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TSL/MoEF&CC/TS-26/2024-02/507

November 25, 2024

The Deputy Director General of Forests (C)
Ministry of Environment, Forest and Climate Change,
Integrated Regional Office,
A/3, Chandersekharapur,
Bhubaneswar-751023

Subject: Half yearly EC compliance reports of 256 MW captive power plant of Tata Steel Ltd., Meramandali for the period April'24 to Sept'24.

Reference: EC vide letters no.J-13012/77/2011-IA-II (I), dated 12.02.2015

Dear Sir,

This has reference to the captioned subject and cited references. It is to inform that we are herewith submitting six monthly compliance reports for the conditions stipulated in the Environment Clearance of 256 MW captive power plant of Integrated Steel Plant of Tata Steel Ltd. Meramandali for the period from April 2024 to September 2024 along with monitoring report for your kind consideration.

The copy of above compliance report is also being sent in soft format through email (roez.bsr-mef@nic.in) for your kind perusal. Also copy of EC compliance is being uploaded on MoEFCC website on portal [http:// environmentalclearance.nic.in](http://environmentalclearance.nic.in).

Hope, the above are in line with the statutory requirements.

Thanking you,

Yours faithfully,

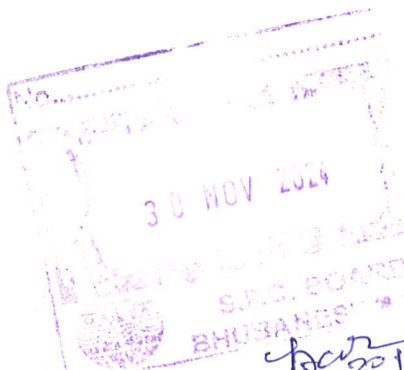
For Tata Steel Limited

Anoop Srivastava

Chief Environment -TSM

Copy to:

- I. The Zonal Officer, Central Pollution Control Board, Southern Conclave Block 502, 5th & 6th Floors, 1582 Rajdanga Main Road, Kolkata - 700107.
- II. The Member Secretary, SPCB, Parivesh Bhawan, A/118, Nilakahanta Nagar, Unit-VIII, Odisha, Bhubaneswar-751012.
- III. The Regional Officer, State Pollution Control Board, Odisha, Angul.



TATA STEEL LIMITED

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Corporate Identity Number L27100MH1907PLC000260 Website www.tatasteel.com

(For the period from April' 2024 to September' 2024)

SL.	STIPULATED CONDITIONS	COMPLIANCE STATUS
i	Vision document specifying prospective plan for the site shall be formulated and submitted to the RO of the Ministry within six months.	<ul style="list-style-type: none"> • Vision, Mission and Environment Policy statements have been submitted to the Regional Office, MoEF&CC, BBSR along with the compliance report.
ii	Harnessing solar power within the premises of the plant particularly at available roof tops shall be carried out and status of implementation including actual generation of solar power shall be submitted along with half yearly monitoring report.	<ul style="list-style-type: none"> • Power is co-generated utilizing waste heat from DRI units through WHRBs. • Additionally, coke oven and blast furnace gases are also used for generating green power through gas fired boilers utilizing renewal energy source. • TERI has been engaged to carryout feasibility study for installation of solar power plant and the study has been completed.
iii	Sulphur and ash contents in the imported coal to be used in the project shall not exceed 0.3% and 6% respectively at any given time. In case of variation of coal quality at any point of time, fresh reference shall be made to the Ministry for suitable amendments to environment clearance condition wherever necessary.	<ul style="list-style-type: none"> • Not applicable. • As presently gas-based power plant of capacity 165 MW has been commissioned. This plant does not consume coal hence, no ash is being generated. • Amendments in environment clearance has been made on 13th fuel from dual firing (Coal + Mixed gas) to 100 % mixed gas firing.
iv	A long term study of radioactivity and heavy metals contents in coal to be used shall be carried out through a reputed institute and results thereof analyzed every two years and reported along with monitoring reports. Thereafter mechanism for an in-built continuous monitoring for radioactivity and heavy metals in coal and fly ash (including bottom ash) shall be put in place.	<ul style="list-style-type: none"> • Not applicable. • As presently gas-based power plant of capacity 165 MW has been commissioned. This plant does not consume coal hence, no ash is being generated. • Hence, no need no monitor Radioactivity and heavy metals contents in coal and ash.
v	A stack of 220 meter height shall be provided with continuous online monitoring equipments for SO _x , NO _x , PM ₁₀ and PM _{2.5} . Exit velocity of flue gases shall not be less than 22 m / sec. Mercury emissions from stack shall also be monitored on periodic basis.	<ul style="list-style-type: none"> • Not applicable. • As gas fired boiler has been commissioned instead of CFBC coal boiler. Chimney height 70 m and 40 m is attached to 60 TPH & 125 TPH and 250 TPH respectively. Online monitoring system has been installed for Sox and NOx in the stacks. Online data is

(For the period from April' 2024 to September' 2024)

		transmitted to SPCB and CPCB servers through RT-DAS.
vi	High efficiency ESPs shall be installed to ensure that particulate emission does not exceed 50 mg / Nm ³ . Adequate dust extraction system such as cyclones/bag filters and water spraying system in dusty areas such as in coal handling and ash handling points, transfer areas and other vulnerable dusty areas shall be provided.	<ul style="list-style-type: none"> • Not applicable. • As presently gas-based power plant of capacity 165 MW has been commissioned. This plant does not consume coal and particulate matter emission is very less. Hence, no requirement of ESPs.
vii	Adequate dust extraction system such as cyclones / bag filters and water spraying system in dusty areas such as in coal handling and ash handling points, transfer areas and other vulnerable dusty areas shall be provided.	<ul style="list-style-type: none"> • Not applicable • EC was granted to install coal base thermal power plant; however, gas base power plant has installed. • Presently only gas fired boilers (60TPH, 125TPH & 250TPH capacities). Hence, no coal and ash handling and dust extraction system such as cyclones / bag filters and water spraying system not required.
viii	COC of at least 5.0 shall be adopted	<ul style="list-style-type: none"> • COC in the range of 7 -8 is maintained.
ix	Monitoring of surface water quantity and quality shall also be regularly conducted and records maintained. The monitoring data shall be submitted to the Ministry regularly. Further, monitoring points shall be located between the plant and drainage in the direction of the flow of ground water and records maintained. Monitoring for heavy metals in ground water shall also be undertaken and results/findings submitted along with half yearly monitoring report.	<ul style="list-style-type: none"> • Monitoring of surface water and ground water is being carried out regularly. Monthly monitoring reports are being submitted to the SPCB, Odisha. Last monitoring report was submitted on May 10th, 2024. • The summarized data is enclosed as Annexure - I.
x	A well designed rainwater harvesting system shall be put in place within six months, which shall comprise of rain water collection from the built up and open area in the plant premises and detailed records kept of the quantity of water harvested every year and its use.	<ul style="list-style-type: none"> • Earthen pond and HDPE pond have been constructed to harvest rainwater. This water is reused in the process when required. During the period April'24 to Sept'24, 36774 m3 of rainwater has been utilized in process. • Surface runoff water collected from DRI & RMHS area are channelized through drains into a series of storage pond for harvesting.
xi	No water bodies including natural drainage system in the area shall be disturbed due to activities associated	<ul style="list-style-type: none"> • No water body or natural drainage system is disturbed.

(For the period from April' 2024 to September' 2024)

	with the setting up / operation of the power plant.	
xii	Hydrogeology of the area shall be reviewed annually from an institute / organization of repute to assess impact of surface water and ground regime (especially around ash dyke). In case any deterioration is observed, specific mitigation measures shall be undertaken and report / data of water quality monitored regularly and maintained shall be submitted to the Regional Office of the Ministry.	<ul style="list-style-type: none"> • Not applicable. • As presently gas-based power plant of capacity 165 MW has been commissioned. However, ground water level and quality are being monitored on quarterly basis and hydrogeology study is being carried out by IMMT, Bhubaneswar. The summary of the report is attached as Annexure- II.
xiii	Waste water generated from the plant shall be treated before discharge to comply limits prescribed by the SPCB / CPCB.	<ul style="list-style-type: none"> • Wastewater generated from the plant is being treated in Effluent Treatment Plant • Treated water is reused in slag granulation, greenery development and low-end application in Blast Furnace & Sinter Plant etc. • The water quality parameters are well within the limit as per the prescribed standard. • Water analysis report is enclosed as Annexure-I.
xiv	Additional soil for leveling of the proposed site shall be generated within the site (to the extent possible) so that natural drainage system of the area is protected and improved.	<ul style="list-style-type: none"> • No additional soil is required for leveling the site.
xv	Prior approval of the Ministry shall be obtained for Mine Void and abandoned stone quarry filling of fly ash based on the outcome of the pilot study for which permission was accorded to the existing units by the Ministry on 05.09.2013 subject to Hon'ble NGT's Order.	<ul style="list-style-type: none"> • We request to withdraw this condition as this is not applicable. We have communicated vide letter No. TSBSL/MoEF&CC/BS-01/2020-01/57 dtd.27.08.20.
xvi	Fly ash shall be collected in dry form and storage facility (silos) shall be provided. Unutilized fly ash shall be disposed off in the ash pond in the form of slurry. Mercury and other heavy metals (As, Cr, Pb etc) will be monitored in the bottom ash as also in the effluents emanating	<ul style="list-style-type: none"> • Not applicable. • As presently gas-based power plant of capacity 165 MW has been commissioned. This plant does not consume coal hence, no ash is being generated.

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	from the existing ash pond. No ash shall be disposed off in low lying areas.	
xvii	Fugitive emission of fly ash (dry or wet) shall be controlled such that no agricultural or non-agricultural land is affected. Damage to any land shall be mitigated and suitable compensation provided in consultation with the local panchayat.	
xviii	Ash pond shall be lined up with HDPE/LDPE lining or any other suitable material impermeable media such that no leachate takes place at any point of time. Adequate safety measures shall also be implemented to protect the ash dyke from getting breached.	
xix	Green belt consisting of three tire of plantation of native species around plant and at least 50 m width shall be raised. Wherever 50 m width is not feasible a 20 m width shall be raised and adequate justification shall be submitted to the Ministry. Tree density shall not be less than 2500 trees per ha with survival rate not less than 80%. Only native species shall be planted and the green belt development shall be expedited.	<ul style="list-style-type: none"> Green belt development is under progress in and around the plant complex by planting indigenous species as per CPCB guidelines. Till Mar'22, 33.66% area (this includes Plant, R&R and CSR plantation) has been covered under green belt. Rapid afforestation using MiyaWaki method in consultation with IIT, Kharagpur has been initiated. Plantation of saplings are done regularly based on the availability of vacant area. During the period April'24 to Sept'24 44052 nos. of plant have been planted. Proper maintenance of green coverage is being ensured throughout the year.
xx	CSR schemes identified based on Public Hearing issues and need based assessment shall be implemented in consultation with the village panchayat and the District administration starting from the development of the project itself. As part of CSR, prior identification of local employable youth and eventual employment in the project after imparting relevant training shall be also undertaken. Company shall provide separate budget for community	<ul style="list-style-type: none"> The peripheral development is being carried out based on socio economic survey and need based assessment. Based on this, company has provided the facilities of sanitation, drinking water, education, health care, road and communication facilities etc in surrounding villages. Various socio-economic development programs covering education, safe drinking water, sports and health care etc are undertaken in nearby villages. Details breakup of CSR initiatives are enclosed as Annexure-III

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	development activities and income generating program.	
xxi	As committed, a minimum amount of Rs. 40.00 crore shall be earmarked for CSR activities for next five years. For proper and periodic monitoring of CSR activities, a CSR committee or a social audit committee or a suitable credible external agency shall be appointed. CSR activities shall also be evaluated by an independent external agency. This evaluation shall be both concurrent and final	<ul style="list-style-type: none"> • CSR department has been established to monitor the CSR activities. The CSR activities are based on need based assessment.
xxii	For proper and periodic monitoring of CSR activities, a CSR committee or a social audit committee or a suitable credible external agency shall be appointed. CSR activities shall also be evaluated by an independent external agency. This evaluation shall be both concurrent and final.	<ul style="list-style-type: none"> • As per the revised companies Act, 2013 and its amendment, CSR committee has been formed. Evaluation of each specific CSR intervention/activities is monitored & evaluated by the CSR Committee. • Evaluation of the Impact of Corporate Social Responsibility Projects has been carried out by XIMB, Bhubaneswar.
xxiii	An Environmental Cell comprising of at least one expert in environment science/engineering, ecology, occupational health and social science, shall be created preferably at the project site itself and shall be headed by an officer of appropriate superiority and qualification. It shall be ensured that the Head of the Cell shall directly report to the Head of the Plant who would be accountable for implementation of environmental regulations and social impact improvement / mitigation measures.	<ul style="list-style-type: none"> • Environment Management Department has been established for implementation of stipulated environmental safeguards and control of pollution. • The head of the Environment department and other officers are having Environmental Science/Engineering qualification and adequate experience.
A	General Conditions:	
i	Space for FGD shall be provided for future installation as may be required.	<ul style="list-style-type: none"> • Not applicable. • As presently gas-based power plant of capacity 165 MW has been commissioned. This plant does not consume coal hence, generation SO₂ is minimum. Hence, FGD is not required.
ii	The treated effluents conforming to the prescribed standards only shall be re-	<ul style="list-style-type: none"> • Wastewater is treated in ETP . The treated effluent, conforming to the prescribed

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	circulated and re-used within the plant. Arrangements shall be made that effluents and storm water do not get mixed	standards, are recycled and reused for slag granulation, dust suppression and green area development.
iii	A sewage treatment plant shall be provided (as applicable) and the treated sewage shall be used for raising greenbelt / plantation.	<ul style="list-style-type: none"> • STP of 100 m3 per day has been installed near Blast Furnace-I.
iv	Adequate safety measures shall be provided in the plant area to check/minimize spontaneous fire in coal yard especially during summer season. Copy of these measures with full details along with location on plant layout shall be submitted to the Ministry as well as to the Regional Office of the Ministry.	<ul style="list-style-type: none"> • Not applicable • As presently gas-based power plant of capacity 165 MW has been commissioned. This plant does not consume coal.
v	Storage facility for auxiliary liquid fuel such as LDO/HFO/LSHS shall be made in the plant area in consultation with the Department of Explosives, Nagpur. Sulphur content in the liquid fuel will not exceed 0.5%. Disaster Management Plan shall be prepared to meet any eventuality in case of an accident taking place due to storage of oil.	<ul style="list-style-type: none"> • Not applicable. • LDO/HFO/LSHS is not using for startup activities. Startup activities are being carried out by LPG or COG.
vi	First aid and sanitation arrangements shall be made for the drivers and other contract workers during construction phase.	<ul style="list-style-type: none"> • Adequate First aid and sanitation arrangements were made during construction phase of the plant and similar facilities are being maintained during operational phase also for the workers and employees.
vii	Noise level emanating from turbines shall be so controlled such that the noise in the work zone shall be limited to 85 dB(A) from the source. For people working in the high noised areas, requisite PPEs like ear plugs/ear muffs etc shall be provided. Workers engaged in noisy areas such as turbine area, air compressors etc shall be periodically examined to maintain audiometric records and for treatment for any hearing loss including shifting to non-noisy/less noisy areas.	<ul style="list-style-type: none"> • Silencers have been provided at boilers to control noise during steam venting. • Necessary PPEs are being provided to all the workers working in noisy areas and periodic examination is being conducted for the workers engaged in noisy areas. • Noise monitoring is carried out regularly in the work zone areas and reports are enclosed as Annexure-IV.

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viii	Regular monitoring of ambient air ground level concentration of SO ₂ , NO _x , PM _{2.5} , PM ₁₀ and Hg shall be carried out in the impact zone and records maintained. If at any stage levels are found to exceed the prescribe limits, necessary control measures shall be provided immediately. The locations of the monitoring stations and frequency of monitoring shall be decided in consultation with SPCB. Periodic reports shall be submitted to the regional office of the Ministry. The data shall also be put on the website of the Company.	<ul style="list-style-type: none"> Five ambient air quality monitoring stations have been set up in nearby villages for measuring ground level concentrations of PM₁₀, SO₂ and NO_x in consultation with SPCB, Odisha. EC compliance along with all report is being uploaded on the company's website at http://www.tatasteel.com.
ix	Utilization of 100 % fly ash generated shall be made from 4 th year of operation. Status of implementation shall be reported to the Regional Office of the Ministry from time to time.	<ul style="list-style-type: none"> Not applicable As Presently gas-based power plant of capacity 165 MW has been commissioned. This plant does not consume coal hence, no ash is being generated.
x	Provision shall be made for the housing of contractor workers (as applicable) within the site with all necessary infrastructure facilities such as fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, crèche etc.	<ul style="list-style-type: none"> Adequate arrangements of housing for construction workers were made during construction phase of the plant.
xi	The project proponent shall advertise in at least two local news papers widely circulated in the region around the project, one of which shall be in the vernacular language of the locality concerned within seven days from the date of this clearance letter, informing that the project has been accorded environment clearance and copies of the clearance letters are available with the SPCB/Committee and may also be seen at website of the Ministry of Environment and Forests at http://envfor.nic.in	<ul style="list-style-type: none"> Advertisements were circulated in The Telegraph (English daily) dated 15.02.2015 and the Samaya (Oriya daily) dated 15.02.2015. A copy of the same was submitted to MoEF&CC vide our letter no. BSL/MoEF/BS-02/2015-09 dated 21.02.2015.
xii	A copy of the clearance letter shall be sent by the proponent to concerned Panchayat, Zila Parishad / Municipal Corporation, Urban Local Body and the	<ul style="list-style-type: none"> Copy of the environment clearance was submitted to the concerned panchayat, Zila Parishad, District Industry Centre etc.

(For the period from April' 2024 to September' 2024)

	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.	
xiii	The proponent shall upload the status of compliance of the stipulated environment clearance conditions, including results of measured data on their website and shall update the same periodically. It shall simultaneously be sent to the Regional Office of the MoEF, the respective zonal office of CPCB and the SPCB. The criteria pollutant levels namely SPM, RSPM (PM ₁₀ and PM _{2.5}) SO ₂ , NO _x (ambient as well as stack emission) shall be displayed at a convenient location near the main gate of the Company in the public domain.	<ul style="list-style-type: none"> • Status of compliance of the stipulated environment clearance conditions are being uploaded on website and are being sent to the Ministry, CPCB and SPCB. Results of online air quality monitoring are displayed electronically near the main gate. • The last half yearly compliance report was submitted vide letter no. TSL/MoEF&CC/TS-26/2024-01/451 dated 29.05.2024.
xiv	The environment 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 SPCB 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 environment clearance conditions and shall also be sent to the respective Regional Office of the Ministry by e-mail.	<ul style="list-style-type: none"> • The environment statement in Form-V for each financial year ending 31st March is submitted to the Regional Office of the Ministry, CPCB and SPCB. • Last environment statement was submitted vide letter no. TSL/SPCB/TS-30/2024-03/494 dated 27.09.2024
xv	The project proponent shall submit six monthly reports on the status of the implementation of the stipulated environmental safeguards to the Ministry of environment and Forests, its Regional Office, CPCB and SPCB. The project proponent shall upload the status of compliance of the environmental clearance conditions on their website and update the same periodically and simultaneously send	<ul style="list-style-type: none"> • Six monthly reports on status of the implementation of the stipulated environmental safeguards are being submitted. • Status of compliance with the environmental clearance conditions is being uploaded on the Company's website at http://www.tatasteel.com.

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	the same by e-mail to the Regional office of MoEF.	
xvi	Regional office of the MoEF will monitor the implementation of the stipulated conditions. A complete set of documents including Environment Impact Assessment report and Environment Management Plan along with the additional information submitted from time to time shall be forwarded to the Regional Office for their use during monitoring. Project proponent will upload the compliance status in their website and update the same from time to time at least six monthly basis. Criteria pollutants levels including NOx (from stack and ambient air) shall be displayed at the main gate of the power plant.	<ul style="list-style-type: none"> • All the required documents have been already submitted to the Regional Office and will be made available during inspection. • Compliance status is uploaded on the website and updated in every six months.
xvii	Separate funds shall be allocated for implementation of environmental protection measures along with item-wise break-up. These shall be included as part of the project cost. The funds earmarked for the environment protection measures shall not be diverted for other purposes and year-wise expenditure should be reported to the Ministry.	<ul style="list-style-type: none"> • Adequate funds are being provided by the management for pollution control and to meet recurring costs. Environmental requirements are given top priority for fund allocation and approval of capital projects. • The funds earmarked for environment pollution control measures are not diverted for any other purpose. • The company has invested adequate capital expenditure to improve mix of clean power & also reduction of carbon emissions
xviii	The project authorities shall inform the Regional Office as well as the Ministry regarding the date of financial closure and final approval of the project by the project authorities and the dates of land development work and commissioning of plant.	<ul style="list-style-type: none"> • Financial closure and financial approval will be communicated to the regional office and the Ministry of MoEF&CC.
xix	Full cooperation shall be extended to the Scientists/Officers from the Ministry / Regional Office / CPCB / SPCB who would be monitoring the compliance on environmental status.	<ul style="list-style-type: none"> • Full cooperation is extended to the Scientists/Officers from the Ministry / Regional Office / CPCB / SPCB who would be monitoring the compliance on environmental status.

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Name change in EC from M/s. Tata Steel BSL Limited to M/s. Tata Steel Limited		
SL	ADDITIONAL CONDITION	COMPLIANCE STATUS
I	M/s Tata Steel BSL Ltd. (new incumbent) shall submit an application for amendment in EC for switching from 50% coal & 50% mix gases from Steel plant to 100% mix gases from steel plant for stipulation of adequate conditions on pollution control measures by the Ministry.	<ul style="list-style-type: none"> Amendment EC has been obtained for switching from 50% coal & 50% mix gases from Steel plant to 100% mix gases.
II	The revised emission standards and specific water consumption as per the Ministry's Notification vide S.O.33.5 dated 17.12.2015 and subsequent amendments shall be complied with. The progress of implementation of new emission standards as per the extended timelines given by CPCB vide Order dated 16.04.2018 shall be submitted as part of compliance report.	<ul style="list-style-type: none"> The revised emission standards and specific water consumption as per the Ministry's Notification vide S.O.33.5 dated 17.12.2015 and subsequent amendments is being complied with.
III	Details of quantity of water consumption, power generation and Specific water consumption shall be submitted as part of compliance report.	<ul style="list-style-type: none"> Water consumption, power generation and specific water consumption for the period April'24 to September'24 are given below. Power Generation: 3273796.8 MW Average Specific water consumption: 3.00 m3/MWh (BFPP-I: 3.43 m3/MWh & BFPP-II: 2.62 m3/MWh)
IV	The status of case (CC case No.16/2014) filed before Hon'ble Sub Divisional Judicial Magistrate, Dhenkanal against Shri Neeraj Singhal, M/s Bhushan Steel Ltd. shall also be communicated to the Ministry.	<ul style="list-style-type: none"> Case is pending for Supply of Prosecution Report.
Amendment Environment clearance of 256 MW power plant Letter no.: J-13012/77/2011-I-A. II (T) dated 13.08.2021		
SL	ADDITIONAL CONDITION	COMPLIANCE STATUS
7	PP shall submit Compliance report of Ministry Regional office within 6 months.	<ul style="list-style-type: none"> Complied Certificate of compliance has already been communicated vide letter No.TSL/MoEF &CC/BS-26/2022-02/202 dtd. 13.05.22.

LIST OF ENCLOSURES

Sl. No.	Enclosure	Details
1.	Annexure - I	Water Analysis Report
2.	Annexure - II	Hydrogeology Study
3.	Annexure - III	CSR Report
4.	Annexure – IV	Ambient & Work zone Noise Report

Summary of Surface Water Quality Analysis

(Period: From April 2024 to September 2024)

S. N	Parameter	Unit	Kishinda Nala		Lingara Nala		Brahamani River	
			U/S	D/S	U/S	D/S	U/S	D/S
1	pH Value	-	6.92-8.58	7.32-8.20	6.78-8.50	7.36-8.4	6.87-8.29	7.02-8.13
2	Colour	Hazen	BDL(DL:2.0)	BDL(DL:2.0)	BDL(DL:2.0)	BDL(DL:2.0)	BDL(DL:2.0)	BDL(DL:2.0)
3	Temperature	Deg C	25-25.3	25-25.2	25-25.2	25-25.2	25-25.3	25-25.0
4	Total Suspended Solids	mg/l	3.8-15.6	2.6-20.0	3.8-19	8.6-18.2	10.8-90	3.2-120
5	Arsenic as As	mg/l	BDL(DL:0.005)	BDL(DL:0.005)	BDL(DL:0.005)	BDL(DL:0.005)	BDL(DL:0.005)	BDL(DL:0.005)
6	BOD, 3days at 27°C	mg/l	2.7-5.6	2.0-5.6	BDL(DL:2.0)	5.7-6.4	2.4-9.6	3.8-13
7	Boron as B	mg/l	BDL(DL:0.25)	BDL(DL:0.25)	BDL(DL:0.25)	BDL(DL:0.25)	BDL(DL:0.25)	BDL(DL:0.25)
8	Cadmium as Cd	mg/l	BDL(DL:0.001)	BDL(DL:0.001)	BDL(DL:0.001)	BDL(DL:0.001)	BDL(DL:0.001)	BDL(DL:0.001)
9	Calcium as Ca	mg/l	34-80.8	34-80.8	13-89.0	26-64.4	12-26.0	12.12-27.0
10	Chlorides as Cl	mg/l	35-158.35	35-148.45	14-152	20-126	11-29.69	12.0-108.0
11	COD	mg/l	9.6-28	16.0-23	10.0-20	19.0-28	8.4-34	13.0-40
12	Copper (as Cu)	mg/l	BDL(DL:0.02)	BDL(DL:0.02)	BDL(DL:0.02)	BDL(DL:0.02)	BDL(DL:0.02)	BDL(DL:0.02)
13	Cyanide as CN	mg/l	BDL(DL:0.01)	BDL(DL:0.01)	BDL(DL:0.01)	BDL(DL:0.01)	BDL(DL:0.01)	BDL(DL:0.01)

14	Fluoride as F-	mg/l	0.22-2.65	0.21-1.80	0.26-0.38	0.19-1.54	0.25-0.41	0.20-0.52
15	Hexa Chromium as Cr +6	mg/l	BDL(DL:0.01)	BDL(DL:0.01)	BDL(DL:0.01)	BDL(DL:0.01)	BDL(DL:0.01)	BDL(DL:0.01)
16	Iron as Fe	mg/l	0.96-4.9	0.17-4.9	0.18-2.0	0.59-1.0	0.17-2.1	2.1-2.2
17	Lead (as Pb)	mg/l	BDL(DL:0.005)	BDL(DL:0.005)	BDL(DL:0.005)	BDL(DL:0.005)	BDL(DL:0.005)	BDL(DL:0.005)
18	Manganese (as Mn)	mg/l	BDL(DL:0.02)	BDL(DL:0.02)	BDL(DL:0.02)	BDL(DL:0.02)	BDL(DL:0.02)	BDL(DL:0.02)
19	Mercury (as Hg)	mg/l	BDL(DL:0.0002)	BDL(DL:0.0002)	BDL(DL:0.0002)	BDL(DL:0.0002)	BDL(DL:0.0002)	BDL(DL:0.0002)
20	Nickel (as Ni)	mg/l	BDL(DL:0.01)	BDL(DL:0.01)	BDL(DL:0.01)	BDL(DL:0.01)	BDL(DL:0.01)	BDL(DL:0.01)
21	O&G	mg/l	BDL(DL:1.4)	BDL(DL:1.4)	BDL(DL:1.4)	BDL(DL:1.4)	BDL(DL:1.4)	BDL(DL:1.4)
22	Phenolic Comp	mg/l	BDL(DL:0.001)	BDL(DL:0.001)	BDL(DL:0.001)	BDL(DL:0.001)	BDL(DL:0.001)	BDL(DL:0.001)
23	Phosphate as P	mg/l	0.11-0.85	0.07-0.84	0.10-0.29	0.10-0.40	0.08-0.35	0.12-0.59
24	RFC	mg/l	BDL(DL:0.1)	BDL(DL:0.1)	BDL(DL:0.1)	BDL(DL:0.1)	BDL(DL:0.1)	BDL(DL:0.1)
25	Selenium (as Se)	mg/l	BDL(DL:0.005)	BDL(DL:0.005)	BDL(DL:0.005)	BDL(DL:0.005)	BDL(DL:0.005)	BDL(DL:0.005)
26	TKN	mg/l	BDL(DL:0.3)	BDL(DL:0.3)	BDL(DL:0.3)	BDL(DL:0.3)	BDL(DL:0.3)	BDL(DL:0.3)
27	Zinc (as Zn)	mg/l	BDL(DL:0.02)	BDL(DL:0.02)	BDL(DL:0.02)	BDL(DL:0.02)	BDL(DL:0.02)	BDL(DL:0.02)

Note: BDL: Below Detectable Limit; DL: Detectable Limit, U/S: Upstream D/S: Downstream

Source: Monitoring/ Analysis report of S.K. Mitra Private Limited and Environment Laboratory of TSM.

Summary of Treated Domestic Effluent Analysis

(Period: From April 2024 to September 2024)

S.N.	Location	Parameters in Range		
		pH	Suspended Solid in mg/l	BOD (3 days at 27°C) in mg/l
1.	Colony STP	7.40-7.85	23-36	9.0-10.7
2.	AEL STP	7.04-7.81	18-28	8.7-11.3
3.	BF-1 STP	6.91-7.85	18-32	7.8-9.8

Summary of Effluent Treatment Plant Analysis
(Period: From April 2024 to September 2024)

S.N	Location	Parameters in Range					
		pH	Suspended Solid in mg/l	Chemical Oxygen Demand in mg/l	BOD (3days at 27°C) in mg/l	Oil & Grease	Iron as Fe
1.	ETP-1 (Outlet)	7.18-8.15	13-26	19-45	3.5-7.0	<4.0	0.27-0.72
2.	ETP-2 (Outlet)	6.53-7.88	18-24	18-30	3.3-5.2	<4.0	0.10-0.60
3.	ETP-3 (Outlet)	6.76-8.02	25-41	29-37	3.7-5.2	<4.0	0.29-0.89
4.	CRM (ETP Outlet)	7.16-8.13	18-58	100-160	14.6-24.9	<4.0	0.79-2.80
5.	BF-1 (Thickener Outlet)	6.63-7.86	35-86	33-48	4.5-9.5	<4.0	-
6.	BF-2 (Thickener Outlet)	6.69-7.58	42-76	36-47	4.4-9.5	<4.0	-
7.	BOF (Thickener Outlet)	>10.0	63-78	36-51	4.5-8.0	<4.0	-

S.N.	Location	Parameters in Range						
		pH	Suspended Solid in mg/l	Chemical Oxygen Demand in mg/l	BOD (3days at 27°C) in mg/l	Oil & Grease	TCN	Phenol
8.	Coke Oven-1 (BOD-1 Outlet)	6.80-7.64	28-80	120-210	16.5-28.5	<4.0	0.12-0.18	0.76-0.87
9.	Coke Oven-2 (BOD-2 Outlet)	6.77-7.23	22-41	130-180	20.1-26.8	<4.0	0.11-0.14	0.71-0.81

Summary of ground water level monitoring report inside plant premises

(Period: From April 2024 to September 2024)

S.N.	Location with description	Sample Code	Depth of Monitoring Bore Well (m)	Longitude	Latitude	Ground Water Level (m)
1	Colony near STP	GW-1	50.29	20°49.045'	85°15.734'	4.10
2	RMHS Near Wagon Tippler	GW-2	91.44	20°47.752'	85°15.993'	2.12
3	Near Blast Furnace-2	GW-3	49.38	20°47.25'	85°15.613'	5.20
4	Near Railway bridge	GW-4	47.55	20°48.920'	85°15.858'	2.50

Ground Water Quality Analysis

S.N.	Parameter	Unit	GW-2	GW-3	GW-4	GW-6	Standard as per IS-10500-2012
1	p H	-	7.55	7.21	7.80	7.76	6.50-8.50
2	Colour	Hazen	Colourless	Colourless	Colourless	Colourless	15
3	Odour	-	Agreeable	Agreeable	Agreeable	Agreeable	-
4	T. Hardness (as CaCO3)	mg/l	278	310	244	282	300
5	Calcium as Ca	mg/l	67.33	74.54	58.52	68.14	75
6	Magnesium as Mg	mg/l	26.84	30.26	23.91	27.33	30
7	Iron as Fe	mg/l	0.13	0.20	0.16	0.15	0.3
8	Chloride as Cl	mg/l	94.30	114.15	71.96	81.89	250
9	Fluoride as F-	mg/l	0.64	0.49	0.68	0.72	1
10	Dissolved solids	mg/l	344	390	298	366	500
11	Nitrate as NO3	mg/l	4.80	6.20	4.20	7.80	45
12	Chromium as Cr+6	mg/l	0.016	0.020	0.024	0.012	0.050
13	Alkalinity as CaCO3	mg/l	78	108	66	86	200

Summary of ground water level monitoring report inside plant premises

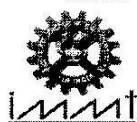
**Ground Water Level
Period: March 2024**

S.N	Location	Sample Code	Longitude	Latitude	Water Level from GL	
					(m) BGL	May'24
1	Kharagrasad	GW-01	20° 49.299'	85° 18.923'		4.2
2	Charadagadia	GW-02	20° 47.768'	85° 17.083'		7.5
3	Sibpur	GW-03	20° 46.941'	85° 14.394'		6.8
4	Kochilamada	GW-04	20° 47.541'	85° 16.802'		5.9
5	Galapada	GW-05	20° 48.142'	85° 18.600'		4.7
6	Motonga	GW-06	20° 48.143'	85° 18.599'		4.1
7	Narendrapur	GW-08	20° 49.483'	85° 15.530'		9.2
8	Khaliberena	GW-09	20° 46.946'	85° 14.396'		4.6
9	Ganthigadia	GW-10	20° 48.501'	85° 15.118'		2.2

Ground Water Quality Analysis Report of surrounding villages

March 2024

S.N.	Parameters	unit	GW-01	GW-02	GW-03	GW-04	GW-05	GW-06	GW-07	GW-08	GW-9
1	pH	-	6.76	7.11	7.59	7.16	7.05	7.29	7.52	7.57	7.54
2	Odour	-	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
3	Colour	mg/l	BDL(DL:2.0)	BDL(DL:2.0)	BDL(DL:2.0)	BDL(DL:2.0)	BDL(DL:2.0)	BDL(DL:2.0)	BDL(DL:2.0)	BDL(DL:2.0)	BDL(DL:2.0)
4	Turbidity	N.T. U	3.45	1.70	2.70	0.75	1.19	1.66	7.75	1.10	4.71
5	Total Dissolved Solids (as TDS)	mg/l	277	1268	493	503	186.0	7.29	565	484	591
6	Aluminium as Al	mg/l	BDL(DL:0.01)	BDL(DL:0.01)	BDL(DL:0.01)	BDL(DL:0.01)	BDL(DL:0.01)	BDL(DL:0.01)	BDL(DL:0.01)	BDL(DL:0.01)	BDL(DL:0.01)
7	Anionic Surface-Active Agents as (MBAS)	mg/l	BDL(DL:0.05)	BDL(DL:0.05)	BDL(DL:0.05)	BDL(DL:0.05)	BDL(DL:0.05)	BDL(DL:0.05)	BDL(DL:0.05)	BDL(DL:0.05)	BDL(DL:0.05)
8	Boron as B	mg/l	BDL(DL:0.25)	BDL(DL:0.25)	BDL(DL:0.25)	BDL(DL:0.25)	BDL(DL:0.25)	BDL(DL:0.25)	BDL(DL:0.25)	BDL(DL:0.25)	BDL(DL:0.25)
9	Calcium as Ca	mg/l	40.08	35.27	80.16	52.91	32.06	89.78	16.03	83.37	83.37
10	Chloride as Cl	mg/l	29.0	240.0	57.0	50.0	15.00	118.0	45.0	40.0	47.0
11	Copper as Cu	mg/l	0.012	0.007	0.014	0.011	0.032	0.005	0.008	0.018	0.013
12	Fluoride as F	mg/l	0.12	0.98	0.46	1.10	0.19	1.00	0.94	0.55	1.10
13	Residual Free Chlorine	mg/l	BDL(DL:0.1)	BDL(DL:0.1)	BDL(DL:0.1)	BDL(DL:0.1)	BDL(DL:0.1)	BDL(DL:0.1)	BDL(DL:0.1)	BDL(DL:0.1)	BDL(DL:0.1)
14	Iron as Fe	mg/l	0.228	0.125	0.157	0.238	0.989	0.153	0.172	0.339	0.301
15	Magnesium as Mg	mg/l	14.58	126.62	32.08	44.71	5.83	99.14	69.01	39.85	55.40
16	Manganese as Mn	mg/l	0.025	0.032	0.086	0.027	0.077	0.060	0.354	0.027	0.028
17	Mineral Oil	mg/l	BDL(DL:0.5)	BDL(DL:0.5)	BDL(DL:0.5)	BDL(DL:0.5)	BDL(DL:0.5)	BDL(DL:0.5)	BDL(DL:0.5)	BDL(DL:0.5)	BDL(DL:0.5)
18	Nitrate as NO3	mg/l	12.30	182.0	3.76	49.60	3.12	12.10	10.63	3.58	17.20
19	Phenolic Compounds as C6H5OH	mg/l	BDL(DL:0.001)	BDL(DL:0.001)	BDL(DL:0.001)	BDL(DL:0.001)	BDL(DL:0.001)	BDL(DL:0.001)	BDL(DL:0.001)	BDL(DL:0.001)	BDL(DL:0.001)
20	Selenium as Se	mg/l	BDL(DL:0.005)	BDL(DL:0.005)	BDL(DL:0.005)	BDL(DL:0.005)	BDL(DL:0.005)	BDL(DL:0.005)	BDL(DL:0.005)	BDL(DL:0.005)	BDL(DL:0.005)
21	Sulphate as SO4	mg/l	30.67	125.41	63.39	57.25	13.61	129.96	62.25	47.26	82.02
22	Total Alkalinity as CaCO3	mg/l	140	484	304	392	96	320	376	364	413
23	Total Hardness	mg/l	160	608	332	316	104	632	324	372	436



CSIR-INSTITUTE OF MINERALS & MATERIALS TECHNOLOGY.

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Environmental Chemical Laboratory
Bhubaneswar, Odisha
TEST REPORT



Issued to : TATA STEEL LIMITED, MERAMANDALI	Date : 23.09.2024
Test report No – 08/2024-007	
Source of Sample : Charadagadia	Sample receiving Date : 09.08.2024
Type of Sample : well water	Sample Analysis Date : 09.08.2024

Sl No	Characteristics	Test Method (P) of IS:3025	Requirements as per IS 10500:2012(Latest Version)		Test Result
			Acceptable limit	Permissible Limit	
1.	Turbidity, NTU	Part 10	1	5	0.78
2.	pH@Temp° C	Part 11	6.5-8.5	No relaxation	6.96@25.0
3.	Total Dissolved Solids mg/L	Part 16	500	2000	1241.0
4.	Total Hardness (as CaCO ₃),mg/L	Part 21	200	600	604.0
5.	Calcium as Ca, mg/L	Part 40	75	200	36.07
6.	Magnesium as Mg, mg/L	Part 46	30	100	124.9
7.	Alkalinity as CaCO ₃ , mg/L	Part 23	200	600	456.0
8.	Chloride as Cl, mg/L	Part 32	250	1000	180.0
9.	Sulfate as SO ₄ , mg/L	Part 24	200	400	138.13
10.	Fluoride as F, mg/L	Part 60	1.0	1.5	0.72
11.	Iron as Fe, mg/L	Part 53	0.3	No relaxation	0.168
12.	Copper as Cu, mg/L	Part 42	0.05	1.5	0.031
13.	Manganese as Mn, mg/L	APHA(PART 3111B)	0.1	0.3	0.009
14.	Zinc as Zn, mg/L	Part 49	5.0	15.0	0.107
15.	Lead as Pb, mg/L	Part 47	0.01	No relaxation	<0.001
16.	Cadmium as Cd, mg/L	Part 41	0.003	No relaxation	<0.001
17.	Chromium as Cr, mg/L	Part 52	0.05	No relaxation	<0.001
18.	Nickel as Ni, mg/l	Part 54	0.02	No relaxation	<0.001

Authorized Signatory


23.09.24

Dr. Arakshita Majhi

Senior Principal Scientist

Phone : 0674-2379236,

E mail - arakshita@immt.res.in

NOTES :

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2. This certificate shall not be reproduced wholly or in part without prior written consent of the laboratory.
3. This certificate shall not be used in any advertising media or as evidence in the court of Law without prior written consent of laboratory.
4. Latest version of test methods used as per latest specification.
5. It is recommended that the acceptable limit is to be implemented. Values in excess of those mentioned in "acceptable limit" render the water not suitable, but still may be tolerated in the absence of an alternative source but up to the limits indicate under "permissible limit" in the absence of alternative sources, above which the source will have to be rejected.

Non NABL Test report – P.T.O

'End of Test Report'



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(A Govt. of India Autonomous Body)
Environmental Chemical Laboratory
Bhubaneswar, Odisha
TEST REPORT

Issued to : TATA STEEL LIMITED, MERAMANDALI	Date : 23.09.2024
Test report No – 08/2024-007	
Source of Sample : Charadagadia	Sample receiving Date : 09.08.2024
Type of Sample : well water	Sample Analysis Date : 09.08.2024

19.	*Color, Hazen units	Part 4	5	15	<5
20.	*Odour	Part 5	Agreeable	Agreeable	Agreeable
21.	*Conductivity, $\mu\text{S}/\text{cm}$	Part 14	-	-	1804
22.	*Total Suspended Solid, mg/l	Part 17	-	-	7.0
23.	*Nitrite as NO_2 , mg/L	Part 34	-	-	0.618
24.	*Nitrate as NO_3 , mg/L	Part 34	45	No relaxation	162.0
25.	Sodium, mg/l	Part 45	-	-	167.95
26.	Potassium, mg/l	Part 45	-	-	5.55
27.	Residual Free Chlorine, mg/l	Part 26	0.2	1.0	<0.1
28.	Arsenic as As, mg/l	Part 37	0.01	No relaxation	<0.001
29.	Total Coliform by MPN	IS 1622 RA 2019	Shall not be detectable in 100ml sample	No relaxation	>542
30.	Fecal Coliform by MPN	IS 1622 RA 2019	Shall not be detectable in 100ml sample	No relaxation	>542

Authorized Signatory


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6. Testing parameters which are not set limitation has marked as "-".

'End of Test Report'



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Bhubaneswar, Odisha
TEST REPORT

Issued to : TATA STEEL LIMITED, MERAMANDALI	Date : 23.09.2024
Test report No – 08/2024-012	
Source of Sample : ETAPA	Sample receiving Date : 09.08.2024
Type of Sample : Well water	Sample Analysis Date : 09.08.2024

19.	*Color, Hazen units	Part 4	5	15	10
20.	*Odour	Part 5	Agreeable	Agreeable.	Agreeable
21.	*Conductivity, $\mu\text{S}/\text{cm}$	Part 14	-	-	1123
22.	*Total Suspended Solid, mg/l	Part 17	-	-	12.0
23.	*Nitrite as NO_2 , mg/L	Part 34	-	-	0.091
24.	*Nitrate as NO_3 , mg/L	Part 34	45	No relaxation	4.62
25.	Sodium, mg/l	Part 45	-	-	141.75
26.	Potassium, mg/l	Part 45	-	-	11.35
27.	Residual Free Chlorine, mg/l	Part 26	0.2	1.0	<0.1
28.	Arsenic as As, mg/l	Part 37	0.01	No relaxation	<0.001
29.	Total Coliform by MPN	IS 1622 RA 2019	Shall not be detectable in 100ml sample	No relaxation	212
30.	Fecal Coliform by MPN	IS 1622 RA 2019	Shall not be detectable in 100ml sample	No relaxation	9

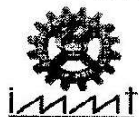
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TEST REPORT

Issued to : TATA STEEL LIMITED, MERAMANDALI	Date : 23.09.2024
Test report No – 08/2024-012	
Source of Sample : ETAPA	Sample receiving Date : 09.08.2024
Type of Sample : Well water	Sample Analysis Date : 09.08.2024

Sl No	Characteristics	Test Method (P) of IS:3025	Requirements as per IS 10500:2012(Latest Version)		Test Result
			Acceptable limit	Permissible Limit	
1.	Turbidity, NTU	Part 10	1	5	14.82
2.	pH@Temp° C	Part 11	6.5-8.5	No relaxation	7.13@25.0
3.	Total Dissolved Solids mg/L	Part 16	500	2000	655.0
4.	Total Hardness (as CaCO ₃),mg/L	Part 21	200	600	284.0
5.	Calcium as Ca, mg/L	Part 40	75	200	8.01
6.	Magnesium as Mg, mg/L	Part 46	30	100	64.15
7.	Alkalinity as CaCO ₃ , mg/L	Part 23	200	600	416.0
8.	Chloride as Cl, mg/L	Part 32	250	1000	92.0
9.	Sulfate as SO ₄ , mg/L	Part 24	200	400	1.42
10.	Fluoride as F, mg/L	Part 60	1.0	1.5	1.02
11.	Iron as Fe, mg/L	Part 53	0.3	No relaxation	0.285
12.	Copper as Cu, mg/L	Part 42	0.05	1.5	0.029
13.	Manganese as Mn, mg/L	APHA(PART 3111B)	0.1	0.3	0.479
14.	Zinc as Zn, mg/L	Part 49	5.0	15.0	0.224
15.	Lead as Pb, mg/L	Part 47	0.01	No relaxation	<0.001
16.	Cadmium as Cd, mg/L	Part 41	0.003	No relaxation	<0.001
17.	Chromium as Cr, mg/L	Part 52	0.05	No relaxation	<0.001
18.	Nickel as Ni, mg/L	Part 54	0.02	No relaxation	<0.001

Authorized Signatory

(Signature)
23.09.24

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Senior Principal Scientist

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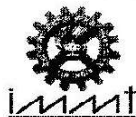
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Non NABL Test report – P.T.O

'End of Test Report'



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TEST REPORT



Issued to : TATA STEEL LIMITED, MERAMANDALI	Date : 23.09.2024
Test report No – 08/2024-011	
Source of Sample : GALPADA	Sample receiving Date : 09.08.2024
Type of Sample : Well water	Sample Analysis Date : 09.08.2024

Sl No	Characteristics	Test Method (P) of IS:3025	Requirements as per IS 10500:2012(Latest Version)		Test Result
			Acceptable limit	Permissible Limit	
1.	Turbidity, NTU	Part 10	1	5	0.59
2.	pH@Temp° C	Part 11	6.5-8.5	No relaxation	6.88@25.0
3.	Total Dissolved Solids mg/L	Part 16	500	2000	252.0
4.	Total Hardness (as CaCO ₃),mg/L	Part 21	200	600	166.0
5.	Calcium as Ca, mg/L	Part 40	75	200	54.51
6.	Magnesium as Mg, mg/L	Part 46	30	100	7.29
7.	Alkalinity as CaCO ₃ , mg/L	Part 23	200	600	158.0
8.	Chloride as Cl, mg/L	Part 32	250	1000	22.0
9.	Sulfate as SO ₄ , mg/L	Part 24	200	400	21.26
10.	Fluoride as F, mg/L	Part 60	1.0	1.5	0.22
11.	Iron as Fe, mg/L	Part 53	0.3	No relaxation	0.29
12.	Copper as Cu, mg/L	Part 42	0.05	1.5	0.025
13.	Manganese as Mn, mg/L	APHA(PART 3111B)	0.1	0.3	0.048
14.	Zinc as Zn, mg/L	Part 49	5.0	15.0	0.096
15.	Lead as Pb, mg/L	Part 47	0.01	No relaxation	<0.001
16.	Cadmium as Cd, mg/L	Part 41	0.003	No relaxation	<0.001
17.	Chromium as Cr, mg/L	Part 52	0.05	No relaxation	<0.001
18.	Nickel as Ni, mg/L	Part 54	0.02	No relaxation	<0.001

Authorized Signatory


Dr. Arakshita Majhi
Senior Principal Scientist
Phone : 0674-2379236,
E mail - arakshita@immt.res.in

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Non NABL Test report – P.T.O

'End of Test Report'



CSIR-INSTITUTE OF MINERALS & MATERIALS TECHNOLOGY.

(A Govt. of India Autonomous Body)
Environmental Chemical Laboratory
Bhubaneswar, Odisha
TEST REPORT

Issued to : TATA STEEL LIMITED, MERAMANDALI			Date : 23.09.2024		
Test report No – 08/2024-011					
Source of Sample : GALPADA			Sample receiving Date : 09.08.2024		
Type of Sample : Well water			Sample Analysis Date : 09.08.2024		
19.	*Color, Hazen units	Part 4	5	15	<5
20.	*Odour	Part 5	Agreeable	Agreeable	Agreeable
21.	*Conductivity, µs/cm	Part 14	-	-	389
22.	*Total Suspended Solid, mg/l	Part 17	-	-	3.0
23.	*Nitrite as NO ₂ ,mg/L	Part 34	-	-	0.031
24.	*Nitrate as NO ₃ , mg/L	Part 34	45	No relaxation	2.65
25.	Sodium, mg/l	Part 45	-	-	15.09
26.	Potassium, mg/l	Part 45	-	-	0.70
27.	Residual Free Chlorine, mg/l	Part 26	0.2	1.0	<0.1
28.	Arsenic as As, mg/l	Part 37	0.01	No relaxation	<0.001
29.	Total Coliform by MPN	IS 1622 RA 2019	Shall not be detectable in 100ml sample	No relaxation	>542
30.	Fecal Coliform by MPN	IS 1622 RA 2019	Shall not be detectable in 100ml sample	No relaxation	5

Authorized Signatory

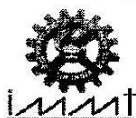

23-09-24

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TEST REPORT



Issued to : TATA STEEL LIMITED, MERAMANDALI	Date : 23.09.2024
Test report No – 08/2024-003	
Source of Sample : Ganthigadia	Sample receiving Date : 09.08.2024
Type of Sample : Well water	Sample Analysis Date : 09.08.2024

Sl No	Characteristics	Test Method (P) of IS:3025	Requirements as per IS 10500:2012(Latest Version)		Test Result
			Acceptable limit	Permissible Limit	
1.	Turbidity, NTU	Part 10	1	5	2.43
2.	pH@Temp° C	Part 11	6.5-8.5	No relaxation	7.60@25.0
3.	Total Dissolved Solids mg/L	Part 16	500	2000	473.0
4.	Total Hardness (as CaCO ₃),mg/L	Part 21	200	600	324.0
5.	Calcium as Ca, mg/L	Part 40	75	200	36.87
6.	Magnesium as Mg, mg/L	Part 46	30	100	56.38
7.	Alkalinity as CaCO ₃ , mg/L	Part 23	200	600	240.0
8.	Chloride as Cl, mg/L	Part 32	250	1000	40.0
9.	Sulfate as SO ₄ , mg/L	Part 24	200	400	115.7
10.	Fluoride as F, mg/L	Part 60	1.0	1.5	0.95
11.	Iron as Fe, mg/L	Part 53	0.3	No relaxation	0.090
12.	Copper as Cu, mg/L	Part 42	0.05	1.5	0.029
13.	Manganese as Mn, mg/L	APHA(PART 3111B)	0.1	0.3	0.018
14.	Zinc as Zn, mg/L	Part 49	5.0	15.0	0.117
15.	Lead as Pb, mg/L	Part 47	0.01	No relaxation	<0.001
16.	Cadmium as Cd, mg/L	Part 41	0.003	No relaxation	<0.001
17.	Chromium as Cr, mg/L	Part 52	0.05	No relaxation	<0.001
18.	Nickel as Ni, mg/l	Part 54	0.02	No relaxation	<0.001

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Non NABL Test report – P.T.O

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Bhubaneswar, Odisha
TEST REPORT

Issued to : TATA STEEL LIMITED, MERAMANDALI

Date : 23.09.2024

Test report No – 08/2024-003

Source of Sample : Ganthigadia

Sample receiving Date : 09.08.2024

Type of Sample : Well water

Sample Analysis Date : 09.08.2024

19.	*Color, Hazen units	Part 4	5	15	<5
20.	*Odour	Part 5	Agreeable	Agreeable	Agreeable
21.	*Conductivity, $\mu\text{S}/\text{cm}$	Part 14	-	-	773
22.	*Total Suspended Solid, mg/l	Part 17	-	-	8.0
23.	*Nitrite as NO_2 , mg/L	Part 34	-	-	0.247
24.	*Nitrate as NO_3 , mg/L	Part 34	45	No relaxation	40.5
25.	Sodium, mg/l	Part 45	-	-	29.15
26.	Potassium, mg/l	Part 45	-	-	18.66
27.	Residual Free Chlorine, mg/l	Part 26	0.2	1.0	<0.1
28.	Arsenic as As, mg/l	Part 37	0.01	No relaxation	<0.001
29.	Total Coliform by MPN	IS 1622 RA 2019	Shall not be detectable in 100ml sample	No relaxation	>542
30.	Fecal Coliform by MPN	IS 1622 RA 2019	Shall not be detectable in 100ml sample	No relaxation	21

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Environmental Chemical Laboratory
Bhubaneswar, Odisha
TEST REPORT

Issued to : TATA STEEL LIMITED, MERAMANDALI

Date : 23.09.2024

Test report No – 08/2024-004

Source of Sample : Khaliberena

Sample receiving Date : 09.08.2024

Type of Sample : Well water

Sample Analysis Date : 09.08.2024

19.	*Color, Hazen units	Part 4	5	15	<5
20.	*Odour	Part 5	Agreeable	Agreeable	Agreeable
21.	*Conductivity, $\mu\text{S}/\text{cm}$	Part 14	-	-	481
22.	*Total Suspended Solid, mg/l	Part 17	-	-	5.0
23.	*Nitrite as NO_2 , mg/L	Part 34	-	-	0.037
24.	*Nitrate as NO_3 , mg/L	Part 34	45	No relaxation	5.65
25.	Sodium, mg/l	Part 45	-	-	15.12
26.	Potassium, mg/l	Part 45	-	-	3.43
27.	Residual Free Chlorine, mg/l	Part 26	0.2	1.0	<0.1
28.	Arsenic as As, mg/l	Part 37	0.01	No relaxation	<0.001
29.	Total Coliform by MPN	IS 1622 RA 2019	Shall not be detectable in 100ml sample	No relaxation	>542
30.	Fecal Coliform by MPN	IS 1622 RA 2019	Shall not be detectable in 100ml sample	No relaxation	348

Authorized Signatory

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Environmental Chemical Laboratory
Bhubaneswar, Odisha
TEST REPORT



Issued to : TATA STEEL LIMITED, MERAMANDALI	Date : 23.09.2024
Test report No – 08/2024-004	
Source of Sample : Khaliberena	Sample receiving Date : 09.08.2024
Type of Sample : Well water	Sample Analysis Date : 09.08.2024

Sl No	Characteristics	Test Method (P) of IS:3025	Requirements as per IS 10500:2012(Latest Version)		Test Result
			Acceptable limit	Permissible Limit	
1.	Turbidity, NTU	Part 10	1	5	1.17
2.	pH@Temp° C	Part 11	6.5-8.5	No relaxation	7.22@25.0
3.	Total Dissolved Solids mg/L	Part 16	500	2000	267.0
4.	Total Hardness (as CaCO ₃),mg/L	Part 21	200	600	176.0
5.	Calcium as Ca, mg/L	Part 40	75	200	14.43
6.	Magnesium as Mg, mg/L	Part 46	30	100	34.02
7.	Alkalinity as CaCO ₃ , mg/L	Part 23	200	600	200.0
8.	Chloride as Cl, mg/L	Part 32	250	1000	18.0
9.	Sulfate as SO ₄ , mg/L	Part 24	200	400	35.98
10.	Fluoride as F, mg/L	Part 60	1.0	1.5	0.59
11.	Iron as Fe, mg/L	Part 53	0.3	No relaxation	0.053
12.	Copper as Cu, mg/L	Part 42	0.05	1.5	0.049
13.	Manganese as Mn, mg/L	APHA(PART 3111B)	0.1	0.3	0.013
14.	Zinc as Zn, mg/L	Part 49	5.0	15.0	0.128
15.	Lead as Pb, mg/L	Part 47	0.01	No relaxation	<0.001
16.	Cadmium as Cd, mg/L	Part 41	0.003	No relaxation	<0.001
17.	Chromium as Cr, mg/L	Part 52	0.05	No relaxation	<0.001
18.	Nickel as Ni, mg/l	Part 54	0.02	No relaxation	<0.001

Authorized Signatory

(Signature)
23.09.24

Dr. Arakshita Majhi

Senior Principal Scientist

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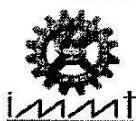
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Environmental Chemical Laboratory
Bhubaneswar, Odisha
TEST REPORT



Issued to : TATA STEEL LIMITED, MERAMANDALI	Date : 23.09.2024
Test report No – 08/2024-009	
Source of Sample : KHARAGPRASAD	Sample receiving Date : 09.08.2024
Type of Sample : Well water	Sample Analysis Date : 09.08.2024

Sl No	Characteristics	Test Method (P) of IS:3025	Requirements as per IS 10500:2012(Latest Version)		Test Result
			Acceptable limit	Permissible Limit	
1.	Turbidity, NTU	Part 10	1	5	0.56
2.	pH@Temp° C	Part 11	6.5-8.5	No relaxation	6.46@25.0
3.	Total Dissolved Solids mg/L	Part 16	500	2000	258.0
4.	Total Hardness (as CaCO ₃),mg/L	Part 21	200	600	168.0
5.	Calcium as Ca, mg/L	Part 40	75	200	46.49
6.	Magnesium as Mg, mg/L	Part 46	30	100	12.64
7.	Alkalinity as CaCO ₃ , mg/L	Part 23	200	600	140.0
8.	Chloride as Cl, mg/L	Part 32	250	1000	30.0
9.	Sulfate as SO ₄ , mg/L	Part 24	200	400	29.19
10.	Fluoride as F, mg/L	Part 60	1.0	1.5	0.21
11.	Iron as Fe, mg/L	Part 53	0.3	No relaxation	0.065
12.	Copper as Cu, mg/L	Part 42	0.05	1.5	0.031
13.	Manganese as Mn, mg/L	APHA(PART 3111B)	0.1	0.3	0.019
14.	Zinc as Zn, mg/L	Part 49	5.0	15.0	0.199
15.	Lead as Pb, mg/L	Part 47	0.01	No relaxation	<0.001
16.	Cadmium as Cd, mg/L	Part 41	0.003	No relaxation	<0.001
17.	Chromium as Cr, mg/L	Part 52	0.05	No relaxation	<0.001
18.	Nickel as Ni, mg/L	Part 54	0.02	No relaxation	<0.001

Authorized Signatory

Dr. Arakshita Majhi
23.09.24

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Bhubaneswar, Odisha
TEST REPORT

Issued to : TATA STEEL LIMITED, MERAMANDALI	Date : 23.09.2024
Test report No – 08/2024-009	
Source of Sample : KHARAGPRASAD	Sample receiving Date : 09.08.2024
Type of Sample : Well water	Sample Analysis Date : 09.08.2024

19.	*Color, Hazen units	Part 4	5	15	<5
20.	*Odour	Part 5	Agreeable	Agreeable	Agreeable
21.	*Conductivity, $\mu\text{S}/\text{cm}$	Part 14	-	-	432
22.	*Total Suspended Solid, mg/l	Part 17	-	-	3.0
23.	*Nitrite as NO_2 , mg/L	Part 34	-	-	0.217
24.	*Nitrate as NO_3 , mg/L	Part 34	45	No relaxation	20.9
25.	Sodium, mg/l	Part 45	-	-	14.59
26.	Potassium, mg/l	Part 45	-	-	14.57
27.	Residual Free Chlorine, mg/l	Part 26	0.2	1.0	<0.1
28.	Arsenic as As, mg/l	Part 37	0.01	No relaxation	<0.001
29.	Total Coliform by MPN	IS 1622 RA 2019	Shall not be detectable in 100ml sample	No relaxation	>542
30.	Fecal Coliform by MPN	IS 1622 RA 2019	Shall not be detectable in 100ml sample	No relaxation	17

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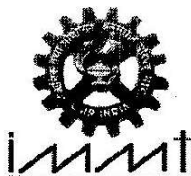
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Environmental Chemical Laboratory

Bhubaneswar, Odisha

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TC-12319

TEST REPORT

Issued to: Tata Steel Limited, Meramandali

Date : 23.09.2024

Test Report No.08/2024-001

Sample Condition: In Plastic Jar

Sample quantity: 2 Litre

Sampling Method: APHA1060B

Source of Sample :Kisinda UP & Down stream

Sample Collected on: 09.08.2024

Letter Reference :

Sample Analysed on: 09.08.2024

Sl No	Characteristics	Test Method As Per APHA	Kisinda UP- stream	Kisinda down stream	Standard as per Class C-IS 2296/CPCB/SPCB
1	pH Value	APHA 4500H+ B	7.66	7.69	6.0-9.0
2	Colour	APHA 2120 B, C	<5	<5	300 (max)
3	Electrical Conductivity, $\mu\text{S}/\text{cm}$	APHA 2510 B	447	481	--
4	Total Dissolved Solids, mg/l	APHA 2540 C	232	263	1500 (max)
5	Dissolved Oxygen, mg/l	APHA 2540 C	6.2	5.8	4 (min)
6	BOD (3) days at 27°C	APHA 5210 B	5.2	1.6	3 (max)
7	Chloride , mg/l	APHA 4500Cl- B	26.0	26.0	600 (max)
8	Fluoride as F , mg/l	APHA 4500F- C	3.1	2.6	1.5 (max)
9	Sulphates (SO_4) , mg/l	APHA 4500 SO42- E	23.1	40.2	400 (max)
10	Nitrate as NO_3 , mg/l	APH4500 NO_3 - E	5.55	3.92	50 (max)
11	Hexa Chromium as Cr^{+6} , mg/l	APHA 3500Cr B	0.016	0.024	0.05
12	Cyanide as CN , mg/l	APHA 4500 CN- C,D	<0.03	<0.03	0.05 (max)
13	Copper as Cu , mg/l	APHA 3111 B,C	0.019	0.026	1.5 (max)
14	Iron as Fe , mg/l	APHA 3500Fe, B	0.128	0.149	0.5 (max)
15	Cadmium as Cd , mg/l	APHA 3111 B,C	<0.003	<0.003	0.01 (max)
16	Selenium as Se, mg/l	APHA 3114 B	<0.001	<0.001	0.05 (max)

1 of 2

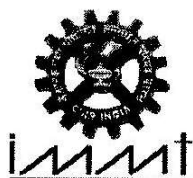
Laboratory: Acharya Vihar, Bhubaneswar, Odisha-751013. Tel: 0674-2379236, Mobile: 9760387460.

E-Mail: dir@immt.res.in.

NABL Accredited Lab/ISO/IEC 17025:2005.

Handwritten signature and date: 23/9/24
Stamp: Environmental Chemical Laboratory, CSIR-IMMT, Bhubaneswar, Odisha

CSIR-INSTITUTE OF MINERALS & MATERIALS TECHNOLOGY.



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Environmental Chemical Laboratory
Bhubaneswar, Odisha
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TEST REPORT

17	Arsenic as As, mg/l	APHA 3114 B	<0.001	<0.001	0.2 (max)
18	Lead as Pb(max), mg/l	APHA 3111 B,C	<0.001	<0.001	0.1 (max)
19	Zinc as Zn(max), mg/l	APHA 3111 B,C	0.129	0.053	15 (max)
20	Sodium Absorption Ratio	By Calculation	4.95	6.45	--
21	Total Coliform	APHA 9221 B	345	>542	5000
22	Fecal Coliform	APHA 9221 B	109	278	300
23	Manganese as Mn, mg/l		0.039	0.045	0.1
24	Sodium as Na, mg/l		23.67	31.24	
25	Potassium as K, mg/l		3.66	3.69	
26	Nickel as Ni, mg/l		<0.001	<0.001	0.02
27	Chemical Oxygen Demand, mg/l		24.0	28.0	
28	Free Ammonia, mg/l		<0.01	<0.01	0.5
29	Boron as B, mg/l		<0.01	<0.01	0.5

Authorized Signatory

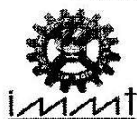

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2 of 2

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Environmental Chemical Laboratory
Bhubaneswar, Odisha
TEST REPORT



Issued to : TATA STEEL LIMITED, MERAMANDALI	Date : 23.09.2024
Test report No – 08/2024-008	
Source of Sample : KOCHILAMARA	Sample receiving Date : 09.08.2024
Type of Sample : Well water	Sample Analysis Date : 09.08.2024

Sl No	Characteristics	Test Method (P) of IS:3025	Requirements as per IS 10500:2012(Latest Version)		Test Result
			Acceptable limit	Permissible Limit	
1.	Turbidity, NTU	Part 10	1	5	0.43
2.	pH@Temp° C	Part 11	6.5-8.5	No relaxation	7.21@25.0
3.	Total Dissolved Solids mg/L	Part 16	500	2000	643.0
4.	Total Hardness (as CaCO ₃),mg/L	Part 21	200	600	420.0
5.	Calcium as Ca, mg/L	Part 40	75	200	76.15
6.	Magnesium as Mg, mg/L	Part 46	30	100	55.89
7.	Alkalinity as CaCO ₃ , mg/L	Part 23	200	600	362.0
8.	Chloride as Cl, mg/L	Part 32	250	1000	58.0
9.	Sulfate as SO ₄ , mg/L	Part 24	200	400	102.15
10.	Fluoride as F, mg/L	Part 60	1.0	1.5	0.81
11.	Iron as Fe, mg/L	Part 53	0.3	No relaxation	0.169
12.	Copper as Cu, mg/L	Part 42	0.05	1.5	0.028
13.	Manganese as Mn, mg/L	APHA(PART 3111B)	0.1	0.3	0.034
14.	Zinc as Zn, mg/L	Part 49	5.0	15.0	0.078
15.	Lead as Pb, mg/L	Part 47	0.01	No relaxation	<0.001
16.	Cadmium as Cd, mg/L	Part 41	0.003	No relaxation	<0.001
17.	Chromium as Cr, mg/L	Part 52	0.05	No relaxation	0.206
18.	Nickel as Ni, mg/l	Part 54	0.02	No relaxation	<0.001

Authorized Signatory


Dr. Arakshita Majhi

Senior Principal Scientist

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Non NABL Test report – P.T.O

'End of Test Report'



CSIR-INSTITUTE OF MINERALS & MATERIALS TECHNOLOGY.

(A Govt. of India Autonomous Body)
Environmental Chemical Laboratory
Bhubaneswar, Odisha
TEST REPORT

Issued to : TATA STEEL LIMITED, MERAMANDALI	Date : 23.09.2024
Test report No – 08/2024-008	
Source of Sample : KOCHILAMARA	Sample receiving Date : 09.08.2024
Type of Sample : Well water	Sample Analysis Date : 09.08.2024

19.	*Color, Hazen units	Part 4	5	15	<5
20.	*Odour	Part 5	Agreeable	Agreeable	Agreeable
21.	*Conductivity, $\mu\text{S}/\text{cm}$	Part 14	-	-	1052
22.	*Total Suspended Solid, mg/l	Part 17	-	-	2.0
23.	*Nitrite as NO_2 , mg/L	Part 34	-	-	0.341
24.	*Nitrate as NO_3 , mg/L	Part 34	45	No relaxation	68.0
25.	Sodium, mg/l	Part 45	-	-	78.67
26.	Potassium, mg/l	Part 45	-	-	2.14
27.	Residual Free Chlorine, mg/l	Part 26	0.2	1.0	<0.1
28.	Arsenic as As, mg/l	Part 37	0.01	No relaxation	<0.001
29.	Total Coliform by MPN	IS 1622 RA 2019	Shall not be detectable in 100ml sample	No relaxation	>542
30.	Fecal Coliform by MPN	IS 1622 RA 2019	Shall not be detectable in 100ml sample	No relaxation	7

Authorized Signatory

Dr. Arakshita Majhi
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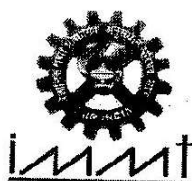
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Environmental Chemical Laboratory

Bhubaneswar, Odisha

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TEST REPORT

Issued to: Tata Steel Limited, Meramandali

Date : 23.09.2024

Test Report No.08/2024-002

Sample Condition: In Plastic Jar

Sample quantity: 2 Litre

Sampling Method: APHA1060B

Source of Sample : Lingra UP & Down stream

Sample Collected on: 09.08.2024

Letter Reference :

Sample Analysed on: 09.08.2024

Sl No	Characteristics	Test Method As Per APHA	Lingra UP- stream	Lingra down stream	Standard as per Class C-IS 2296/CPCB/SPCB
1	pH Value	APHA 4500H+ B	7.45	7.43	6.0-9.0
2	Colour	APHA 2120 B, C	<5	<5	300 (max)
3	Electrical Conductivity, $\mu\text{S}/\text{cm}$	APHA 2510 B	270	272	--
4	Total Dissolved Solids, mg/l	APHA 2540 C	145.0	151.0	1500 (max)
5	Dissolved Oxygen, mg/l	APHA 2540 C	5.4	5.8	4 (min)
6	BOD (3) days at 27°C	APHA 5210 B	1.6	2.0	3 (max)
7	Chloride, mg/l	APHA 4500Cl- B	16.0	14.0	600 (max)
8	Fluoride as F, mg/l	APHA 4500F- C	0.41	0.41	1.5 (max)
9	Sulphates (SO_4), mg/l	APHA 4500 SO42- E	5.11	21.44	400 (max)
10	Nitrate as NO_3 , mg/l	APH4500 NO3- E	2.72	2.48	50 (max)
11	Hexa Chromium as Cr^{+6} , mg/l	APHA 3500Cr B	0.012	0.014	0.05
12	Cyanide as CN, mg/l	APHA 4500 CN- C,D	<0.03	<0.03	0.05 (max)
13	Copper as Cu, mg/l	APHA 3111 B,C	0.020	0.019	1.5 (max)
14	Iron as Fe, mg/l	APHA 3500Fe, B	0.369	0.702	0.5 (max)
15	Cadmium as Cd, mg/l	APHA 3111 B,C	<0.001	<0.001	0.01 (max)

1 of 2

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E-Mail: dir@immt.res.in.

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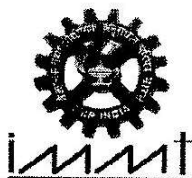
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Environmental Chemical Laboratory

Bhubaneswar, Odisha

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TEST REPORT

16	Selenium as Se, mg/l	APHA 3114 B	<0.001	<0.001	0.05 (max)
17	Arsenic as As, mg/l	APHA 3114 B	<0.001	<0.001	0.2 (max)
18	Lead as Pb(max), mg/l	APHA 3111 B,C	<0.001	<0.001	0.1 (max)
19	Zinc as Zn(max), mg/l	APHA 3111 B,C	0.063	0.081	15 (max)
20	Sodium Absorption Ratio	By Calculation	3.88	3.56	--
21	Total Coliform (CFU/ml)	APHA 9221 B	542	>542	5000
22	Fecal Coliform (CFU/ml)	APHA 9221 B	348	120	300
23	Manganese as Mn, mg/l		0.083	0.064	0.1
24	Sodium as Na, mg/l		15.12	14.69	
25	Potassium as K, mg/l		3.43	3.37	
26	Nickel as Ni, mg/l		<0.001	<0.001	0.02
27	Chemical Oxygen Demand, mg/l		12.0	16.0	
28	Free Ammonia, mg/l		<0.01	<0.01	0.5
29	Boron as B, mg/l		<0.01	<0.01	0.5

Authorized Signatory

(Signature)
23.04.24

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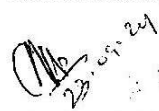


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Environmental Chemical Laboratory
Bhubaneswar, Odisha
TEST REPORT

Issued to : TATA STEEL LIMITED, MERAMANDALI				Date : 23.09.2024	
Test report No – 08/2024-010					
Source of Sample : MOTANGA				Sample receiving Date : 09.08.2024	
Type of Sample : Well water				Sample Analysis Date : 09.08.2024	
19.	*Color, Hazen units	Part 4	5	15	<5
20.	*Odour	Part 5	Agreeable	Agreeable	Agreeable
21.	*Conductivity, µs/cm	Part 14	-	-	1094
22.	*Total Suspended Solid, mg/l	Part 17	-	-	5.0
23.	*Nitrite as NO ₂ ,mg/L	Part 34	-	-	0.102
24.	*Nitrate as NO ₃ , mg/L	Part 34	45	No relaxation	25.6
25.	Sodium, mg/l	Part 45	-	-	77.71
26.	Potassium, mg/l	Part 45	-	-	2.99
27.	Residual Free Chlorine, mg/l	Part 26	0.2	1.0	<0.1
28.	Arsenic as As, mg/l	Part 37	0.01	No relaxation	<0.001
29.	Total Coliform by MPN	IS 1622 RA 2019	Shall not be detectable in 100ml sample	No relaxation	221
30.	Fecal Coliform by MPN	IS 1622 RA 2019	Shall not be detectable in 100ml sample	No relaxation	79

Authorized Signatory


23.09.24

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Bhubaneswar, Odisha



TEST REPORT

Issued to : TATA STEEL LIMITED, MERAMANDALI	Date : 23.09.2024
Test report No – 08/2024-010	
Source of Sample : MOTANGA	Sample receiving Date : 09.08.2024
Type of Sample : Well water	Sample Analysis Date : 09.08.2024

Sl No	Characteristics	Test Method (P) of IS:3025	Requirements as per IS 10500:2012(Latest Version)		Test Result
			Acceptable limit	Permissible Limit	
1.	Turbidity, NTU	Part 10	1	5	0.73
2.	pH@Temp° C	Part 11	6.5-8.5	No relaxation	6.97@25.0
3.	Total Dissolved Solids mg/L	Part 16	500	2000	697.0
4.	Total Hardness (as CaCO ₃),mg/L	Part 21	200	600	418.0
5.	Calcium as Ca, mg/L	Part 40	75	200	84.17
6.	Magnesium as Mg, mg/L	Part 46	30	100	50.54
7.	Alkalinity as CaCO ₃ , mg/L	Part 23	200	600	326.0
8.	Chloride as Cl, mg/L	Part 32	250	1000	70.0
9.	Sulfate as SO ₄ , mg/L	Part 24	200	400	139.13
10.	Fluoride as F, mg/L	Part 60	1.0	1.5	0.80
11.	Iron as Fe, mg/L	Part 53	0.3	No relaxation	0.068
12.	Copper as Cu, mg/L	Part 42	0.05	1.5	0.026
13.	Manganese as Mn, mg/L	APHA(PART 3111B)	0.1	0.3	0.014
14.	Zinc as Zn, mg/L	Part 49	5.0	15.0	0.197
15.	Lead as Pb, mg/L	Part 47	0.01	No relaxation	<0.001
16.	Cadmium as Cd, mg/L	Part 41	0.003	No relaxation	<0.001
17.	Chromium as Cr, mg/L	Part 52	0.05	No relaxation	<0.001
18.	Nickel as Ni, mg/l	Part 54	0.02	No relaxation	<0.001

Authorized Signatory

(Signature)
23.09.24

Dr. Arakshita Majhi

Senior Principal Scientist

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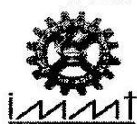
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Non NABL Test report – P.T.O

'End of Test Report'



CSIR-INSTITUTE OF MINERALS & MATERIALS TECHNOLOGY.

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Environmental Chemical Laboratory
Bhubaneswar, Odisha
TEST REPORT



Issued to : TATA STEEL LIMITED, MERAMANDALI	Date : 23.09.2024
Test report No – 08/2024-013	
Source of Sample : NARENDRAPUR	Sample receiving Date : 09.08.2024
Type of Sample : Well water	Sample Analysis Date : 09.08.2024

Sl No	Characteristics	Test Method (P) of IS:3025	Requirements as per IS 10500:2012(Latest Version)		Test Result
			Acceptable limit	Permissible Limit	
1.	Turbidity, NTU	Part 10	1	5	4.08
2.	pH@Temp° C	Part 11	6.5-8.5	No relaxation	7.22@25.0
3.	Total Dissolved Solids mg/L	Part 16	500	2000	535.0
4.	Total Hardness (as CaCO ₃),mg/L	Part 21	200	600	318.0
5.	Calcium as Ca, mg/L	Part 40	75	200	11.22
6.	Magnesium as Mg, mg/L	Part 46	30	100	70.47
7.	Alkalinity as CaCO ₃ , mg/L	Part 23	200	600	264.0
8.	Chloride as Cl, mg/L	Part 32	250	1000	48.0
9.	Sulfate as SO ₄ , mg/L	Part 24	200	400	79.51
10.	Fluoride as F, mg/L	Part 60	1.0	1.5	0.68
11.	Iron as Fe, mg/L	Part 53	0.3	No relaxation	0.027
12.	Copper as Cu, mg/L	Part 42	0.05	1.5	0.027
13.	Manganese as Mn, mg/L	APHA(PART 3111B)	0.1	0.3	0.008
14.	Zinc as Zn, mg/L	Part 49	5.0	15.0	0.086
15.	Lead as Pb, mg/L	Part 47	0.01	No relaxation	<0.001
16.	Cadmium as Cd, mg/L	Part 41	0.003	No relaxation	<0.001
17.	Chromium as Cr, mg/L	Part 52	0.05	No relaxation	<0.001
18.	Nickel as Ni, mg/l	Part 54	0.02	No relaxation	<0.001

Authorized Signatory

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Environmental Chemical Laboratory
Bhubaneswar, Odisha
TEST REPORT

Issued to : TATA STEEL LIMITED, MERAMANDALI

Date : 23.09.2024

Test report No – 08/2024-013

Source of Sample : NARENDRAPUR

Sample receiving Date : 09.08.2024

Type of Sample : Well water

Sample Analysis Date : 09.08.2024

19.	*Color, Hazen units	Part 4	5	15	<5
20.	*Odour	Part 5	Agreeable	Agreeable	Agreeable
21.	*Conductivity, $\mu\text{S}/\text{cm}$	Part 14	-	-	842
22.	*Total Suspended Solid, mg/l	Part 17	-	-	10.0
23.	*Nitrite as NO_2 , mg/L	Part 34	-	-	0.267
24.	*Nitrate as NO_3 , mg/L	Part 34	45	No relaxation	51.9
25.	Sodium, mg/l	Part 45	-	-	55.50
26.	Potassium, mg/l	Part 45	-	-	6.39
27.	Residual Free Chlorine, mg/l	Part 26	0.2	1.0	<0.1
28.	Arsenic as As, mg/l	Part 37	0.01	No relaxation	<0.001
29.	Total Coliform by MPN	IS 1622 RA 2019	Shall not be detectable in 100ml sample	No relaxation	348
30.	Fecal Coliform by MPN	IS 1622 RA 2019	Shall not be detectable in 100ml sample	No relaxation	11

Authorized Signatory

(Signature)
23.09.24

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Environmental Chemical Laboratory
Bhubaneswar, Odisha
TEST REPORT



Issued to : TATA STEEL LIMITED, MERAMANDALI	Date : 23.09.2024
Test report No – 08/2024-005	
Source of Sample : SARAPA	Sample receiving Date : 09.08.2024
Type of Sample : Well water	Sample Analysis Date : 09.08.2024

Sl No	Characteristics	Test Method (P) of IS:3025	Requirements as per IS 10500:2012(Latest Version)		Test Result
			Acceptable limit	Permissible Limit	
1.	Turbidity, NTU	Part 10	1	5	0.49
2.	pH@Temp° C	Part 11	6.5-8.5	No relaxation	7.48@25.0
3.	Total Dissolved Solids mg/L	Part 16	500	2000	505.0
4.	Total Hardness (as CaCO ₃),mg/L	Part 21	200	600	390.0
5.	Calcium as Ca, mg/L	Part 40	75	200	79.36
6.	Magnesium as Mg, mg/L	Part 46	30	100	46.66
7.	Alkalinity as CaCO ₃ , mg/L	Part 23	200	600	304.0
8.	Chloride as Cl, mg/L	Part 32	250	1000	42.0
9.	Sulfate as SO ₄ , mg/L	Part 24	200	400	92.59
10.	Fluoride as F, mg/L	Part 60	1.0	1.5	0.55
11.	Iron as Fe, mg/L	Part 53	0.3	No relaxation	0.204
12.	Copper as Cu, mg/L	Part 42	0.05	1.5	0.024
13.	Manganese as Mn, mg/L	APHA(PART 3111B)	0.1	0.3	0.018
14.	Zinc as Zn, mg/L	Part 49	5.0	15.0	0.098
15.	Lead as Pb, mg/L	Part 47	0.01	No relaxation	<0.001
16.	Cadmium as Cd, mg/L	Part 41	0.003	No relaxation	<0.001
17.	Chromium as Cr, mg/L	Part 52	0.05	No relaxation	0.153
18.	Nickel as Ni, mg/l	Part 54	0.02	No relaxation	<0.001

Authorized Signatory

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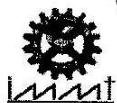
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Non NABL Test report – P.T.O

'End of Test Report'



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Environmental Chemical Laboratory
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TEST REPORT

Issued to : TATA STEEL LIMITED, MERAMANDALI			Date : 23.09.2024		
Test report No – 08/2024-005					
Source of Sample : SARAPA			Sample receiving Date : 09.08.2024		
Type of Sample : Well water			Sample Analysis Date : 09.08.2024		
19.	*Color, Hazen units	Part 4	5	15	<5
20.	*Odour	Part 5	Agreeable	Agreeable	Agreeable
21.	*Conductivity, µs/cm	Part 14	-	-	790
22.	*Total Suspended Solid, mg/l	Part 17	-	-	6.0
23.	*Nitrite as NO ₂ ,mg/L	Part 34	-	-	0.079
24.	*Nitrate as NO ₃ , mg/L	Part 34	45	No relaxation	4.39
25.	Sodium, mg/l	Part 45	-	-	20.54
26.	Potassium, mg/l	Part 45	-	-	1.63
27.	Residual Free Chlorine, mg/l	Part 26	0.2	1.0	<0.1
28.	Arsenic as As, mg/l	Part 37	0.01	No relaxation	<0.001
29.	Total Coliform by MPN	IS 1622 RA 2019	Shall not be detectable in 100ml sample	No relaxation	542
30.	Fecal Coliform by MPN	IS 1622 RA 2019	Shall not be detectable in 100ml sample	No relaxation	< 2

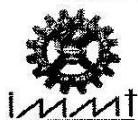
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Bhubaneswar, Odisha
TEST REPORT



Issued to : TATA STEEL LIMITED, MERAMANDALI	Date : 23.09.2024
Test report No – 08/2024-006	
Source of Sample : SIBAPUR	Sample receiving Date : 09.08.2024
Type of Sample : Well water	Sample Analysis Date : 09.08.2024

Sl No	Characteristics	Test Method (P) of IS:3025	Requirements as per IS 10500:2012(Latest Version)		Test Result
			Acceptable limit	Permissible Limit	
1.	Turbidity, NTU	Part 10	1	5	2.03
2.	pH@Temp° C	Part 11	6.5-8.5	No relaxation	7.42@25.0
3.	Total Dissolved Solids mg/L	Part 16	500	2000	240.0
4.	Total Hardness (as CaCO ₃),mg/L	Part 21	200	600	154.0
5.	Calcium as Ca, mg/L	Part 40	75	200	52.10
6.	Magnesium as Mg, mg/L	Part 46	30	100	5.83
7.	Alkalinity as CaCO ₃ , mg/L	Part 23	200	600	126.0
8.	Chloride as Cl, mg/L	Part 32	250	1000	24.0
9.	Sulfate as SO ₄ , mg/L	Part 24	200	400	33.46
10.	Fluoride as F, mg/L	Part 60	1.0	1.5	0.64
11.	Iron as Fe, mg/L	Part 53	0.3	No relaxation	0.113
12.	Copper as Cu, mg/L	Part 42	0.05	1.5	0.039
13.	Manganese as Mn, mg/L	APHA(PART 3111B)	0.1	0.3	0.019
14.	Zinc as Zn, mg/L	Part 49	5.0	15.0	0.277
15.	Lead as Pb, mg/L	Part 47	0.01	No relaxation	<0.001
16.	Cadmium as Cd, mg/L	Part 41	0.003	No relaxation	<0.001
17.	Chromium as Cr, mg/L	Part 52	0.05	No relaxation	<0.001
18.	Nickel as Ni, mg/l	Part 54	0.02	No relaxation	<0.001

Authorized Signatory

(Signature)
23.09.24

Dr. Arakshita Majhi
Senior Principal Scientist
Phone : 0674-2379236,
E mail - arakshita@immt.res.in

NOTES :

- The sample is drawn by EC Laboratory & result relates to the sample tested.
- This certificate shall not be reproduced wholly or in part without prior written consent of the laboratory.
- This certificate shall not be used in any advertising media or as evidence in the court of Law without prior written consent of laboratory.
- Latest version of test methods used as per latest specification.
- It is recommended that the acceptable limit is to be implemented. Values in excess of those mentioned in "acceptable limit" render the water not suitable, but still may be tolerated in the absence of an alternative source but up to the limits indicate under "permissible limit" in the absence of alternative sources, above which the source will have to be rejected.

Non NABL Test report – P.T.O

'End of Test Report'



CSIR-INSTITUTE OF MINERALS & MATERIALS TECHNOLOGY.

(A Govt. of India Autonomous Body)
Environmental Chemical Laboratory
Bhubaneswar, Odisha
TEST REPORT

Issued to : TATA STEEL LIMITED, MERAMANDALI	Date : 23.09.2024
Test report No – 08/2024-006	
Source of Sample : SIBAPUR	Sample receiving Date : 09.08.2024
Type of Sample : Well water	Sample Analysis Date : 09.08.2024

19.	*Color, Hazen units	Part 4	5	15	<5
20.	*Odour	Part 5	Agreeable	Agreeable	Agreeable
21.	*Conductivity, $\mu\text{S}/\text{cm}$	Part 14	-	-	415
22.	*Total Suspended Solid, mg/l	Part 17	-	-	8.0
23.	*Nitrite as NO_2 , mg/L	Part 34	-	-	0.148
24.	*Nitrate as NO_3 , mg/L	Part 34	45	No relaxation	25.30
25.	Sodium, mg/l	Part 45	-	-	16.38
26.	Potassium, mg/l	Part 45	-	-	13.85
27.	Residual Free Chlorine, mg/l	Part 26	0.2	1.0	<0.1
28.	Arsenic as As, mg/l	Part 37	0.01	No relaxation	<0.001
29.	Total Coliform by MPN	IS 1622 RA 2019	Shall not be detectable in 100ml sample	No relaxation	>542
30.	Fecal Coliform by MPN	IS 1622 RA 2019	Shall not be detectable in 100ml sample	No relaxation	32

Authorized Signatory

Dr. Arakshita Majhi
Senior Principal Scientist
Phone : 0674-2379236,
E mail - arakshita@immt.res.in

NOTES :

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3. This certificate shall not be used in any advertising media or as evidence in the court of Law without prior written consent of laboratory.
4. Latest version of test methods used as per latest specification.
5. It is recommended that the acceptable limit is to be implemented. Values in excess of those mentioned in "acceptable limit" render the water not suitable, but still may be tolerated in the absence of an alternative source but up to the limits indicate under "permissible limit" in the absence of alternative sources, above which the source will have to be rejected.
6. Testing parameters which are not set limitation has marked as "-".

'End of Test Report'

CSR Expenditure and Activities**(Around Tata Steel Ltd, Meramandali & TSM-CPP(AEL))****Period: From April'24 to October'24**

PROGRAM HEAD	Expenditure in Lakh	MAJOR INTERVENTIONS/REMARKS
HEALTH	62.07	Public Health Unit; Rishta; Project Drishti
Agriculture	57.18	Agricultural activity
Environment	2.91	Plantation at Nuahata, Odapada
Skill Development	6.89	Disability program
DRINKING WATER	61.72	Installation of tubewells; supply of drinking water (Kusupanga, Krunti, Narendrapur, Talbahal)
EDUCATION	307.98	School infrastructure; Education project: Green school project
SPORTS	4.86	Marathon
Miscellaneous	189.25	Volunteerism, Safety, Common expenses
TOTAL	692.86	

Environment Laboratory
TATA Steel Meramandali, Odisha

Ref.No.EMD/LAB/2024/0002

S. N	Name of the unit	Location	April	May	June	July	August	September
			Leq					
1	BF-2 Cast House	Near Motor I D fan 1	82.9	82.8	82.4	83.2	82.1	83.6
		Near Motor I D fan-2	84.8	86.3	85.1	85.1	85.3	85.7
		Near Motor I D fan-3	85.2	85.2	84.9	84.8	85	85.2
		Near Cooling tower area	80.3	80.9	80.8	80.5	80.5	79.8
		Near Fire Pump House Building area	90.5	90.1	90.9	90.7	92.1	90.9
		PCI-1	82.2	83	80.8	82.2	83.5	84.1
		PCI-2	86.1	SD	83	84.8	82	83
		CA Fan-1,2,3	90.1	87.9	87.8	87.9	86.9	87.4
		Control room	59.8	60.1	60.5	60	58.1	60
		Near B F-2 Furnace area	81.1	80.8	79.8	80.5	81.4	79.9
2	BF-2 Stock House	Near ID fan 1	84.2	84.8	84.9	84.4	83.7	84.1
		Near ID fan 2	84.6	85	84.7	85.1	84.9	85.2
		Control room office	59.3	58.9	59.3	59.2	59.4	61.8
3	Lime Plant	Near De dusting-2 ID fan	84.4	85.1	84.4	84.1	81.8	82.7
		Near Blower room area	92.1	91.6	87.5	89.7	93.2	93.6
		Near Cooling tower area	81.6	82.9	81.1	82	80.3	79.4
		Near De dusting-3 ID fan	82.5	82.1	83.2	82.8	81.6	82.8
		Near De dusting-4 ID fan	84.8	84	SD	SD	SD	SD
		Near Pump House area	86.1	86.8	86.4	85.6	85.4	85.9
		Screening House 01	SD	84.3	85.3	85.7	80.3	SD
		Screening House 02	SD	88.3	87.7	87.8	SD	85.3
		Screening House 03	85	84.9	92.7	90	SD	86.9
		Screening House 04	SD	86.9	90.2	89.5	SD	87.6
		Screening House 05	84.2	SD	SD	SD	SD	87.8
		Delivery Building	83.5	83.1	82.9	83.2	82.2	81.8
		Near Outside Office area	82.7	79.3	77.7	76.8	77.9	76.7
		Gas Boosting Station	91.5	93.8	88.2	89.1	86.8	87.1
		Inside office building	58.8	61.4	60	60.4	62.1	62.5
4	BF PP-1 Boiler-01	Near ID Fan -1	SD	82.9	SD	SD	SD	SD
		Near ID Fan -2	82.5	84.9	SD	81.1	84.6	83
		Near FD fan	89.3	90.8	SD	89.7	90	87.2
		Near Boiler-1 Area	81.1	83.4	SD	83	84.8	83.3
5	BF PP-1 Boiler-02	Near ID Fan -1	SD	85.2	86	SD	85.5	SD
		Near ID Fan-2	SD	87.4	86.4	SD	87.4	SD
		Near FD fan	SD	93.5	93.8	SD	95.7	SD
		Near Boiler-2 Area	SD	85.8	85.3	SD	84.7	SD
6	BF PP-1 Boiler-03	Near ID Fan -1	84.5	SD	85.5	86.2	SD	85.6
		Near ID Fan -2	86.8	SD	87.5	87.8	SD	86.7
		Near FD fan	95	SD	94.2	96.4	SD	96.7
		Near Blower (9 m)	89.1	91.4	90.4	91.3	90.9	90.8
		TG Floor (8.5 m)	87.5	88.5	89.3	87.5	87.2	86.8
		Near Boiler-3 Area	84.9	SD	84.1	85.3	SD	84.1
		Near Control room office	67.2	60.9	61.2	63.4	63.5	63.8
7	Gas fired boiler 60 TPH Area	Near ID fan -1	80.1	80.5	80.2	80.5	79.6	80.8
		Near ID fan -2	80.5	81.3	80.3	80.7	79	81.1
		Near FD fan 1	82	82.4	81.6	82	82.6	82.7
		Near FD fan 2	82.3	82.1	81.8	81.8	80.1	81.8
		60 TPH Blower feed water pump	83.9	84	83.8	83.9	83.9	83.7
		Near Boiler area	81.4	82.7	81.4	81.6	80.2	80

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			April	May	June	July	August	September
S. N	Name of the unit	Location						
8	Gas fired boiler 125 TPH Area	Near ID fan -1	82.1	82.5	81.5	83	84	SD
		Near ID fan -2	84.8	84.3	84.8	84.8	83.9	SD
		Near FD fan -1	87.6	87.9	88.4	87.3	88.9	SD
		Near FD fan -2	88.1	88.1	88.8	88.4	87	SD
		Near Boiler area	82.8	81.6	81.4	82	83.6	SD
		125 TPH Blower feed Water pump	86.5	85.1	86.5	85.1	87.7	SD
9	Gas fired boiler 250 TPH Area	Near ID fan -1 area	80	SD	SD	82.5	80.8	81.2
		Near ID fan -2 area	80.5	SD	SD	82.7	81.7	81.6
		Near FD fan -1 area	82.5	SD	SD	82.3	82.9	83.7
		Near FD fan -2 area	83.6	SD	SD	84.5	83.1	82.3
		Near Boiler area	81.7	SD	SD	84.7	82.2	80.9
		250 TPH Blower feed water pump	86.5	SD	SD	86.2	87.9	85.1
		Office and Control Room	60.1	58.4	60	59.3	62.1	59.6
10	DRI	KILN NO-1						
		Near Cooling tower area	SD	78.5	80.1	79.8	80.2	77.6
		Near De-dusting 01 ID Fan	SD	85.8	85.3	85.1	85.7	85.3
		Near 1& 2 control room office	60.4	61.2	58.5	62.1	59.3	63.1
		Near Cooler area	SD	80.6	80.4	80.3	80.1	78.2
		Near Lobe Compressor room	SD	87.3	85.8	85.3	85.1	85.9
		KILN NO-2						
		Near Cooling tower area	SD	81.2	SD	80.2	SD	SD
		Near Cooler area	SD	79.5	SD	79.1	SD	SD
		Near Lobe Compressor room	SD	84.5	SD	84.9	SD	SD
		KILN NO-3						
		Near Cooling tower area	79.7	SD	SD	SD	81.4	80
		Near De-dusting 02 ID Fan	85.8	SD	SD	SD	86	86.8
		Near 3& 4control room office	61.7	61.8	60	60.9	58.1	60.4
		Near Cooler area	79.6	SD	SD	SD	80.5	81
		Near Lobe Compressor room	86.4	SD	SD	SD	85	84.9
		KILN NO-4						
		Near Cooling tower area	80.4	SD	SD	SD	80	78.9
		Near Cooler area	80.9	SD	SD	SD	80.7	79.5
		Near Lobe Compressor room	84.2	SD	SD	SD	84.9	83.4
		KILN NO-5						
		Near Cooling tower area	79.6	81.9	SD	80	81.5	79.6
		Near De-dusting 03 ID Fan	85.6	87.8	SD	85.4	85.8	86.3
		Near 5& 6 control room office	59.1	62.1	59.4	60.2	58.9	60.6
		Near Cooler area	79.9	79.5	SD	80.1	81.5	80.1
		Near Lobe Compressor room	84.4	86.1	SD	85.3	85.1	85.8
		KILN NO-6						
		Near Cooling tower area	79.8	SD	SD	SD	80.1	81.1
		Near Cooler area	80.2	SD	SD	SD	80.4	80.4

Environment Laboratory
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		Near Lobe Compressor room	87.8	SD	SD	SD	85.9	84
		KILN NO-7						
		Near Cooling tower area	79.6	SD	SD	SD	SD	79.8
		Near De-dusting 04 ID Fan	85.9	86.7	SD	85.6	85.9	86.3
		Near 7& 8 control room office	58.2	59.7	58.4	61.3	58.1	59.4
		Near Cooler area	80.1	SD	SD	SD	SD	80
		Near Lobe Compressor room	85.3	SD	SD	SD	SD	85.2
		KILN NO-8						
		Near Cooling tower area	SD	79.9	SD	80.4	81.5	79.3
		Near Cooler area	SD	81.4	SD	81	80.4	79.8
		Near Lobe Compressor room	SD	82.2	SD	86.2	86.1	84.5
		KILN NO-9						
		Near Cooling tower area	78.5	80.3	79.4	80.3	SD	SD
		Near 9&10 control room office	57.9	60.6	60	59.3	59.7	59.7
		Near Cooler area	80.6	81.1	80	80.2	SD	SD
		Near Lobe Compressor room	84.1	84.2	84.9	85.2	SD	SD
		KILN NO-10						
		Near Cooling tower area	78.2	80.8	81.3	79.3	81.3	80.6
		Near De-dusting 05 ID Fan	85.8	85.7	86.2	86.1	85.8	85.9
		Near Cooler area	79	79.4	81.1	80.8	79.3	80.5
		Near Lobe Compressor room	83.5	81.9	84.9	85.4	85.8	84.3
11	110 MW Power Plant	Boiler-01						
		ID Fan	SD	81.6	83.4	82.3	82.4	82
		Near Boiler area	SD	83.7	84.5	84.8	84.8	84.4
		Boiler-02						
		ID Fan	82.9	SD	SD	81.5	SD	SD
		Near Boiler area	84.8	SD	SD	83.8	SD	SD
		Boiler-03						
		ID Fan	81.8	83.3	SD	82.4	80.3	82.3
		Near Boiler area	83.5	83.6	SD	83.5	81.3	83.7
		Boiler-04						
		ID Fan	82.1	82.1	SD	83.9	81.1	81.6
		Near Boiler area	83.2	83.8	SD	84.3	83.1	82.5
		Boiler-5						
		ID Fan	85.5	85.1	SD	85.4	84.7	85.4
		Near Boiler area	82.3	83.4	SD	82.3	83.2	82.1
		Boiler-6						
		ID Fan	85.9	SD	SD	85.8	SD	85.8
		Near Boiler area	81.5	SD	SD	84.5	SD	83.5
		Boiler-7						
		ID Fan	SD	SD	SD	SD	85.6	84.9
		Near Boiler area	SD	SD	SD	SD	82.8	83
		Boiler-8						
		ID Fan	SD	84.8	SD	84.8	85	84.6
		Near Boiler area	SD	81.6	SD	84.3	81.7	81.7
		Boiler-9						
		ID Fan	83.6	84.8	84.8	84.9	SD	SD
		Near Boiler area	81.4	82.5	82.5	82.8	SD	SD
		Boiler-10						
		ID Fan	86.2	85.8	85	85.6	85.9	86.3
		Near Boiler area	82.1	81	81.8	83.2	80.5	82.5

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		AFBC Boiler Area	SD	SD	SD	SD	SD	SD
		Near 33 TG MW	SD	SD	85.3	85.4	SD	SD
		Near 77 TG MW	87.1	87.1	SD	86.5	86.3	85.5
12	BF-1 Cast House	Near Bag House Motor I D fan-1	85.2	85.4	85.6	85.4	SD	85.3
		Near Bag House Motor I D fan-2	85.6	SD	85.8	85.5	85.4	85.7
		Near Bag House Motor I D fan-3	SD	85.9	86.1	85.1	85.1	86
		Near Bag House Motor I D fan-4	86.1	85.8	SD	84.9	84.9	85.2
		Near secondary Cooling tower area	80.8	80.6	82.1	81.2	81	81.4
		Near Main Pump House Building area	86.9	86.2	87.5	88.4	88.8	87.9
		Near PCI building	SD	89.3	87.3	SD	SD	85.8
		Near B F-1 Furnace	81.9	80.2	80.7	79.3	80	80.2
13	BF-1 Stock House	Near Bag House Motor I D fan-1	SD	SD	SD	SD	SD	SD
		Near Bag House Motor I D fan-2	85.4	85.8	86.2	85	85.3	85.8
		BF-1 Office	60.4	59.8	60	59.3	59.2	58.4
		Near Fines building Area	80.2	81.1	82	82	80.5	82.3
14	CRM	Near CRM Mill Complex Area	81	79.2	81.1		80.8	83.9
		Near Fire water pump house area	85.2	86.1	85.3		85.4	85
		Near T.L.L	86.2	85.6	SD		84.9	87.8
		Near A.R.P building	SD	86.1	85		84.6	85.2
		Near Air Receiver Tank area	96	95.8	92.1		94.1	89.7
		Near ETP area	83.3	84.8	84.8		82.3	80.2
		Near GP-1 Zinc Pot	SD	87.7	84.9		SD	SD
		Near GP-2 Zinc Pot	87.5	88.9	85.5		84.9	SD
		Near GP-3 Zinc Pot	SD	85.4	85.1		86.1	88
		Colour Coating Line	84.3	84.8	83.8		85	82.8
		Mill-1	86.8	86.3	85		86.7	86.4
		Mill-2	86.2	85.8	87.1		87.7	SD
		Mill-3	85.6	85.3	85.2		SD	85.5
		CRM Plant Office	60.4	60.1	59		58.5	58.4
		ECL	SD	SD	84.4		88.1	87.2
		CRCA	85.6	85.2	83.9		84.7	SD
		SPM	85.3	85.7	88.6		87.9	88.1
15	Sinter Plant-1	RGM	81	82.3	82.6		SD	82.4
		Near Main ID fan 1	82.1	82.9			91	84.8
		Near Cooler fan area 1	85.6	83.7			85.1	82.6
		Near Cooler fan area-2	85.8	84			84.6	84.6
		Near Cooler fan area-3	85	83.9			82.9	84
		Near Cooler fan area-4	84.8	85.1			85.3	85
		Near 85m2 ESP ID Fan	87.1	86			86.3	85.9
		Near 110m2 ESP ID fan	89	86.5			86.9	86.3
		Near Pump House Building area	80	80.6			81.1	82
		Near bag filter ID fan	88.8	88.1			87.1	86.9
		Product Screen	87.4	85.8			85.9	86.5
		Flux and Coke Crushing House	82.8	81.4			80.3	81.4
		Sinter Machine 15 mtr	84.5	84.3			85.8	85.1
		9 m office room	58.4	58.8			57.5	60
		15 m office	59.8	60.1			57.3	60.4
		19 m office	70.6	59.3			58.1	60.5
		Store area	78.4	79.4			77.5	81.6

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		Electrical office	67.4	61.5			61.7	59.8
		Proportioning Building	80.2	81.9			80.7	80.7
		Mixing House	81.1	82			81.3	81.6
		Sinter machine 19 mtr	85.4	85.1			81.9	85.3
16	Coke Oven-1	Near Stone Cutter Building area	84.8	84.8	84.2	84.8	84.8	83.5
		Near M.H.S I.D fan	84.5	84.3	84.6	84.6	84.6	84.9
		Near Coal Pushing & Charging I D Fan Area	SD	SD	SD	81.4	SD	SD
		Near Battery-1 area	80	80	81.4	80.5	SD	81.5
		Near Battery-2 area	81.2	80.2	80.9	81.1	81	80.3
		Control room office	60.1	60.2	59.5	60.3	59.6	59.5
		Laboratory	58.8	58	58.4	59	59.1	58
17	Sinter Plant-02	Near Main ESP ID	83.9	82.9	81.7	83.9	84.8	84.5
		Near PD ESP ID fan	81.5	82.1	80.2	82	81.5	83.1
		Near Cooler fan -1	86.1	87.1	86.5	86.7	86.2	86.3
		Near Cooler fan -2	85.9	86.1	85.7	86.3	85.8	76.7
		Near Cooler fan -3	86.2	87.6	86.3	87	86	76.3
		Control Room Area	60.2	61.2	60.4	58.9	58.3	58.2
		ESP Area	79.9	80.2	80.5	81.2	80.4	81.3
18	Sinter Plant-03	Near M. N. D Area	80	79.9	81.1	80.3	80.1	81.5
		Near Main ESP ID fan	84.6	84.8	83.7	84	84.5	84.8
		Near PD ESP ID fan	81.7	81.9	80.8	81.3	81.6	82.8
		Near Cooler fan -1	86	88.5	87.9	86.1	86.9	85.9
		Near Cooler fan -2	85.4	87.6	87.1	87.3	87	85.7
		Near Cooler fan -3	88.8	88.6	87.6	87.2	87.9	85.2
		SP2,3RCPHTPM circle	91	90.7	90.2	91.4	90.9	90.1
		ESP Area	80.8	81.8	80	80.5	80.3	82.1
		Pumphouse Area	82.1	83.2	82.9	81.1	81.1	82.9
		Near M. N. D Area	81.6	82.3	80.7	81.4	80	81.4
19	BOF Shop	Control Room Area	58.8	59.3	59.7	59.5	59.7	59.4
		Infront of Entrance of DG 250 KVA SP2&SP3 (Door Close Condition)	84.1	84.4	83.9	82.8	83.6	83.9
		Near Secondary ID fan-1	91	SD		91.9	91.4	91.5
		Near Secondary ID fan-2	91.3	91.7		91.8	91.9	SD
		Near Secondary ID fan area-3	SD	91.4		90	SD	92
		Near Secondary ID fan area-4	90.3	91.3		89.5	91.5	92.1
		Near Cooling Tower area	83.4	81.2		84.8	82.6	84.6
		Near Primary/ Secondary ID fan area-1/2	81.8	82.3		82	82	81.2
		BOF Briquetting plant	SD	78.5		81.5	80.8	81.4
		Bag House T44B ID fan	84.2	82.7		84.5	SD	SD
20	SMS-2-FES-1&2	BOF office area	61.4	66.3		62.3	62.3	62.4
		Near Wage bridge area	76.3	77.8		79.3	78.5	80.6
		Near Motor ID fan area-1 area		91.1		91.6	90.7	92.8
		Near Motor ID fan area-2 area		88.9		89.3	90.1	91.6
		Near Motor ID fan area-4 area		88.4		90.4	SD	90.3
		Near Motor ID fan area-6 area		88.3		89.8	89.2	90.1
21	HSM	Booster House (ID Fan)		84.1		84.5	84.2	84.9
		Near Control room Area		79.4		58.4	60.8	58.8
		Near COG Fan Area	83.6	85.1	84.7	85.2	85.1	84.4
		Near RHF Office area (Pulpit)	80.7	80.6	81.9	81.7	83	81.7
		Near RM-2 area	87.9	87.2	86.3	85.8	85.2	86.2
		Near Roll Shop area	78.7	77.5	78.2	79.3	78.4	79.9
		Near HSM Quality Lab area	61.2	62	61.9	62.1	63.1	62.7
		Near B F G Motor fan RHF area	SD	84.4	84.2	83	82.7	83.2

Environment Laboratory
TATA Steel Meramandali, Odisha

		Near Combustion air blower - 1	86.9	87.1	86.1	86.7	86.6	85.9
		Near Combustion air blower- 2	87.2	86.8	85.8	85.5	85.8	SD
		DC pulpit office area	62.4	61.3	62.1	61.5	62.2	62
		Near RM-1 area	85.4	85.9	85.2	85.9	85.2	85.8
		FM area	86.7	86.3	86.7	86.2	85.9	85.7
		Laminar area	89.7	88.9	88.2	87.8	87.3	87.8
		Near DC sampling Station	84.5	84.9	84.4	84.1	83.7	82.9
		Near Re-heating Furness area	81.7	81.2	82.3	80.9	81.4	81.7
22	Coke Oven-2	Near Exhauster house area	87.2	87.5	87.8	86.8	86.9	86.3
		Near Chemical Dosing E.T.P room area	80	80.2	80.4	80.6	79.3	80.4
		Near Pusher car Emission control system ID Fan	81.7	81.6	80.1	83.7	82	82.1
		Near Guide car emission I D Fan	82.8	82.8	81.4	83.5	81.6	80
		Near Water pumphouse area	86.7	86.9	88.9	87.3	87.5	86.8
		Near Battery cellar ventilation blower	SD	SD	SD	SD	SD	SD
		Near Battery coke oven gas de-graphitizing blower	SD	SD	SD	SD	SD	SD
		Pushing emission control system ID fan	81.2	81.7	81.9	82.1	82.7	81.5
		Control Room Office	60	58	58.4	59.7	61.7	58.4
23	BFPP-2 Boiler-2	Near I.D. fan-1	82.4	SD	87	86.3	86.1	SD
		Near I.D. fan-2	83.9	SD	88.3	87.5	85.3	SD
		Near P.A. fan	90.8	SD	90.6	90.1	90.3	SD
		Near S.A. fan	90.9	SD	90	90.5	88.4	SD
		Near Boiler -2 area	84.8	SD	84.3	83.7	83.7	SD
		Near cooling tower-area	84.2	84.6	84.8	84.1	83.3	84.6
24	BFPP-2 Boiler-3	Near I.D. fan-1	SD	85.1	87.5	SD	SD	83.5
		Near I.D. fan-2	SD	84.9	86.3	SD	SD	84.1
		Near P.A. fan	SD	90	89.8	SD	SD	89.7
		Near S.A. fan	SD	88.6	87.9	SD	SD	88.8
		Near TG floor	90.4	89.8	89	89.9	89	87.8
		Near Blower	91.8	89.3	89.4	90.2	91.3	88.6
		Control room	58.3	60.2	62.2	60.7	62.4	58.4
25	Oxygen Plant-02	Near Boiler -3 area	SD	83.8	83.8	SD	SD	85
		Near Nitrogen compressor House-1	106.3	104.5	SD	105.7	107.4	105.9
		Near Nitrogen compressor House-2	105.8	SD	95.6	105.2	107.2	106
		Near Nitrogen compressor House-3	104.9	106.3	SD	SD	108.3	106.3
		Near Air compressor House area-1	108	109.6	97.3	98.2	96.7	98.9
		Near Control room office out side area	92.5	94.8	81.1	98.6	95.1	96.1
		Control Room Office	60.4	61.5	61.2	61.8	61.1	61.9
		Near A/ C Package room area	83.7	83.2	76.8	78.1	82.2	82.3
		Near Argon cold box area	81.8	81.6	81.9	79.7	80.1	82
		Near cooling tower	80.5	79.3	70.4	75.3	81.4	81.9
		Near 340 TPD new compressor House exit	81.4	89.5	89.8	88.9	89.9	87.5
		Near 340 TPD new compressor House Entrance	85.9	89.2	90.8	89.6	90.2	91.8

Environment Laboratory
TATA Steel Meramandali, Odisha

		Near 1120 TPD air compressor house	87.3	86.8	100	97.6	98.3	98.9
		Pump House area	85.8	86	83.6	84.8	86.1	86.5
		Near Turbine-1 area	85.1	84.9	84.5	84.7	84.5	83.7
		Near BB Plant Bunker ID fan-1	80	82.7	81.4	83.5	82.1	
		Near BB Plant flux building ID fan-2	83.2	83.9	82.6	82.4	83.6	
		Near BB Plant crushing & screening building	80.2	79.8	80	81.5	80.5	
		Near BB Plant coke screening building	79.7	79.3	80.1	79.2	81.4	
		Near BB Plant compressor house 1 & 2	82.8	SD	SD	SD	SD	
26	BB Plant	BB Plant Office	59.5	59.7	59.4	59.3	58.8	
		Near CSB-1 I D Fan	81.7	SD	83	82.5	SD	83.5
		Near CSB-2 I D Fan	SD	85.1	84.1	85.1	SD	84.9
		Near BB plant site office	78.5	80.3	79.3	78.6	77.9	80.2
		Near P.C.S building	80	81.5	78.4	80.9	SD	81.1
		Near T.C.S building	79.6	81.7	80	81.6	SD	82.3
		Near S.C.S building	79.8	82	79.9	81.4	SD	80.7
		Control Room Office	58.7	56	58.4	58.1	60.7	58.5
		Near Pumphouse Area	80.4	80.5	83.4	81.2	80.6	81.1
		Near O.P.S building	81.8	81.4	82.6	81.5	80.1	80.6
		Near O.S.C building	82.5	82.4	82	81.7	79.6	80.4
		Near O.T.C building	83	82.6	81.5	82.3	83.5	83.6
		Near Entrance Point	84.1	82.1	83.8	84.2	84.5	83.5
		Near Compressor	90.2	92.3	90.7	91.5	92.3	92.8
		Inside Operator office	79.7	80.3	75.1	80	75.9	80.3
		Near Entrance Point	85.1	84.4	84.5	85.8	85.2	85.1
		Near Compressor	91.7	90.4	91	92	90.3	93.6
		Inside Operator office	81.4	80.6	76.3	79.9	76.5	81.4
		Near Entrance Point	81.7	82.5	79.3	81.5	85.1	80.5
		Near Compressor	92	90.3	92	91.7	91.9	92.8
		Inside Operator office	78.6	77.5	69.2	80.2	80.1	80.4
		CFBC Boiler-1						
		Near ID Fan-1	SD	SD	SD	SD	SD	SD
		Near ID Fan-2	SD	SD	SD	SD	SD	SD
		Near S A Fan	SD	SD	SD	SD	SD	SD
		Near P.A. Fan	SD	SD	SD	SD	SD	SD
		Near Boiler -1 Area	SD	SD	SD	SD	SD	SD
		CFBC- Boiler-2						
		Near ID Fan-1	SD	85.4	85.9	SD	SD	85.9
		Near ID Fan-2	SD	85.8	86	SD	SD	85.7
		Near S A Fan	SD	91	95.5	SD	SD	91.3
		Near P.A. Fan	SD	91.1	96	SD	SD	91.5
		Near Boiler -2 Area	SD	84.5	84.9	SD	SD	85.8
		CFBC- Boiler-3						
		Near ID Fan-1	85.8	84.9	86.8	85.1	SD	85.2
		Near ID Fan-2	86.1	85.1	86.2	85.4	SD	85.9
		Near S A Fan	90.7	90.4	94.5	94.1	SD	91.8
		Near P.A. Fan	90.9	91.6	94.3	94.7	SD	91.2
		Near Boiler -3 Area	85.6	85.1	84.8	84.1	SD	85
		CFBC- Boiler-4						
		Near ID Fan-1	85.4	SD	84.1	84.4	SD	85.1

Environment Laboratory
TATA Steel Meramandali, Odisha

		Near ID Fan-2	86	SD	83.6	84	SD	85.4
		Near S A Fan	90.5	SD	94.3	93.7	SD	92
	185 MW Power Plant AEL	Near P.A. Fan	91	SD	93.7	94.2	SD	91.3
		Near Boiler -4	85.2	SD	83.9	84.6	SD	85.8
		CFBC- Boiler-5						
		Near ID Fan-1	78.2	80	83.1	80.4	80.3	SD
		Near ID Fan-2	79.3	80.3	82.6	80.5	80.5	SD
		Near S A Fan	92.1	91.7	87.1	91.5	91.7	SD
		Near P.A. Fan	91.3	91.5	88.8	91.1	91.5	SD
		Near Boiler -5	85.4	85.8	84.7	85.1	85.1	SD
		CFBC- Boiler-6						
		Near ID Fan-1	80	80.8	SD	80.1	81.6	SD
		Near ID Fan-2	80.2	81.6	SD	80.4	80.7	SD
		Near S A Fan	91.5	91	SD	90.5	91.6	SD
		Near P.A. Fan	90.8	91.6	SD	91.4	91.4	SD
		Near Boiler -6	86	85.4	SD	85.3	83.9	SD
		Near Silo Area	84.8	84.3	84.5	83.5	83.7	82.5
		Near 150 MW TG	91.1	90.4	89.8	90.1	90	90.1
		Near 165 MW TG	91.5	90.2	90.6	90	89.6	90.5
		Control Room Office	59.3	61.5	61.8	61.8	59.3	60.8
31	Coal Washary	Hammer Building Area	84.3	83.6	80	81.5	80.2	81.1
		Screening Building	80	80.6	79.5	81	81.9	80.4
		Power Plant Feeding Silo	83.5	82.4	82.7	83.6	82.8	84.2
		Lab & Office Area	58.1	59.1	58.9	58.5	59.3	58.9
32	RMHS	Yard No-1 to 4	78.1	78.4	78.5	78.7	80	80.1
		Yard No-5 to 6	79.3	79.9	79.3	79.8	80.2	80.3
		Near 3 EP-2 RMHS-III						
		Electrical Building	68.4	60.3	60	80.1	72.5	81.6
		RMHS Office	59.1	58.4	58.2	59.4	58.8	58.7
		Wagon Tippler -1	SD	81.5	SD	82.1	SD	SD
		Wagon Tippler -4	80	81.7	80.4	SD	SD	82
		Wagon Tippler -3	80.1	82.1	SD	81.6	SD	SD
		Wagon Tippler -2	79.6	81	SD	SD	SD	SD
		Tunnel area	81.2	83.3	82.3	83.1	SD	83.4
33	CCH 2	RMHS-2 offline crusher Screen area	85.1	84.8	80.8	82	SD	83.3
		RMHS-2 offline crusher area	81.2	81.5	84.5	84.8	SD	84.8
		Entrance of air compressor house gate 1	82.1	81.4	82.1	81.5	81.5	82.6
		Entrance of air compressor gate 2	83.7	82.5	81.8	81.3	81.6	82.3
		Inside store cum rest house	80	78.7	71.5	79.5	80	80.6
		Inside compressor house	91.7	93.7	92.4	90.2	91.8	96.1
		Near air compressor	93.5	96.1	95.2	93.5	92.3	96.9
34	BFPP2 ash conveying compressor house	Inside office area	76.9	59.4	59.8	59.3	58.5	60.3
		Inside compressor operator cabin	80.3	79.3	78.5	78	80.4	80.7
		Entrance of air compressor house	84.3	83.1	83.4	83.3	83.2	83.6
		Inside compressor house	87.1	85.1	85	85.1	85.7	85.3
		Near air compressor	88.6	87.3	86.2	86.5	86.8	86.1

**Environment Laboratory
TATA Steel Meramandali, Odisha**

35	IBMD	Crusher Tata office (container)	58	57	58.1	58.6	58	58.7
		Entrance of Weigh Bridge	70.2	81.5	79.2	82	80.2	80.6
		Scraped Yard	81	80.6	81.2	83.2	82.1	82
		New Sarpa MRP-II (Operator Cabin)	59.3	58.3	59.7	59.3	58	SD
		New MRP Screen-II-New MRP	81.1	81.1	78.8	80.2	80.4	SD
		New MRP Screen-I-New MRP	81.2	80.4	79.2	80.4	81.2	SD
		New MRP-Loading Point Area	83.5	82.7	81.9	81.6	82.2	SD
		Office & Operator Cabin (Old MRP)	59.7	59.2	60.1	58.1	58.8	58.4
		Old MRP Screen-I&II-New MRP	80.6	80.5	80.8	81.5	81.5	80.8
		Old MRP Screen-III-New MRP	80.4	80.7	79.9	80.1	81	80.5
		Old MRP-Loading Point	82.5	81	81.3	81.5	82.4	81.7

Address of Laboratory :

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3, Pagladanga Road, Kolkata 700015
West Bengal
Tel. : +91 7044036120
Email: udayanlab@mitrask.com



TC-6950



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ULR: TC-69502400009350F

TEST REPORT

Name & Address of Customer :

TATA STEEL LTD.

NH-55, NARENDRAPUR, MERAMANDLI, DHENKANAL
ODISHA India Pin 759129

Report No. :

MSKPL/ED/2024-25/8N6A9S

Date :

22/05/2024

Sample No. :

MSKNB/ED/2024-25/05/TG432G

Date of receipt of sample:

20/05/2024

Date(s) of performance:

20/05/2024 - 22/05/2024

Location of performance of

Permanent Facility

Reference No. & Date :

3000151489/A06, Date - 01/04/2023

Discipline:

Chemical

We hereby certify that the following sample Drawn by us has been analyzed with the following results:

1. Group	Atmospheric Pollution
2. Description of sample	Ambient Air
3. Unique Identification of sample(if any)	NA
4. Date of sampling	17/05/2024
5. Place of sampling	Itapa
6. Environmental conditions during sampling & Transport	1) Temperature :25-36 deg C 2) Barometric Pressure: 754 mm of Hg 3) Rain fall : No & Cold Chain Maintained
7. Sampling Plan & Method used	IS:5182(P-2,6,10,23, 24)
8. Identification of the personnel performing sampling by MSK	Ananda Sahoo
9. Field Equipments Used	MSK/BBSR/FIELD/FDS-5, MSK/BBSR/FIELD/RDS-05

Report No. : MSKPL/ED/2024-25/8N6A9S

Sample No. : MSKNB/ED/2024-25/05/TG432G

RESULT

Chemical


SI No.	Parameter	UOM	Method	Limit	Result
1	Carbon monoxide (as CO)	mg/m3	IS 5182 (Part 10) (NDIR)	2 (8 Hours)	0.47
2	Fine Particulate Matter (PM2.5)	micro gm/m3	IS 5182 (Part 24)	60 (24 Hours)	38.3
3	Oxides of Nitrogen as (NO2)	micro gm/m3	IS 5182 (Part 6)	80 (24 Hours)	33.9
4	PM10(Particulate Matter<10 µm)/Respirable Suspended Particulate Matter Cyclonic technique	micro gm/m3	IS 5182 (Part 23)	100 (24 Hours)	81.9
5	Sulphur Dioxide as (SO2)	micro gm/m3	IS 5182 (Part 2)	80 (24 Hours)	6.6

Opinion : Limit as per CPCB notification, New Delhi, 18th November 2009, for Ambient air quality

Statement of Conformity NA

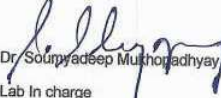
----- END -----

Reviewed By:

Signature : 
Name : Mr. Pradip Bag

Designation : Technical In charge

Authorized Signatory:

Signature : 
Name : Dr. Souryadeep Mukherjee
Designation : Lab In charge

The results relate only to the item(s) tested.

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The reserved part of sample(s) for chemical analysis (Non - perishable sample(s) Food, Water) shall be retained for 15 days from the date of issue of the Test Report. Perishable sample(s) shall be retained 2 days from the date of issue of the Test Report.

The reserved part of sample(s) for chemical analysis (Soil, Solid & Liquid Waste) shall be retained for 15 days as per CPCB guideline & (Air) 1 month from the date of issue of the Test Report.

The reserved part of sample(s) for Microbiological analysis (Non - perishable sample(s) Food, Sealed Water, Sealed food) shall be retained for 15 days from the date of issue of the Test Report.

Head Office: Shrachi Centre (5th Floor), 74B, A.J.C. Bose Road, Kolkata - 700016, West Bengal, India.
Tel. : 91 33 40143000 / 22650007 Fax : 91 33 22650008
Email : info@mitrask.com Website : www.mitrask.com

Address of Laboratory :

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3, Pagladanga Road, Kolkata 700015
West Bengal
Tel. : +91 7044036120
Email: udayanlab@mitrask.com



TC-6950



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ULR: TC-69502400009349F

TEST REPORT

Name & Address of Customer :

TATA STEEL LTD.

NH-55, NARENDRAPUR, MERAMANDLI, DHENKANAL
ODISHA India Pin 759129

Report No. :

MSKPL/ED/2024-25/2F6A9E

Date :

22/05/2024

Sample No. :

MSKNB/ED/2024-25/05/RR434U

Date of receipt of sample:

20/05/2024

Date(s) of performance:

20/05/2024 - 22/05/2024

Location of performance of

Permanent Facility

Reference No. & Date :

3000151489/A06, Date - 01/04/2023

Discipline:

Chemical

We hereby certify that the following sample Drawn by us has been analyzed with the following results:

1. Group	Atmospheric Pollution
2. Description of sample	Ambient Air
3. Unique Identification of sample(if any)	NA
4. Date of sampling	17/05/2024
5. Place of sampling	Kochilamara
6. Environmental conditions during sampling & Transport	1) Temperature :25-36 deg C 2) Barometric Pressure: 754 mm of Hg 3) Rain fall : No & Cold Chain Maintained
7. Sampling Plan & Method used	IS:5182(P-2,6,10,23, 24)
8. Identification of the personnel performing sampling by MSK	Ananda Sahoo
9. Field Equipments Used	MSK/BBSR/FIELD/FDS-9, MSK/BBSR/FIELD/RDS-09

Report No. : MSKPL/ED/2024-25/2F6A9E**Sample No. :** MSKNB/ED/2024-25/05/RR434U

RESULT

Chemical

Sl No.	Parameter	UOM	Method	Limit	Result
1	Carbon monoxide (as CO)	mg/m3	IS 5182 (Part 10) (NDIR)	2 (8 Hours)	0.41
2	Fine Particulate Matter (PM2.5)	micro gm/m3	IS 5182 (Part 24)	60 (24 Hours)	34.1
3	Oxides of Nitrogen as (NO2)	micro gm/m3	IS 5182 (Part 6)	80 (24 Hours)	35.4
4	PM10(Particulate Matter<10 µm)/Respirable Suspended Particulate Matter Cyclonic technique	micro gm/m3	IS 5182 (Part 23)	100 (24 Hours)	77.0
5	Sulphur Dioxide as (SO2)	micro gm/m3	IS 5182 (Part 2)	80 (24 Hours)	BDL(DL:6.0)

Opinion :

Limit as per CPCB notification, New Delhi, 18th November 2009, for Ambient air quality

Statement of Conformity NA

----- END -----

Reviewed By:

Signature :

Name : Mr. Pradip Bag

Designation : Technical In charge

Authorized Signatory:

Signature :

Name : Mr. Soumyadeep Mukhopadhyay

Designation : Lab In charge

The results relate only to the item(s) tested.

This Test Report shall not be reproduced except in full, without the permission of Mitra S.K. Private Limited.

The reserved part of sample(s) for chemical analysis (Non - perishable sample(s) Food, Water) shall be retained for 15 days from the date of issue of the Test Report. Perishable sample(s) shall be retained 2 days from the date of issue of the Test Report.

The reserved part of sample(s) for chemical analysis (Soil, Solid & Liquid Waste) shall be retained for 15 days as per CPCB guideline & (Air) 1 month from the date of issue of the Test Report.

The reserved part of sample(s) for Microbiological analysis (Non - perishable sample(s) Food, Sealed Water, Sealed food) shall be retained for 15 days from the date of issue of the Test Report.

Head Office: Shrachi Centre (5th Floor), 74B, A.J.C. Bose Road, Kolkata - 700016, West Bengal, India.

Tel. : 91 33 40143000 / 22650007 Fax : 91 33 22650008

Email : info@mitrask.com Website : www.mitrask.com

Address of Laboratory :

Building No. P- 48, Udayan Industrial Estate,
3, Pagladanga Road, Kolkata 700015
West Bengal
Tel. : +91 7044036120
Email: udayanlab@mitrask.com



TC-6950



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ULR: TC-69502400009348F

TEST REPORT

Name & Address of Customer :

TATA STEEL LTD.

NH-55, NARENDRAPUR, MERAMANDLI, DHENKANAL
ODISHA India Pin 759129

Report No. :

MSKPL/ED/2024-25/SM6A9E

Date :

22/05/2024

Sample No. :

MSKNB/ED/2024-25/05/KV435J

Date of receipt of sample:

20/05/2024

Date(s) of performance:

20/05/2024 - 22/05/2024

Location of performance of

Permanent Facility

Reference No. & Date :

3000151489/A06, Date - 01/04/2023

Discipline:

Chemical

We hereby certify that the following sample Drawn by us has been analyzed with the following results:

1. Group	Atmospheric Pollution
2. Description of sample	Ambient Air
3. Unique Identification of sample(if any)	NA
4. Date of sampling	17/05/2024
5. Place of sampling	Khaliberana
6. Environmental conditions during sampling & Transport	1) Temperature :25-36 deg C 2) Barometric Pressure: 754 mm of Hg 3) Rain fall : No & Cold Chain Maintained
7. Sampling Plan & Method used	IS:5182(P-2,6,10,23, 24)
8. Identification of the personnel performing sampling by MSK	Ananda Sahoo
9. Field Equipments Used	MSK/BBSR/FIELD/FDS-11, MSK/BBSR/FIELD/RDS-11

Report No. : MSKPL/ED/2024-25/SM6A9E

Sample No. : MSKNB/ED/2024-25/05/KV435J

RESULT

Chemical


Sl No.	Parameter	UOM	Method	Limit	Result
1	Carbon monoxide (as CO)	mg/m3	IS 5182 (Part 10) (NDIR)	2 (8 Hours)	0.57
2	Fine Particulate Matter (PM2.5)	micro gm/m3	IS 5182 (Part 24)	60 (24 Hours)	47.3
3	Oxides of Nitrogen as (NO2)	micro gm/m3	IS 5182 (Part 6)	80 (24 Hours)	32.9
4	PM10(Particulate Matter<10 µm)/Respirable Suspended Particulate Matter Cyclonic technique	micro gm/m3	IS 5182 (Part 23)	100 (24 Hours)	84.7
5	Sulphur Dioxide as (SO2)	micro gm/m3	IS 5182 (Part 2)	80 (24 Hours)	7.1

Opinion : Limit as per CPCB notification, New Delhi, 18th November 2009, for Ambient air quality

Statement of Conformity NA

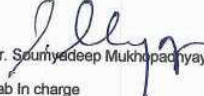
----- END -----

Reviewed By:

Signature : 
Name : Mr. Pradip Bag

Designation : Technical In charge

Authorized Signatory:

Signature : 
Name : Dr. Soumyadeep Mukhopadhyay
Designation : Lab In charge

The results relate only to the item(s) tested.

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The reserved part of sample(s) for chemical analysis (Non - perishable sample(s) Food, Water) shall be retained for 15 days from the date of issue of the Test Report. Perishable sample(s) shall be retained 2 days from the date of issue of the Test Report.

The reserved part of sample(s) for chemical analysis (Soil, Solid & Liquid Waste) shall be retained for 15 days as per CPCB guideline & (Air) 1 month from the date of issue of the Test Report.

The reserved part of sample(s) for Microbiological analysis (Non - perishable sample(s) Food, Sealed Water, Sealed food) shall be retained for 15 days from the date of issue of the Test Report.

Head Office: Shrachi Centre (5th Floor), 74B, A.J.C. Bose Road, Kolkata - 700016, West Bengal, India.
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Email : info@mitrask.com Website : www.mitrask.com

Address of Laboratory :

Building No. P- 48, Udayan Industrial Estate,
3, Pagladanga Road, Kolkata 700015
West Bengal
Tel. : +91 7044036120
Email: udayanlab@mitrask.com



TC-6950



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ULR: TC-69502400009347F

TEST REPORT

Name & Address of Customer :

TATA STEEL LTD.

NH-55, NARENDRAPUR, MERAMANDLI, DHENKANAL
ODISHA India Pin 759129

Report No. :

MSKPL/ED/2024-25/Q06A9G

Date :

22/05/2024

Sample No. :

MSKNB/ED/2024-25/05/KS430D

Date of receipt of sample:

20/05/2024

Date(s) of performance:

20/05/2024 - 22/05/2024

Location of performance of

Permanent Facility

Reference No. & Date :

3000151489/A06, Date - 01/04/2023

Discipline:

Chemical

We hereby certify that the following sample Drawn by us has been analyzed with the following results:

1. Group	Atmospheric Pollution
2. Description of sample	Ambient Air
3. Unique Identification of sample(if any)	NA
4. Date of sampling	17/05/2024
5. Place of sampling	Mangalpur
6. Environmental conditions during sampling & Transport	1) Temperature :25-36 deg C 2) Barometric Pressure: 754 mm of Hg 3) Rain fall : No & Cold Chain Maintained
7. Sampling Plan & Method used	IS:5182(P-2,6,10,23, 24)
8. Identification of the personnel performing sampling by MSK	Ananda Sahoo
9. Field Equipments Used	MSK/BBSR/FIELD/FDS-3, MSK/BBSR/FIELD/RDS-03

Report No. : MSKPL/ED/2024-25/Q06A9G

Sample No. : MSKNB/ED/2024-25/05/KS430D

RESULT

Chemical


Sl No.	Parameter	UOM	Method	Limit	Result
1	Carbon monoxide (as CO)	mg/m3	IS 5182 (Part 10) (NDIR)	2 (8 Hours)	0.48
2	Fine Particulate Matter (PM2.5)	micro gm/m3	IS 5182 (Part 24)	60 (24 Hours)	38.2
3	Oxides of Nitrogen as (NO2)	micro gm/m3	IS 5182 (Part 6)	80 (24 Hours)	30.6
4	PM10(Particulate Matter<10 µm)/Respirable Suspended Particulate Matter Cyclonic technique	micro gm/m3	IS 5182 (Part 23)	100 (24 Hours)	74.4
5	Sulphur Dioxide as (SO2)	micro gm/m3	IS 5182 (Part 2)	80 (24 Hours)	6.7

Opinion : Limit as per CPCB notification, New Delhi, 18th November 2009, for Ambient air quality

Statement of Conformity NA

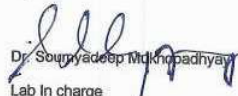
----- END -----

Reviewed By:

Signature : 
Name : Mr. Pradip Bag

Designation : Technical In charge

Authorized Signatory:

Signature : 
Name : Dr. Soumyadeep Mukhopadhyay
Designation : Lab In charge

The results relate only to the item(s) tested.

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The reserved part of sample(s) for chemical analysis (Non - perishable sample(s) Food, Water) shall be retained for 15 days from the date of issue of the Test Report. Perishable sample(s) shall be retained 2 days from the date of issue of the Test Report.

The reserved part of sample(s) for chemical analysis (Soil, Solid & Liquid Waste) shall be retained for 15 days as per CPCB guideline & (Air) 1 month from the date of issue of the Test Report.

The reserved part of sample(s) for Microbiological analysis (Non - perishable sample(s) Food, Sealed Water, Sealed food) shall be retained for 15 days from the date of issue of the Test Report.

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Email : info@mitrask.com Website : www.mitrask.com

Address of Laboratory :

Building No. P- 48, Udayan Industrial Estate,
3, Pagladanga Road, Kolkata 700015
West Bengal
Tel. : +91 7044036120
Email: udayanlab@mitrask.com



TC-6950



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ULR: TC-695024000009346F

TEST REPORT

Name & Address of Customer :

TATA STEEL LTD.

NH-55, NARENDRAPUR, MERAMANDLI, DHENKANAL
ODISHA India Pin 759129

Report No. :

MSKPL/ED/2024-25/KG6A90

Date :

22/05/2024

Sample No. :

MSKNB/ED/2024-25/05/BA431U

Date of receipt of sample:

20/05/2024

Date(s) of performance:

20/05/2024 - 22/05/2024

Location of performance of

Permanent Facility

Reference No. & Date :

3000151489/A06, Date - 01/04/2023

Discipline:

Chemical

We hereby certify that the following sample Drawn by us has been analyzed with the following results:

1. Group	Atmospheric Pollution
2. Description of sample	Ambient Air
3. Unique Identification of sample(if any)	NA
4. Date of sampling	17/05/2024
5. Place of sampling	Narandrapur
6. Environmental conditions during sampling & Transport	1) Temperature :25-36 deg C 2) Barometric Pressure: 754 mm of Hg 3) Rain fall : No & Cold Chain Maintained
7. Sampling Plan & Method used	IS:5182(P-2,6,10,23, 24)
8. Identification of the personnel performing sampling by MSK	Ananda Sahoo
9. Field Equipments Used	MSK/BBSR/FIELD/FDS-4, MSK/BBSR/FIELD/RDS-04

Report No. : MSKPL/ED/2024-25/KG6A90

Sample No. : MSKNB/ED/2024-25/05/BA431U

RESULT

Chemical

SI No.	Parameter	UOM	Method	Limit	Result
1	Carbon monoxide (as CO)	mg/m3	IS 5182 (Part 10) (NDIR)	2 (8 Hours)	0.42
2	Fine Particulate Matter (PM2.5)	micro gm/m3	IS 5182 (Part 24)	60 (24 Hours)	43.3
3	Oxides of Nitrogen as (NO2)	micro gm/m3	IS 5182 (Part 6)	80 (24 Hours)	41.1
4	PM10(Particulate Matter<10 µm)/Respirable Suspended Particulate Matter Cyclonic technique	micro gm/m3	IS 5182 (Part 23)	100 (24 Hours)	90.5
5	Sulphur Dioxide as (SO2)	micro gm/m3	IS 5182 (Part 2)	80 (24 Hours)	7.0


Opinion :

Limit as per CPCB notification, New Delhi, 18th November 2009, for Ambient air quality

Statement of Conformity NA

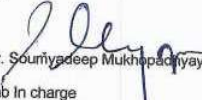
----- END -----

Reviewed By:

Signature : 
Name : Mr. Pradip Bag

Designation : Technical In charge

Authorized Signatory:

Signature : 
Name : Dr. Sourinadeep Mukhopadhyay
Designation : Lab In charge

The results relate only to the item(s) tested.

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The reserved part of sample(s) for chemical analysis (Non - perishable sample(s) Food, Water) shall be retained for 15 days from the date of issue of the Test Report. Perishable sample(s) shall be retained 2 days from the date of issue of the Test Report.

The reserved part of sample(s) for chemical analysis (Soil, Solid & Liquid Waste) shall be retained for 15 days as per CPCB guideline & (Air) 1 month from the date of issue of the Test Report.

The reserved part of sample(s) for Microbiological analysis (Non - perishable sample(s) Food, Sealed Water, Sealed food) shall be retained for 15 days from the date of issue of the Test Report.

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West Bengal
Tel. : +91 7044036120
Email: udayanlab@mitrask.com



TC-6950



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ULR: TC-69502400009345F

TEST REPORT

Name & Address of Customer :

TATA STEEL LTD.

NH-55, NARENDRAPUR, MERAMANDLI, DHENKANAL
ODISHA India Pin 759129

Report No. :

MSKPL/ED/2024-25/5R6A9B

Date :

22/05/2024

Sample No. :

MSKNB/ED/2024-25/05/AK42FA

Date of receipt of sample:

20/05/2024

Date(s) of performance:

20/05/2024 - 22/05/2024

Location of performance of

Permanent Facility

Reference No. & Date :

3000151489/A06, Date - 01/04/2023

Discipline:

Chemical

We hereby certify that the following sample Drawn by us has been analyzed with the following results:

1. Group	Atmospheric Pollution
2. Description of sample	Ambient Air
3. Unique Identification of sample(if any)	NA
4. Date of sampling	17/05/2024
5. Place of sampling	Nalachandrapur (Nalatangra)
6. Environmental conditions during sampling & Transport	1) Temperature :25-36 deg C 2) Barometric Pressure: 754 mm of Hg 3) Rain fall : No & Cold Chain Maintained
7. Sampling Plan & Method used	IS:5182(P-2,6,10,23, 24)
8. Identification of the personnel performing sampling by MSK	Ananda Sahoo
9. Field Equipments Used	MSK/BBSR/FIELD/FDS-12, MSK/BBSR/FIELD/RDS-12

Report No. : MSKPL/ED/2024-25/5R6A9B

Sample No. : MSKNB/ED/2024-25/05/AK42FA

RESULT

Chemical

Sl No.	Parameter	UOM	Method	Limit	Result
1	Carbon monoxide (as CO)	mg/m3	IS 5182 (Part 10) (NDIR)	2 (8 Hours)	0.51
2	Fine Particulate Matter (PM2.5)	micro gm/m3	IS 5182 (Part 24)	60 (24 Hours)	50.2
3	Oxides of Nitrogen as (NO2)	micro gm/m3	IS 5182 (Part 6)	80 (24 Hours)	44.8
4	PM10(Particulate Matter<10 µm)/Respirable Suspended Particulate Matter Cyclonic technique	micro gm/m3	IS 5182 (Part 23)	100 (24 Hours)	87.3
5	Sulphur Dioxide as (SO2)	micro gm/m3	IS 5182 (Part 2)	80 (24 Hours)	7.9

Opinion : Limit as per CPCB notification, New Delhi, 18th November 2009, for Ambient air quality

Statement of Conformity NA

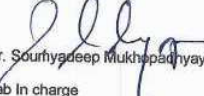
----- END -----

Reviewed By:

Signature : 
Name : Mr. Pradip Bag

Designation : Technical In charge

Authorized Signatory:

Signature : 
Name : Dr. Sourhyadeep Mukhopadhyay
Designation : Lab In charge

The results relate only to the item(s) tested.

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The reserved part of sample(s) for chemical analysis (Soil, Solid & Liquid Waste) shall be retained for 15 days as per CPCB guideline & (Air) 1 month from the date of issue of the Test Report.

The reserved part of sample(s) for Microbiological analysis (Non - perishable sample(s) Food, Sealed Water, Sealed food) shall be retained for 15 days from the date of issue of the Test Report.

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Address of Laboratory :

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West Bengal
Tel. : +91 7044036120
Email: udayanlab@mitrask.com



TC-6950



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ULR: TC-695024000009344F

TEST REPORT

Name & Address of Customer :

TATA STEEL LTD.

NH-55, NARENDRAPUR, MERAMANDLI, DHENKANAL
ODISHA India Pin 759129

Report No. :

MSKPL/ED/2024-25/TN6A9Q

Date :

22/05/2024

Sample No. :

MSKNB/ED/2024-25/05/4K4338

Date of receipt of sample:

20/05/2024

Date(s) of performance:

20/05/2024 - 22/05/2024

Location of performance of

Permanent Facility

Reference No. & Date :

3000151489/A06, Date - 01/04/2023

Discipline:

Chemical

We hereby certify that the following sample Drawn by us has been analyzed with the following results:

1. Group	Atmospheric Pollution
2. Description of sample	Ambient Air
3. Unique Identification of sample(if any)	NA
4. Date of sampling	17/05/2024
5. Place of sampling	Galpada
6. Environmental conditions during sampling & Transport	1) Temperature :25-36 deg C 2) Barometric Pressure: 754 mm of Hg 3) Rain fall : No & Cold Chain Maintained
7. Sampling Plan & Method used	IS:5182(P-2,6,10,23, 24)
8. Identification of the personnel performing sampling by MSK	Ananda Sahoo
9. Field Equipments Used	MSK/BBSR/FIELD/FDS-10, MSK/BBSR/FIELD/RDS-10

Report No. : MSKPL/ED/2024-25/TN6A9Q

Sample No. : MSKNB/ED/2024-25/05/4K4338

RESULT

Chemical

Sl No.	Parameter	UOM	Method	Limit	Result
1	Carbon monoxide (as CO)	mg/m3	IS 5182 (Part 10) (NDIR)	2 (8 Hours)	0.36
2	Fine Particulate Matter (PM2.5)	micro gm/m3	IS 5182 (Part 24)	60 (24 Hours)	40.5
3	Oxides of Nitrogen as (NO2)	micro gm/m3	IS 5182 (Part 6)	80 (24 Hours)	39.6
4	PM10(Particulate Matter<10 µm)/Respirable Suspended Particulate Matter Cyclonic technique	micro gm/m3	IS 5182 (Part 23)	100 (24 Hours)	71.6
5	Sulphur Dioxide as (SO2)	micro gm/m3	IS 5182 (Part 2)	80 (24 Hours)	6.8

Opinion : Limit as per CPCB notification, New Delhi, 18th November 2009, for Ambient air quality

Statement of Conformity NA


----- END -----

Reviewed By:

Signature : 
Name : Mr. Pradip Bag

Designation : Technical In charge

Authorized Signatory:

Signature : 
Name : Dr. Soumyadeep Mukhopadhyay
Designation : Lab In charge

The results relate only to the item(s) tested.

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The reserved part of sample(s) for chemical analysis (Soil, Solid & Liquid Waste) shall be retained for 15 days as per CPCB guideline & (Air) 1 month from the date of issue of the Test Report. The reserved part of sample(s) for Microbiological analysis (Non - perishable sample(s) Food, Sealed Water, Sealed food) shall be retained for 15 days from the date of issue of the Test Report.

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West Bengal
Tel. : +91 7044036120
Email: udayanlab@mitrask.com



TC-6950



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ULR: TC-695024000009343F

TEST REPORT

Name & Address of Customer :

TATA STEEL LTD.

NH-55, NARENDRAPUR, MERAMANDLI, DHENKANAL
ODISHA India Pin 759129

Report No. :

MSKPL/ED/2024-25/7T6A9P

Date :

22/05/2024

Sample No. :

MSKNB/ED/2024-25/05/1842EN

Date of receipt of sample:

20/05/2024

Date(s) of performance:

20/05/2024 - 22/05/2024

Location of performance of

Permanent Facility

Reference No. & Date :

3000151489/A06, Date - 01/04/2023

Discipline:

Chemical

We hereby certify that the following sample Drawn by us has been analyzed with the following results:

1. Group	Atmospheric Pollution
2. Description of sample	Ambient Air
3. Unique Identification of sample(if any)	NA
4. Date of sampling	17/05/2024
5. Place of sampling	Motanga
6. Environmental conditions during sampling & Transport	1) Temperature :25-36 deg C 2) Barometric Pressure: 754 mm of Hg 3) Rain fall : No & Cold Chain Maintained
7. Sampling Plan & Method used	IS:5182(P-2,6,10,23, 24)
8. Identification of the personnel performing sampling by MSK	Ananda Sahoo
9. Field Equipments Used	MSK/BBSR/FIELD/FDS-6, MSK/BBSR/FIELD/RDS-06

Report No. : MSKPL/ED/2024-25/7T6A9P

Sample No. : MSKNB/ED/2024-25/05/1842EN

RESULT

Chemical					
Sl No.	Parameter	UOM	Method	Limit	Result
1	Carbon monoxide (as CO)	mg/m3	IS 5182 (Part 10) (NDIR)	2 (8 Hours)	0.49
2	Fine Particulate Matter (PM2.5)	micro gm/m3	IS 5182 (Part 24)	60 (24 Hours)	44.6
3	Oxides of Nitrogen as (NO2)	micro gm/m3	IS 5182 (Part 6)	80 (24 Hours)	35.2
4	PM10(Particulate Matter<10 µm)/Respirable Suspended Particulate Matter Cyclonic technique	micro gm/m3	IS 5182 (Part 23)	100 (24 Hours)	78.3
5	Sulphur Dioxide as (SO2)	micro gm/m3	IS 5182 (Part 2)	80 (24 Hours)	BDL(DL:6.0)

Opinion : Limit as per CPCB notification, New Delhi, 18th November 2009, for Ambient air quality

Statement of Conformity NA

----- END -----

Reviewed By:

Signature :

Name : Mr. Pradipt Bag

Designation : Technical In charge

Authorized Signatory:

Signature :

Name : Dr. Soumyadeep Mukhopadhyay

Designation : Lab In charge

The results relate only to the item(s) tested.

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The reserved part of sample(s) for chemical analysis (Soil, Solid & Liquid Waste) shall be retained for 15 days as per CPCB guideline & (Air) 1 month from the date of issue of the Test Report.

The reserved part of sample(s) for Microbiological analysis (Non - perishable sample(s) Food, Sealed Water, Sealed food) shall be retained for 15 days from the date of issue of the Test Report.

Head Office: Shrachi Centre (5th Floor), 74B, A.J.C. Bose Road, Kolkata - 700016, West Bengal, India.

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West Bengal
Tel. : +91 7044036120
Email: udayanlab@mitrask.com



TC-6950



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ULR: TC-695024000009342F



Name & Address of Customer :

TATA STEEL LTD.

NH-55, NARENDRAPUR, MERAMANDLI, DHENKANAL
ODISHA India Pin 759129

TEST REPORT

Report No. :

MSKPL/ED/2024-25/6S6A9E

Date :

22/05/2024

Sample No. :

MSKNB/ED/2024-25/05/PR42EK

Date of receipt of sample:

20/05/2024

Date(s) of performance:

20/05/2024 - 22/05/2024

Location of performance of

Permanent Facility

Reference No. & Date :

3000151489/A06, Date - 01/04/2023

Discipline:

Chemical

We hereby certify that the following sample Drawn by us has been analyzed with the following results:

1. Group	Atmospheric Pollution
2. Description of sample	Noise
3. Unique Identification of sample(if any)	NA
4. Date of sampling	17/05/2024
5. Place of sampling	Motanga
6. Environmental conditions during sampling & Transport	NA
7. Sampling Plan & Method used	IS 9989:1988
8. Identification of the personnel performing sampling by MSK	Ananda Sahoo
9. Field Equipments Used	MSK/BBSR/FIELD/SLM-01

Report No. : MSKPL/ED/2024-25/6S6A9E

Sample No. : MSKNB/ED/2024-25/05/PR42EK

RESULT

Chemical				
SI No.	Parameter	UOM	Method	Result
1	Leq dB(A) day	dB(A)	IS 9989	51.4
2	Leq dB(A) night	dB(A)	IS 9989	45.7

Opinion : NA

Statement of Conformity NA

----- END -----

Reviewed By:

Signature :

Name : Mr. Pradip Bag

Designation : Technical In charge

Authorized Signatory:

Signature :

Name : Dr. Soumyadeep Mukhopadhyay

Designation : Lab In charge

The results relate only to the item(s) tested.

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The reserved part of sample(s) for chemical analysis (Non - perishable sample(s) Food, Water) shall be retained for 15 days from the date of issue of the Test Report. Perishable sample(s) shall be retained 2 days from the date of issue of the Test Report.

The reserved part of sample(s) for chemical analysis (Soil, Solid & Liquid Waste) shall be retained for 15 days as per CPCB guideline & (Air) 1 month from the date of issue of the Test Report.

The reserved part of sample(s) for Microbiological analysis (Non - perishable sample(s) Food, Sealed Water, Sealed food) shall be retained for 15 days from the date of issue of the Test Report.

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West Bengal
Tel. : +91 7044036120
Email: udayanlab@mitrask.com



TC-6950



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ULR: TC-69502400009341F

TEST REPORT

Name & Address of Customer :

TATA STEEL LTD.

NH-55, NARENDRAPUR, MERAMANDLI, DHENKANAL
ODISHA India Pin 759129

Report No. :

MSKPL/ED/2024-25/AJ6A9C

Date :

22/05/2024

Sample No. :

MSKNB/ED/2024-25/05/MU42EE

Date of receipt of sample:

20/05/2024

Date(s) of performance:

20/05/2024 - 22/05/2024

Location of performance of

Permanent Facility

Reference No. & Date :

3000151489/A06, Date - 01/04/2023

Discipline:

Chemical

We hereby certify that the following sample Drawn by us has been analyzed with the following results:

1. Group	Atmospheric Pollution
2. Description of sample	Noise
3. Unique Identification of sample(if any)	NA
4. Date of sampling	16/05/2024
5. Place of sampling	Ganthigadia
6. Environmental conditions during sampling & Transport	NA
7. Sampling Plan & Method used	IS 9989:1988
8. Identification of the personnel performing sampling by MSK	Ananda Sahoo
9. Field Equipments Used	MSK/BBSR/FIELD/SLM-01

Report No. : MSKPL/ED/2024-25/AJ6A9C

Sample No. : MSKNB/ED/2024-25/05/MU42EE

RESULT

Chemical				
SI No.	Parameter	UOM	Method	Result
1	Leq dB(A) day	dB(A)	IS 9989	49.6
2	Leq dB(A) night	dB(A)	IS 9989	46.4

Opinion : NA

Statement of Conformity NA

----- END -----

Reviewed By:

Signature :

Name : Mr. Pradip Bag

Designation : Technical In charge

Authorized Signatory:

Signature :

Name : Dr. Souryadeep Mukhopadhyay

Designation : Lab In charge

The results relate only to the item(s) tested.

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The reserved part of sample(s) for chemical analysis (Non - perishable sample(s) Food, Water) shall be retained for 15 days from the date of issue of the Test Report. Perishable sample(s) shall be retained 2 days from the date of issue of the Test Report.

The reserved part of sample(s) for Microbiological analysis (Soil, Solid & Liquid Waste) shall be retained for 15 days as per CPCB guideline & (Air) 1 month from the date of issue of the Test Report.

The reserved part of sample(s) for Microbiological analysis (Non - perishable sample(s) Food, Sealed Water, Sealed food) shall be retained for 15 days from the date of issue of the Test Report.

Head Office: Shraichi Centre (5th Floor), 74B, A.J.C. Bose Road, Kolkata - 700016, West Bengal, India.
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Mitra S. K. Private Limited

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Kalyan Bhiwandi Bypass, Tal - Bhiwandi
Dist. Thane- 421302.
Tel. : 0252 2672352.
Email: mumbailab@mitrask.com
Web : www.mitrask.com

**TEST REPORT**

Name & Address of the Customer:
TATA STEEL LTD.
NH-55, NARENDRAPUR, MERAMANDLI
DHENKANAL, Odisha-759129 India

Report No. : MSKGL/ED/2024-25/002239
Date : 10.07.2024
Sample No. : MSKGL/ED/2024-25/06/00689
Date of receipt of sample : 13.06.2024
Date(s) of performance : 13.06.2024 – 18.06.2024
Location of performance of : Permanent Facility
Ref. No. & Date : 3000148695/A06
Discipline : Chemical

We hereby certify that the following sample drawn by us from the customer has been analyzed with the following results:

ANALYSIS RESULT

1. Group	Atmospheric Pollution
2. Description of sample	Noise
3. Unique Identification of sample(if any)	NA
4. Date of sampling	12/06/2024
5. Place of sampling	Caaqms-1(Colony)
6. Environmental conditions during sampling & Transport	NA
7. Sampling Plan & Method used	IS 9989:1981
8. Identification of the personnel performing sampling by MSK	Ananda Sahoo
9. Field Equipments Used	MSK/BBSR/FIELD/SLM-03

Report No. : MSKGL/ED/2024-25/002239

Sample No. : MSKGL/ED/2024-25/06/00689

RESULT

Chemical							
Sl No.	Parameter	UOM	Method	Result	Zone	Limit as per CPCB at Day (06.00-22.00)	Limit as per CPCB at Night (22.00-06.00)
1	Leq dB(A) day	dB(A)	IS 9989	68.1	Industrial	75	--
2	Leq dB(A) night	dB(A)	IS 9989	62.0	Industrial	--	70

Opinion : NA

Statement of Conformity : NA

End

Reviewed By:

Signature : *Ananta Kumar Rath*
Name : Mr. Ananta Kumar Rath.
Designation : Operational Manager

Authorized Signatory

For Mitra S.K. Private Limited

Signature : *Ananta Kumar Rath*
Name : Mr. Ananta Kumar Rath.
Designation : Operational Manager

- The results relate only to the item(s) tested.
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- The reserved part of sample(s) shall be retained for 10 days & 1 years (Air) from the date of issue of the Test Report.

Mitra S. K. Private Limited

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Tel. : 0252 2672352.
Email: mumbailab@mitrask.com
Web : www.mitrask.com

**TEST REPORT**

Name & Address of the Customer:
TATA STEEL LTD.
NH-55, NARENDRAPUR, MERAMANDLI
DHENKANAL, Odisha-759129 India

Report No. : MSKGL/ED/2024-25/002240
Date : 10.07.2024
Sample No. : MSKGL/ED/2024-25/06/00949
Date of receipt of sample : 14.06.2024
Date(s) of performance : 14.06.2024 – 19.06.2024
Location of performance of : Permanent Facility
Ref. No. & Date : 3000148695/A06
Discipline : Chemical

We hereby certify that the following sample drawn by us from the customer has been analyzed with the following results:

ANALYSIS RESULT

1. Group	Atmospheric Pollution
2. Description of sample	Noise
3. Unique Identification of sample(if any)	NA
4. Date of sampling	13/06/2024
5. Place of sampling	Caaqms-2(AEL)
6. Environmental conditions during sampling & Transport	NA
7. Sampling Plan & Method used	IS 9989:1981
8. Identification of the personnel performing sampling by MSK	Ananda Sahoo
9. Field Equipments Used	MSK/BBSR/FIELD/SLM-03

Report No. : MSKGL/ED/2024-25/002240

Sample No. : MSKGL/ED/2024-25/06/00949

RESULT

Chemical							
Sl No.	Parameter	UOM	Method	Result	Zone	Limit as per CPCB at Day (06.00-22.00)	Limit as per CPCB at Night (22.00-06.00)
1	Leq dB(A) day	dB(A)	IS 9989	70.0	Industrial	75	--
2	Leq dB(A) night	dB(A)	IS 9989	64.2	Industrial	--	70

Opinion : NA

Statement of Conformity : NA

End

Reviewed By:

Signature

Name

Designation.

Ananta Kumar Rath
: Mr. Ananta Kumar Rath
: Operational Manager

Authorized Signatory

For Mitra S.K. Private Limited

Signature

Name

Designation

Ananta Kumar Rath
: Mr. Ananta Kumar Rath
: Operational Manager

- The results relate only to the item(s) tested.
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Email: mumbailab@mitrask.com
Web : www.mitrask.com

**TEST REPORT**

Name & Address of the Customer:
TATA STEEL LTD.
NH-55, NARENDRAPUR, MERAMANDLI
DHENKANAL, Odisha-759129 India

Report No. : MSKGL/ED/2024-25/002241
Date : 10.07.2024
Sample No. : MSKGL/ED/2024-25/06/00960
Date of receipt of sample : 18.06.2024
Date(s) of performance : 18.06.2024 – 22.06.2024
Location of performance of : Permanent Facility
Ref. No. & Date : 3000148695/A06
Discipline : Chemical

We hereby certify that the following sample drawn by us from the customer has been analyzed with the following results:

ANALYSIS RESULT

1. Group	Atmospheric Pollution
2. Description of sample	Noise
3. Unique Identification of sample(if any)	NA
4. Date of sampling	17/06/2024
5. Place of sampling	Caaqms-3(CRM)
6. Environmental conditions during sampling & Transport	NA
7. Sampling Plan & Method used	IS 9989:1981
8. Identification of the personnel performing sampling by MSK	Ananda Sahoo
9. Field Equipments Used	MSK/BBSR/FIELD/SLM-03

Report No. : MSKGL/ED/2024-25/002241

Sample No. : MSKGL/ED/2024-25/06/00960

RESULT

Chemical							
Sl No.	Parameter	UOM	Method	Result	Zone	Limit as per CPCB at Day (06.00-22.00)	Limit as per CPCB at Night (22.00-06.00)
1	Leq dB(A) day	dB(A)	IS 9989	66.7	Industrial	75	--
2	Leq dB(A) night	dB(A)	IS 9989	63.6	Industrial	--	70

Opinion : NA

Statement of Conformity : NA

End

Reviewed By:

Signature : *Ananta Kumar Rath*
Name : Mr. Ananta Kumar Rath
Designation : Operational Manager

Authorized Signatory

For Mitra S.K. Private Limited

Signature : *Ananta Kumar Rath*
Name : Mr. Ananta Kumar Rath
Designation : Operational Manager

- The results relate only to the item(s) tested.
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**TEST REPORT****Name & Address of the Customer:**

TATA STEEL LTD.

NH-55, NARENDRAPUR, MERAMANDLI

DHENKANAL, Odisha-759129 India

Report No.

: MSKGL/ED/2024-25/002242

Date

: 10.07.2024

Sample No.

: MSKGL/ED/2024-25/06/00962

Date of receipt of sample

: 19.06.2024

Date(s) of performance

: 19.06.2024 – 23.06.2024

Location of performance of

: Permanent Facility

Ref. No. & Date

: 3000148695/A06

Discipline

: Chemical

We hereby certify that the following sample drawn by us from the customer has been analyzed with the following results:

ANALYSIS RESULT

1. Group	Atmospheric Pollution
2. Description of sample	Noise
3. Unique Identification of sample(if any)	NA
4. Date of sampling	18/06/2024
5. Place of sampling	Caaqms-5(Coke Oven-2)
6. Environmental conditions during sampling & Transport	NA
7. Sampling Plan & Method used	IS 9989:1981
8. Identification of the personnel performing sampling by MSK	Ananda Sahoo
9. Field Equipments Used	MSK/BBSR/FIELD/SLM-03

Report No. : MSKGL/ED/2024-25/002242

Sample No. : MSKGL/ED/2024-25/06/00962

RESULT

Chemical							
Sl No.	Parameter	UOM	Method	Result	Zone	Limit as per CPCB at Day (06.00-22.00)	Limit as per CPCB at Night (22.00-06.00)
1	Leq dB(A) day	dB(A)	IS 9989	69.2	Industrial	75	--
2	Leq dB(A) night	dB(A)	IS 9989	62.9	Industrial	--	70

Opinion : NA

Statement of Conformity : NA

End

Reviewed By:

Signature

: *Ananta Kumar Rath*

Name

: Mr. Ananta Kumar Rath

Designation.

: Operational Manager

Authorized Signatory

For Mitra S.K. Private Limited

Signature

: *Ananta Kumar Rath*

Name

: Mr. Ananta Kumar Rath

Designation

: Operational Manager

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Email: mumbailab@mitrask.com
Web : www.mitrask.com

**TEST REPORT****Name & Address of the Customer:****TATA STEEL LTD.**

NH-55, NARENDRAPUR, MERAMANDLI

DHENKANAL, Odisha-759129 India

Report No.

: MSKGL/ED/2024-25/002243

Date

: 10.07.2024

Sample No.

: MSKGL/ED/2024-25/06/00964

Date of receipt of sample

: 25.06.2024

Date(s) of performance

: 25.06.2024 – 28.06.2024

Location of performance of

: Permanent Facility

Ref. No. & Date

: 3000148695/A06

Discipline

: Chemical

We hereby certify that the following sample drawn by us from the customer has been analyzed with the following results:

ANALYSIS RESULT

1. Group	Atmospheric Pollution
2. Description of sample	Noise
3. Unique Identification of sample(if any)	NA
4. Date of sampling	24/06/2024
5. Place of sampling	Caaqms-4(HSM Water Complex)
6. Environmental conditions during sampling & Transport	NA
7. Sampling Plan & Method used	IS 9989:1981
8. Identification of the personnel performing sampling by MSK	Ananda Sahoo
9. Field Equipments Used	MSK/BBSR/FIELD/SLM-03

Report No. : MSKGL/ED/2024-25/002243

Sample No. : MSKGL/ED/2024-25/06/00964

RESULT

Chemical							
Sl No.	Parameter	UOM	Method	Result	Zone	Limit as per CPCB at Day (06.00-22.00)	Limit as per CPCB at Night (22.00-06.00)
1	Leq dB(A) day	dB(A)	IS 9989	67.7	Industrial	75	--
2	Leq dB(A) night	dB(A)	IS 9989	64.3	Industrial	--	70

Opinion : NA

Statement of Conformity : NA

End

Reviewed By:

Signature

: *Ananta Kumar Rath*

Name

: Mr. Ananta Kumar Rath

Designation.

: Operational Manager

Authorized Signatory

For Mitra S.K. Private Limited

Signature

: *Ananta Kumar Rath*

Name

: Mr. Ananta Kumar Rath

Designation

: Operational Manager

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Email: mbailab@mitrask.com
Web : www.mitrask.com

**TEST REPORT**

Name & Address of the Customer:
TATA STEEL LTD.
NH-55, NARENDRAPUR, MERAMANDLI
DHENKANAL, Odisha-759129 India

Report No. : MSKGL/ED/2024-25/002244
Date : 10.07.2024
Sample No. : MSKGL/ED/2024-25/06/00966
Date of receipt of sample : 26.06.2024
Date(s) of performance : 26.06.2024 – 30.06.2024
Location of performance of : Permanent Facility
Ref. No. & Date : 3000148695/A06
Discipline : Chemical

We hereby certify that the following sample drawn by us from the customer has been analyzed with the following results:

ANALYSIS RESULT

1. Group	Atmospheric Pollution
2. Description of sample	Noise
3. Unique Identification of sample(if any)	NA
4. Date of sampling	25/06/2024
5. Place of sampling	Caaqms-6(Wagon Tippler)
6. Environmental conditions during sampling & Transport	NA
7. Sampling Plan & Method used	IS 9989:1981
8. Identification of the personnel performing sampling by MSK	Ananda Sahoo
9. Field Equipments Used	MSK/BBSR/FIELD/SLM-03

Report No. : MSKGL/ED/2024-25/002244

Sample No. : MSKGL/ED/2024-25/06/00966

RESULT

Chemical							
Sl No.	Parameter	UOM	Method	Result	Zone	Limit as per CPCB at Day (06.00-22.00)	Limit as per CPCB at Night (22.00-06.00)
1	Leq dB(A) day	dB(A)	IS 9989	66.2	Industrial	75	--
2	Leq dB(A) night	dB(A)	IS 9989	62.4	Industrial	--	70

Opinion : NA

Statement of Conformity : NA

End

Reviewed By:

Signature : *Ananta Kumar Rath*
Name : Mr. Ananta Kumar Rath
Designation : Operational Manager

Authorized Signatory

For Mitra S.K. Private Limited

Signature : *Ananta Kumar Rath*
Name : Mr. Ananta Kumar Rath
Designation : Operational Manager

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Tel. : 0252 2672352.
Email: mumbailab@mitrask.com
Web : www.mitrask.com

Doc No MSK/GEN/19/01



TEST REPORT

Name & Address of the Customer:

TATA STEEL LTD.
NH-55, NARENDRAPUR, MERAMANDLI
DHENKANAL, Odisha-759129 India

Report No.

: MSKGL/ED/2024-25/002245

Date

: 10.07.2024

Sample No.

: MSKGL/ED/2024-25/06/00968

Date of receipt of sample

: 27.06.2024

Date(s) of performance

: 27.06.2024 – 02.07.2024

Location of performance of

: Permanent Facility

Ref. No. & Date

: 3000148695/A06

Discipline

: Chemical

We hereby certify that the following sample drawn by us from the customer has been analyzed with the following results:

ANALYSIS RESULT

1. Group	Atmospheric Pollution
2. Description of sample	Noise
3. Unique Identification of sample(if any)	NA
4. Date of sampling	26/06/2024
5. Place of sampling	Caaqms-7(Material Gate)
6. Environmental conditions during sampling & Transport	NA
7. Sampling Plan & Method used	IS 9989:1981
8. Identification of the personnel performing sampling by MSK	Ananta Sahoo
9. Field Equipments Used	MSK/BBSR/FIELD/SLM-03

Report No. : MSKGL/ED/2024-25/002245

Sample No. : MSKGL/ED/2024-25/06/00968

RESULT

Chemical							
Sl No.	Parameter	UOM	Method	Result	Zone	Limit as per CPCB at Day (06.00-22.00)	Limit as per CPCB at Night (22.00-06.00)
1	Leq dB(A) day	dB(A)	IS 9989	69.5	Industrial	75	--
2	Leq dB(A) night	dB(A)	IS 9989	65.8	Industrial	--	70

Opinion : NA

Statement of Conformity : NA

End

Reviewed By:

Signature : *Ananta Kumar Rath*
Name : Mr. Ananta Kumar Rath
Designation : Operational Manager

Authorized Signatory

For Mitra S.K. Private Limited

Signature : *Ananta Kumar Rath*
Name : Mr. Ananta Kumar Rath
Designation : Operational Manager

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Address of Laboratory :

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West Bengal
Tel. : +91 7044036120
Email: udayanlab@mitrask.com



TC-6950



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ULR: TC-695024000008863F

TEST REPORT

Name & Address of Customer :

TATA STEEL LTD.

NH-55, NARENDRAPUR, MERAMANDLI, DHENKANAL
ODISHA India Pin 759129

Report No. :

Date :

Sample No. :

Date of receipt of sample:

Date(s) of performance:

Location of performance of

Reference No. & Date :

Discipline:

MSKPL/ED/2024-25/NH5181

22/05/2024

MSKNB/ED/2024-25/05/RX3F1U

16/05/2024

16/05/2024 - 21/05/2024

Permanent Facility

3000148695/A06, Date - 15/12/2022

Chemical

We hereby certify that the following sample Drawn by us has been analyzed with the following results:

1. Group	Atmospheric Pollution
2. Description of sample	Noise
3. Unique Identification of sample(if any)	NA
4. Date of sampling	13/05/2024
5. Place of sampling	Caaqms-1(Colony)
6. Environmental conditions during sampling & Transport	NA
7. Sampling Plan & Method used	IS 9989:1988
8. Identification of the personnel performing sampling by MSK	Chinmaya Biswal
9. Field Equipments Used	MSK/BBSR/FIELD/SLM-03

Report No. : MSKPL/ED/2024-25/NH5181

Sample No. : MSKNB/ED/2024-25/05/RX3F1U

RESULT

Chemical							
Sl No.	Parameter	UOM	Method	Result	Zone	Limit as per CPCB at Day (06.00-22.00)	Limit as per CPCB at Night (22.00-06.00)
1	Leq dB(A) day	dB(A)	IS 9989	69.4	Industrial	75	-
2	Leq dB(A) night	dB(A)	IS 9989	63.4	Industrial	-	70

Opinion : NA

Statement of Conformity NA

----- END -----

Reviewed By:

Signature :

Name : Mr. Basal Jana

Designation : Executive Chemist

Authorized Signatory:

Signature :

Name : Mr. Pradip Bag

Designation : Technical in charge

The results relate only to the item(s) tested.

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The reserved part of sample(s) for chemical analysis (Non - perishable sample(s) Food, Water) shall be retained for 15 days from the date of issue of the Test Report. Perishable sample(s) shall be retained 2 days from the date of issue of the Test Report.

The reserved part of sample(s) for chemical analysis (Soil, Solid & Liquid Waste) shall be retained for 15 days as per CPCB guideline & (Air) 1 month from the date of issue of the Test Report.

The reserved part of sample(s) for Microbiological analysis (Non - perishable sample(s) Food, Sealed Water, Sealed food) shall be retained for 15 days from the date of issue of the Test Report.

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Tel. : 91 33 40143000 / 22650007 Fax : 91 33 22650008
Email : info@mitrask.com Website : www.mitrask.com

Address of Laboratory :

Building No. P- 48, Udayan Industrial Estate,
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West Bengal
Tel. : +91 7044036120
Email: udayanlab@mitrask.com



TC-6950



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ULR: TC-69502400008866F

TEST REPORT

Name & Address of Customer :

TATA STEEL LTD.

NH-55, NARENDRAPUR, MERAMANDLI, DHENKANAL
ODISHA India Pin 759129

Report No. :**Date :****Sample No. :****Date of receipt of sample:****Date(s) of performance:****Location of performance of****Reference No. & Date :****Discipline:**

MSKPL/ED/2024-25/U3519Y

22/05/2024

MSKNB/ED/2024-25/05/KF3F1Y

17/05/2024

17/05/2024 - 21/05/2024

Permanent Facility

3000151489/A06, Date - 01/04/2023

Chemical

We hereby certify that the following sample Drawn by us has been analyzed with the following results:

1. Group	Atmospheric Pollution
2. Description of sample	Noise
3. Unique Identification of sample(if any)	NA
4. Date of sampling	15/05/2024
5. Place of sampling	Sarapa
6. Environmental conditions during sampling & Transport	NA
7. Sampling Plan & Method used	IS 9989:1988
8. Identification of the personnel performing sampling by MSK	Ananda Sahoo
9. Field Equipments Used	MSK/BBSR/FIELD/SLM-01

Report No. : MSKPL/ED/2024-25/U3519Y**Sample No. :** MSKNB/ED/2024-25/05/KF3F1Y

RESULT

Chemical							
Sl No.	Parameter	UOM	Method	Result	Zone	Limit as per CPCB at Day (06.00-22.00)	Limit as per CPCB at Night (22.00-06.00)
1	Leq dB(A) day	dB(A)	IS 9989	49.2	Industrial	75	-
2	Leq dB(A) night	dB(A)	IS 9989	46.7	Industrial	-	70

Opinion : NA**Statement of Conformity** NA

----- END -----

Reviewed By:

Signature :

Name : Mr. Banal Jana

Designation : Executive Chemist

Authorized Signatory:

Signature :

Name : Mr. Pradip Bag

Designation : Technical In charge

The results relate only to the item(s) tested.

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The reserved part of sample(s) for chemical analysis (Non - perishable sample(s) Food, Water) shall be retained for 15 days from the date of issue of the Test Report. Perishable sample(s) shall be retained 2 days from the date of issue of the Test Report.

The reserved part of sample(s) for chemical analysis (Soil, Solid & Liquid Waste) shall be retained for 15 days as per CPCB guideline & (Air) 1 month from the date of issue of the Test Report.

The reserved part of sample(s) for Microbiological analysis (Non - perishable sample(s) Food, Sealed Water, Sealed food) shall be retained for 15 days from the date of issue of the Test Report.

Head Office: Shraichi Centre (5th Floor), 74B, A.J.C. Bose Road, Kolkata - 700016, West Bengal, India
Tel. : 91 33 40143000 / 22650007 Fax : 91 33 22650008
Email : info@mitrask.com Website : www.mitrask.com

Address of Laboratory :

Building No. P- 48, Udayan Industrial Estate,
3, Pagladanga Road, Kolkata 700015
West Bengal
Tel. : +91 7044036120
Email: udayanlab@mitrask.com



TC-6950



Scan for Portal

ULR: TC-695024000008865F

TEST REPORT

Name & Address of Customer :

TATA STEEL LTD.

NH-55, NARENDRAPUR, MERAMANDLI, DHENKANAL
ODISHA India Pin 759129

Report No. :

Date :

Sample No. :

Date of receipt of sample:

Date(s) of performance:

Location of performance of

Reference No. & Date :

Discipline:

MSKPL/ED/2024-25/LM518Z

22/05/2024

MSKNB/ED/2024-25/05/R43F15

16/05/2024

16/05/2024 - 21/05/2024

Permanent Facility

3000151489/A06, Date - 01/04/2023

Chemical

We hereby certify that the following sample Drawn by us has been analyzed with the following results:

1. Group	Atmospheric Pollution
2. Description of sample	Noise
3. Unique Identification of sample(if any)	NA
4. Date of sampling	14/05/2024
5. Place of sampling	Sibapur
6. Environmental conditions during sampling & Transport	NA
7. Sampling Plan & Method used	IS 9989:1988
8. Identification of the personnel performing sampling by MSK	Ananda Sahoo
9. Field Equipments Used	MSK/BBSR/FIELD/SLM-01

Report No. : MSKPL/ED/2024-25/LM518Z

Sample No. : MSKNB/ED/2024-25/05/R43F15

RESULT

Chemical							
Sl No.	Parameter	UOM	Method	Result	Zone	Limit as per CPCB at Day (06.00-22.00)	Limit as per CPCB at Night (22.00-06.00)
1	Leq dB(A) day	dB(A)	IS 9989	48.4	Industrial	75	-
2	Leq dB(A) night	dB(A)	IS 9989	46.9	Industrial	-	70

Opinion : NA

Statement of Conformity NA

----- END -----

Reviewed By:

Signature :

Name : Mr. Bansi Jana

Designation : Executive Chemist

Authorized Signatory:

Signature :

Name : Mr. Pradip Bag

Designation : Technical in charge

The results relate only to the item(s) tested.

This Test Report shall not be reproduced except in full, without the permission of Mitra S.K. Private Limited.

The reserved part of sample(s) for chemical analysis (Non - perishable sample(s) Food, Water) shall be retained for 15 days from the date of issue of the Test Report. Perishable sample(s) shall be retained 2 days from the date of issue of the Test Report.

The reserved part of sample(s) for chemical analysis (Soil, Solid & Liquid Waste) shall be retained for 15 days as per CPCB guideline & (Air) 1 month from the date of issue of the Test Report.

The reserved part of sample(s) for Microbiological analysis (Non - perishable sample(s) Food, Sealed Water, Sealed food) shall be retained for 15 days from the date of issue of the Test Report.

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West Bengal
Tel. : +91 7044036120
Email: udayanlab@mitrask.com



TC-6950



Scan for Portal

ULR: TC-695024000008864F

TEST REPORT

Name & Address of Customer :

TATA STEEL LTD.

NH-55, NARENDRAPUR, MERAMANDLI, DHENKANAL
ODISHA India Pin 759129

Report No. :**Date :****Sample No. :****Date of receipt of sample:****Date(s) of performance:****Location of performance of****Reference No. & Date :****Discipline:**

MSKPL/ED/2024-25/DN5181

22/05/2024

MSKNB/ED/2024-25/05/253F1F

16/05/2024

16/05/2024 - 21/05/2024

Permanent Facility

3000151489/A06, Date - 01/04/2023

Chemical

We hereby certify that the following sample Drawn by us has been analyzed with the following results:

1. Group	Atmospheric Pollution
2. Description of sample	Noise
3. Unique Identification of sample(if any)	NA
4. Date of sampling	13/05/2024
5. Place of sampling	Kochilamara
6. Environmental conditions during sampling & Transport	NA
7. Sampling Plan & Method used	IS 9989:1988
8. Identification of the personnel performing sampling by MSK	Ananda Sahoo
9. Field Equipments Used	MSK/BBSR/FIELD/SLM-01

Report No. : MSKPL/ED/2024-25/DN5181**Sample No. :** MSKNB/ED/2024-25/05/253F1F

RESULT

Chemical							
Sl No.	Parameter	UOM	Method	Result	Zone	Limit as per CPCB at Day (06.00-22.00)	Limit as per CPCB at Night (22.00-06.00)
1	Leq dB(A) day	dB(A)	IS 9989	48.9	Industrial	75	-
2	Leq dB(A) night	dB(A)	IS 9989	45.9	Industrial	-	70

Opinion : NA**Statement of Conformity** NA

----- END -----

Reviewed By:

Signature :

Name : Mr. Bansi Jana

Designation : Executive Chemist

Authorized Signatory:

Signature :

Name : Mr. Prady Bag

Designation : Technical In charge

The results relate only to the item(s) tested.

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The reserved part of sample(s) for chemical analysis (Soil, Solid & Liquid Waste) shall be retained for 15 days as per CPCB guideline & (Air) 1 month from the date of issue of the Test Report.

The reserved part of sample(s) for Microbiological analysis (Non - perishable sample(s) Food, Sealed Water, Sealed food) shall be retained for 15 days from the date of issue of the Test Report.

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