
Env. Cond	ition of	Lab.	Labo per l	ratory S 196:	is ma 1966	aintai (C).	ning T	empe	rature	27± 2°C	and I	Relativ	e Hum	idity 6	5±5 %	in all	testin	g area	as
Abbreviati	on	2	MDL	: Minir	num l	Detect	ion Li	mit, E	BDL: B	elow Dete	ection	n Limit		6	3				
Norms** is	specif	ied	As pe	er Nois	se Pol	lutior	n (Reg	ulatio	n and	Control)	Rules	s - 200	0						
Remark			Same	le Cor	nnly	with P	rescri	hed S	necifi	cation									

Tested By: Akanksha Sourabh

Sample Drawn By: Rahul Singh & Team

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is issued by the Director of the Organization.	rechnical Manager ranch Director

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





								Te	st R	eport				1						
ULR No.	:	Т	C	1	1	5	1	5	2	4	0	0	0	0	0	1	1	4		
Disciplin	ne: Chem	ical		Grou	p: Atr	nosph	neric P	olluti	on	Sub-Group: Ambient Noise Levels (Excluding Vibration)										
Report I	ssue Dat	e: 25-0	07-20	24						Test Report No.: RN-230714001N2										
Sample	ID: 24072	22AP2	21002							Sample Description: Ambient Noise										
Challan	No./P.O.	No.: 4	45110	12880						Challan No./ P.No. Date: 13-07-2023										
ssued t	:0:																			
	M/s Ta	ata St	eel Li	mited																
	(Form	erly T	ata S	teel Lo	ong F	rodu	cts Li	miteo	i)											
	Gama Serail	haria (ela-K	Phase harsa	e-V, A awan,	ditya Jharl	pur In khand	idusti 1-8321	rial Aı I08	rea,				2							
Type of Industry: Iron & Steel										Custom	er Re	epres	entat	ive: S	Shwet	a Kum	nari			
Sample Drawn by: IEM Team									Sampling Date: 16-07-2024 to 17-07-2024											
Protoco	I: CPCB G	uideli	ne & I	IS Met	hod 9	989:1	1981	-	al T					-						
Samplin	g Locatio	n: STA	TION	2 PLA	NT W	EST SI	DE BO	UNDA	RY											
ield Me	eteorolog	gical Ir	nform	ation	Α.	Temp	.(°C):	30	R.H.	(%): 66	W.	. C.: Se	emi-Cl	loudy	1	N.D.: \	West	to Ea	st	
Sample	Receiving	g Date	: 22-0	07-202	4	Tes	ting S	tarte	d: 22	-07-2024		T	esting	End	ed: 25	5-07-20	024			
	_					5		Tes	st Res	ult										
SI. No		Para	amete	r			Meth	od		Unit	Unit Day Time			Night Time			N	orms	**	
1.	Equival	ent Sc	ound L	.evel (l	.eq)	IS	9989	:1981		dB(A) 65.8 60.5					D	ay - 7 ght - 1	5 70			
								End	of Re	ports				-						
Note: - Day time ! Night time ! Mixed ca ! dB(A) Lec i dB(A) Lec esponse ch	shall mean te shall mean tegories of a denotes th I" is a unit in naracteristics	from 6.0 n from 1 nreas ma e time w which r s of the l	00 a.m. t 0.00 p.r ay be de veightec noise is i human e	to 10.00 m. to 6.0 clared as d average measure ear.	p.m. D a.m. one of of the d. "A",	the fou level of in dB(A)	ir abo <mark>ve</mark> sound i Leq, de	mentio n decibe notes th	ned ca els on s he freq	tegories by t scale A which uency weigh	he cor h is rela ting in	npeten atable t the me	t author o huma easurem	rity. n heari ient of	ng. noise ai	nd corres	sponds	to freq	uency	

	per IS 196:1966(C).
Abbreviation	MDL: Minimum Detection Limit, BDL: Below Detection Limit
Norms** is specified	As per Noise Pollution (Regulation and Control) Rules - 2000
Remark	Sample Comply with Prescribed Specification.

Tested By: Akanksha Sourabh

Sample Drawn By: Rahul Singh & Team

Specific Contractual Notes: -	Reviewed by Authorized Signatory							
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6. In case of feedback/ complaints, please send an email at <u>gm.iemeco@gmail.com</u>	(Tauqeer Ahmad) 🚾 🥙 / (Df/ 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 * Ranchi * Director							
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Laboratory Site - H.No. - A-13, Saket Vihar, Near Sohrai Bhawan, Harmu Housing Colony, Ranchi-834002, Jharkhand, India

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





								Test	Report									
ULR No.:		Т	С	1	1	5	1	5	2 4	0	0 0	0	0	1	1		4	
Disciplin	e: Chem	ical		Grou	p: Atr	nospł	neric P	ollutior	Sub-Group: Ambient Noise Levels (Excluding Vibration									
Report Is	sue Dat	e: 25-0	07-202	24					Test Report No.: RN-230714001N3									
Sample I	D: 24072	2AP2	1003						Sample	Descri	ption: A	mbier	nt Noi	se				
Challan N	No./P.O.	No.: 4	45110	12880)				Challan I	No./P	No. Da	te: 13	-07-20	023				
ssued to	o:																	
	M/s Ta	ata Ste	eel Li	mited	_													
	(Form	erly T	ata St	ceel Lo	ong P	rodu	cts Li	mited)										
	Gamal	naria I	Phase	e-V, A	ditya	pur Ir	1dustr	ial Area	a,									
vpe of I	ndustry:	Iron &	& Stee		Jilan	Man	1-0021	00	Custome	er Rep	resenta	tive: S	Shweta	a Kum	ari			
Sample Drawn by: IEM Team									Samplin	g Date	: 16-07-	2024	to 17-	07-20	24			
Protocol	CPCB G	uideli	ne & I	S Met	hod 9	989:1	1981	and the local data				1						
Sampling	Locatio	n: STA	TION-	3 PLAN	T EA	ST SID	E BOU	NDARY		*								
ield Me	teorolog	ical Ir	form	ation	Α.	Temp	o.(°C):	30 R	.H. (%): 66	W.C.	: Semi-C	Cloudy	V	V.D.: \	Vest	to E	ast	
ample F	Receiving	z Date	: 22-0	7-202	4	Tes	sting S	tarted:	22-07-2024		Testin	g Ende	Ended: 25-07-2024					
								Test F	Result	- R								
SI. No		Para	ameter	r	8		Meth	od	Unit	Da	y Time	Nig	ght Tir	ne	N	orms	s**	
1.	Equival	ent Sc	ound L	.evel (I	_eq)	IS	5 9989:	1981	dB(A)	dB(A) 70.8 64.3 Day						ay - ght -	75 70	
								End of	Reports									
Note: - Day times Night time Mixed cat dB(A) Leq A "decibel" esponse cha	shall mean f e shall mear egories of a denotes th " is a unit in aracteristics	from 6.0 n from 1 reas ma e time w which n s of the h	0 a.m. to 0.00 p.n y be deo veighted noise is r numan e	o 10.00 n. to 6.0 clared as l average measure ear.	p.m. 0 a.m. 5 one of 2 of the d. "A",	the fou level of in dB(A)	ur ab <mark>ove</mark> f sound i) Leq, de	mentioned n decibels notes the f	d c <mark>ategories by</mark> th on scale A which requency weighti	e compo is relata ing in th	etent autho ble to hum e measurer	ority. an heari ment of r	ng. noise ar	id corres	ponds t	to free	quency	

Env. condition of Lab.	per IS 196:1966(C).
Abbreviation	MDL: Minimum Detection Limit, BDL: Below Detection Limit
Norms** is specified	As per Noise Pollution (Regulation and Control) Rules - 2000
Remark	Sample Comply with Prescribed Specification.

Tested By: Akanksha Sourabh

Sample Drawn By: Rahul Singh & Team

Specific Contractual Notes: -	Reviewed by Authorized Signatory
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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) 🐂 🛷 / (Dr. S. C. Jain)
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is issued by the Director of the Organization.	Teermieur Mundeer
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								Te	est F	Report										_
ULR No.	.:	Т	C	1	1	5	1	5	2	4	0	0	0	0	0	1	1		4	5
Disciplin	ne: Chem	ical	(Group	: Atn	nosph	neric P	ollut	ion	Sub-Group: Ambient Noise Levels (Excluding Vibration)										n)
Report	Issue Dat	e: 25-	07-202	4						Test Report No.: RN-230714001N4										
Sample	ID: 24072	22AP2	21004							Sampl	e Des	cripti	on: A	mbier	nt Noi	se				
Challan	hallan No./P.O. No.: 4511012880										Challan No./ P.No. Date: 13-07-2023									
Issued	to:																			
	M/s Ta	ata St	eel Lin	nited																
	(Form	erly T	ata Ste	eel Lo	ng P	rodu	cts Li	mite	d)											
	Gama Serail	haria (e <mark>la-K</mark>	Phase-	-V, Ad wan, J	lityap Ihark	our In chand	ldustr I-8321	ial A 08	rea,											
Type of	Industry:	Iron	& Steel							Custor	ner R	lepres	entat	ive: S	Shweta	a Kum	ari			
Sample	Drawn b	y: IEM	I Team							Sampling Date: 16-07-2024 to 17-07-2024										
Protocol: CPCB Guideline & IS Method 9989:1981																				
Sampling Location: STATION-4 PLANT SOUTH SIDE BOUNDARY																				
Field M	eteorolog	gical Ir	nforma	tion	A. '	Temp	.(°C):	30	R.H	. (%): 66	W	.c.: S	emi-C	loudy	V	V.D.: \	Vest	to E	ast	
Sample	Receiving	g Date	: 22-07	7-2024	1	Tes	ting S	tarte	d: 22	2-07-2024 Testing Ended: 25-07-2024										
						-		Te	st Res	ult										
SI. No		Para	ameter		.3	8	Meth	od		Unit		Day 1	ime	Nig	jht Tin	ne	N	lorms	S**	
1.	Equival	ent So	ound Le	evel (Le	eq)	IS	9989:	1981		dB(A) 68.5 62.3					N	Day - ight -	75			
					I.			Enc	d of Re	eports										
Note: -																				
1. Day time	shall mean	from 6.0	0 a.m. to	10.00 p.	.m.															
3. Mixed ca	itegories of a	reas ma	v be deck	ared as o	one of	the fou	r above	mentio	oned ca	tegories by	the co	mpeter	t author	rity.						
4. dB(A) Le	q denotes th	e time w	veighted a	average	of the	level of	sound in	n decib	oels on	scale A whi	ch is re	latable	o huma	n hearin	ng.					
5.A "decibe	el" is a unit in	which r	noise is m	easured	. "A", i	n dB(A)	Leq, de	notes t	he free	uency weig	hting in	n the m	easurem	nent of r	noise an	d corres	ponds	to free	quen	су
response cl	haracteristics	of the l	human ea	ar.		cified -	oriod													
req. it is a	an energy m		ie noise ie	ever, ove	a spe	, enieu p	chou.				8		100	1.2				-		

Env. Condition of Lab.	Laboratory is maintaining Temperature 27± 2°C and Relative Humidity 65±5 % in all testing area as per IS 196:1966(C).
Abbreviation	MDL: Minimum Detection Limit, BDL: Below Detection Limit
Norms** is specified	As per Noise Pollution (Regulation and Control) Rules - 2000
Remark	Sample Comply with Prescribed Specification.

Tested By: Akanksha Sourabh

Sample Drawn By: Rahul Singh & Team

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CSR Activity Gamharia

TSL Gamharia





Education

- Primary Learning Centre (PLC) is continuous running in 5 location of different villages of gamharia Block. 205 student were getting benefit from these centre.
- Pre-Matric coaching (PMC) is continuous running in 2 location of Gauri and Tetuladanga villages.
- 5 NRBC (Non-residential bridge course) started in gamharia block with objective to bridging the drop out student that engage in slag picker and other activity and enrolled them to regular schooling.







Public Health

- Mobile public health (mPHU) running in 4 location of gamharia that provide basic curative disease with diagnosis of Blood Pressure ,Sugar etc.
- 12 Eye camp concluded till date in which 272 person get screen and 60 were find having mature cataract that surgery need to perform.13 patient surgery completed.









Livelihood- Agriculture

- Two capacity building training programme on livestock management and modern breed improvement practises in Kolabira Agriculture Centre organised.
- An orientation session on Vegetable Marketing & Supply Chain with farmers of Sapra Cluster by Kolabira center.









Livelihood- Skill Development

- Kaushalyan: 100 students registered for this course from Gouri Middle School.
- Counselling sessions through MCC undertaken & girls from key villages got placement offers in ZOMATO.
- Scouting of students for Dugdha school has been initiated and Skill team to start the batch by November









Sports

- Training in Archery feeder centre is continuing. M/S Sarna Umul Pinderabera, a women entrepreneur group created for Nutrition supply to 25 trainees.
- Panchayat level Girls Football tournament organized at Saldih village, 8 team participated with 112 girls of different villages of Gamharia
- Team of Pinderabere won the trophy beating Women's Power Srirampur.





SN.	Condition	Compliance status/Action taken
1	Coke Oven Plant: To meet the parameters PLD (% leaking doors), PLL (% leaking lids), PLO (% leaking off take) of the notified standards under EPA. To rebuild at least 40% of the coke oven batteries* in next 10 years by December 2012.	Our Coke Oven Plant is non-recovery type coke oven and this requirement is not applicable.
2	Steel Melting Shop: Steel Melting Shop Fugitive Emission Status To reduce 30% by March 2004 and 100% by March 2008 (including installation of secondary de- dusting facilities).	Dedicated secondary Fume Extractive System are installed in EAF & LRF and fugitive emissions are significantly reduced. To measure the stack emission dedicated online dust Monitors are installed in the respective stacks and it's data uploading to JSPCB & CPCB Server on real time basis.
3	Blast Furnace - Direct inject of reducing agents in blast furnace	Pulverized Coal injection (PCI) system installed and commissioned along with bag filter as an air pollution control measures (bag filter with stack) to reduce fugitive emission during direct injection.
4	 Solid Waste / Hazardous Waste Management: Utilization of Steel Melting Shop (SMS) / Blast Furnace (BF) slag as per the following. By 2004 - 70% By 2006 - 80% and By 2007 - 100% Hazardous Waste: - Charge of tar sludge / ETP sludge to coke oven by June 2003 Inventorization of Hazardous waste as per Hazardous waste (M & H) Rules, 1989 as amended in 2000 and implementation of the rules by December 2003. (Tar sludge, acid sludge, waste lubricating oil and type fuel fall in the category of HZ). 	 Solid waste generated within the plant are segregated and most of the waste are recycled back in process. (i) Rolling mill scrap is partially recycled as steel scrap in SMS and partially sold as scrap to outside vendor. (ii) Mill scale is used in sinter making process at Sinter Plant. (iii) FES Dust from SMS is being used in sinter plant. (iv) Flue Dust from blast furnace, Bag Filter Dust and wet GCP dust is also used in Sinter plant. (v) 100% Blast furnace slag is sold to open market. (Used by major cement industry). (vi) Metal is recovered from slag of arc furnace and recycled. (vii) Used Oil / Waste Oil / Spent oil is collected and stored in designated place and sold to authorized recycler.

		Hazardous Waste: Our coke oven plant is non-recovery type and hence Tar sludge & ETP sludge is not applicable. The waste oil and other hazardous wastes generated is being disposed to authorized vendors as per the Hazardous Waste Management Rule 2016.
5	Water Conservation / Water Pollution - To reduce specific water consumption to 5 m3/ t for long products and 8 m3 / t for flat products by December 2005.	We maintained Zero Effluent Discharge. There are only evaporation losses. We are presently manufacturing only long products and our specific water consumption is well within the prescribed limit
6	Installation of continuous stack monitoring	Stack monitoring facilities are provided at all major stacks. 7 online gas analysers and 23 online dust monitors are installed covering all major stacks for monitoring of emission from the stacks as per CTO condition and the real time data of PM, SO2 & NOx are transmitted to JSPCB / CPCB servers. Apart from the above, manual monitoring is being conducted by a NABL accredited external laboratory on monthly basis. The monitoring results are well within the permissible limits.
7	To operate the existing pollution control equipment efficiently and to keep proper record of run hours, failure time and efficiency with immediate effect. Compliance report in this regard be submitted to CPCB / SPCB every three months.	The pollution control equipments are being operated efficiently and proper records are maintained for running hours, failure time and efficiency. Any failure leads to APC is resulted exceedance alarm from CPCB server and justification along with corrective action reports are being submitted to RTDMS Portal.
8	To implement the recommendations of Life Cycle Assessment (LCA) study sponsored by MoEF by December 2003.	Being Complied

9	The industry will initiate the steps	•	Our BF gas pressure (plant
	to adopt the following clean		capacity is 0.65 MTPA only) is not
	technologies measures to improve		adequate to install TPT
	the performance of industry	_	Aucquaic to instan INT.
	towards production operation	•	Our coke oven plant is non-
	towards production, energy and		recovery type and hence not
	environment.		applicable.
		٠	The de-dusting system
	• Energy recovery of top Blast		commissioned at MBF-I & II cast
	Furnace (BF) gas.		house covering tap holes.
	• Use of Tar- free runner linings		runners skimmers ladles and
	 Do ducting of Cost house at ton 		charging points
	• De- dusting of Cast house at tap		charging points.
	holes, runners, skimmers ladle	•	Water sprinkling system, Dry &
	and charging points.		Wet fog systems and the
	• Suppression of fugitive		compressed air are used for
	emissions using nitrogen gas or		suppression of fugitive emissions
	other inert gas		at RMHs area.
	• To study the possibility of slag	•	Since we are nurchasing raw
	and fly ash transportation back		materials from outside sources it
	to the abandoned mines to the		is not applicable
	abandoned mines to fill up the	_	The wests containing from 0
	abandoned nimes, to nin up the	•	The waste containing hux &
	cavities through empty railway		terrous waste is utilized to the
	wagons while they return back		maximum extent possible in the
	to the mines and its		Pellet & Sinter plant. 100 % of
	implementation.		waste containing flux and ferrous
	• Processing of the waste		is utilized in the pellet & Sinter
	containing flux & ferrous wastes		plant.
	through waste recycling plant.	•	Rainwater harvesting structures
	• To implement rainwater		are created within the premises to
	homesting		horwest roinwater Open
	Defection One Here O		narvest famwater. Open
	• Reduction Green House Gases		reservoirs within the plant also act
	by:		as sink for rainwater during rainy
	1. Reduction in power		season the water of which is used
	consumption		in the plant.
	2. Use of by –products gases	٠	Various initiatives and measures
	for power generation		are being taken to reduce the GHG
	3. Promotion of Energy		emissions and present level of
	Optimisation technology		GHG emission is 4.44 tCO2e/tcs
	including energy / audit		Major focus are being given to
	moraning onorgy/ adam		maximise the waste heat
	• To get targets for Descurse		intrinse the waste ficat
	- 10 Set largers 101 Resource		Colto roto in DE ⁹ DDI Drosson
	Conservation such as Raw		Coke fale III BF & DKI Process,
	material, energy and water		Maximum utilization of Char,
	consumption to match		resource conservation. To reduce
	International Standards.		the power consumption VFDs are
	• Up-gradation in the monitoring		being installed wherever possible.
	and analysis facilities for air and		LED lights are installed to replace
	water pollution. Also, to impart		the sodium vapor lamps and many
	elaborate training to the		Kaizens are implemented to
	mannower so that realistic data		conserve power. By product BF
	is obtained in the environmental		gas is being used as fuel in Dower
			Diant Mills Sinter Droduction
	monitoring laboratories.		Fiant, Minis, Sinter Production
			Process.