



TSL/MoEF&CC/BS-01/2024-03/450

May 28, 2024

The Director(s)

Ministry of Environment, Forest & Climate Change,
Integrated Regional Office,
A/3, Chandrasekharpur,
Bhubaneswar-751023

Subject: Submission of half yearly EC compliance reports of 5.6 MTPA, 3.1 MTPA & 1.5 MTPA capacity integrated steel plant of M/s. Tata Steel Limited, Meramandali for the period from October' 2023 to March' 2024.

Reference: i. EC vide letter No. J-11011/829/2008-IA-II(I); dated: 20.07.2012 of 5.6 MTPA
ii. EC vide letter No. J-11011/405/2007-IA-II(I); dated: 22.09.2008 of 3.1 MTPA
iii. EC vide letter No. J-11011/8/2005-IA-II(I); dated: 29.06.2005 of 1.5 MTPA

Dear Sir,

With reference to the captioned subject and cited reference, we are herewith submitting six monthly compliance reports for the conditions stipulated in the Environmental Clearance of 5.6 MTPA, 3.1 MTPA & 1.5 MTPA Integrated Steel Plant of M/s. Tata Steel Limited, Meramandali for the period from October' 2023 to March' 2024 along with monitoring reports for your kind perusal.

The soft copies of the aforesaid compliance reports is also being sent through mail (roez.bsr-mef@nic.in) for your kind information and necessary record please. Also copy of 5.6 MTPA, 3.1 MTPA & 1.5 MTPA EC compliance is being uploaded on MoEF&CC web site 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:** 1. The Zonal Officer, Central Pollution Control Board, Southern Conclave Block, 502, 5th & 6th Floors, 1582 Rajdanga Main Road, Kolkata – 700107.
2. The Member Secretary, SPCB, Parivesh Bhawan, A/118, Nilakantha Nagar, Unit-VIII, Odisha, Bhubaneswar-751012
3. Regional Officer, State Pollution Control Board, Angul, Odisha.

TATA STEEL LIMITED

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Compliance Status of Environmental Clearance for Expansion of Integrated Steel Plant (3.1 MTPA to 5.6 MTPA) at Tata Steel Limited, Meramandali, District Dhenkanal, Odisha vide MoEF&CC File no. J-11011/829/2008-IA-II (I) dated 20.07.2012 and subsequent amendment dated 10.09.2015, 11.05.2015, 17.09.2019 & 15.07.2022.

(For the period from October' 2023 to March' 2024)

SPECIFIC CONDITION:

SL	CONDITIONS	COMPLIANCE STATUS
i	Compliance to all the specific and general conditions stipulated for the existing plant by the Central / State Government shall be ensured and regular reports submitted to the Ministry's Regional Office at Bhubaneswar / SPCB.	<ul style="list-style-type: none"> Compliance to all stipulated specific & general conditions are being ensured. Regular compliance reports including monitoring data are being sent to MOEF&CC, CPCB and SPCB. The latest half yearly compliance report was submitted vide letter no. TSM/MoEF&CC/BS-01/2023-03/394 dated 30.11.2023.
ii	The target dates / schedule given for compliance to the conditions of environmental clearance for 3.1 MTPA Steel Plant to the State Pollution Control Board and to the Ministry shall be adhered to and reports regularly submitted to MoEF Regional Office at Bhubaneswar.	<ul style="list-style-type: none"> All conditions of EC for 3.1 MTPA steel Plant has been complied. However few conditions are being complied. Six monthly compliance report including monitoring data for the conditions stipulated in EC for 3.1 MTPA capacity integrated steel plant is being sent to MOEF&CC, CPCB and SPCB regularly. The latest half yearly compliance report was submitted vide letter no. TSM/MoEF&CC/BS-01/2023-03/394 dated 30.11.2023.
iii	The 'Consent to Operate' shall be granted by SPCB only after satisfactory compliance of the conditions stipulated in the environmental clearance and Consent granted by the SPCB for the 3.1 MTPA steel plant. A joint visit shall be conducted by MoEF Regional Office at Bhubaneswar and SPCB in this regard. Periodic review of the project regarding compliance to the conditions stipulated shall be undertaken based on the compliance report submitted by the proponent within four months. The compliance status shall be monitored by the Regional Office of the Ministry at Bhubaneswar.	<ul style="list-style-type: none"> Consent to Operate for 5.6 MTPA integrated steel plant was granted by OSPCB vide letter no 4463/IND-I-CON-5440, dated. 23.03.2023 and is valid up to 31.03.2025.
iv	Measures shall be undertaken to mitigate particulate matter levels in the ambient air and a time bound action plan shall be submitted. On-line ambient air quality monitoring and continuous stack monitoring	<ul style="list-style-type: none"> 58 nos. of bag filters, 27 nos. of ESP have been installed with each operating unit to reduce particulate matter levels in ambient air. All the pollution control equipment are being operated & monitored continuously.

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	<p>facilities for all the stacks shall be provided and sufficient air pollution control devices viz. Electro Static Precipitator (ESP), Gas cleaning plant (GCP), Bag Filter (BF) etc. shall be provided to keep the emission levels below by installing energy efficient technology.</p>	<p>Details list of pollution control devices is enclosed as Annexure-I.</p> <ul style="list-style-type: none"> • 09 numbers of Gas Cleaning scrubbers have been installed at Coke Oven I&II, Blast Furnace I&II and BOF. • To monitor the ambient air quality, 7 numbers of Continuous Ambient Air Quality Monitoring Stations (CAAQMS) have been installed in the different locations of Tata Steel Limited in consultation with SPCB, Odisha. • Implemented various improvement projects e.g., installation of new technology power supply controller at Sinter plant (HFTR- High frequency transformer rectifier) in process ESP & Micropulse in dedusting ESP of sinter plant to keep emission level below the norms. • Installation of new Dedusting system has been identified and will be implemented in phase wise manner.
v	<p>The bag filter shall be installed at the coal crusher and the screening area. Pneumatic dust handling system shall be provided at ESP hoppers in the sinter plant. The existing bag filters shall be upgraded. Fixed type water sprinklers shall be installed in the internal roads and at the material handling area to control the fugitive emission. Dry fog system shall be installed in the coal handling area. Dry sweeping (vacuum process) shall be carried out prior to water sprinkling on roads.</p>	<ul style="list-style-type: none"> • Two Bag filters, adequate no. of Dry Fog Dust Suppression System (DFDS) and Single Fluid Dedusting System (SFDS) have been provided at the coal circuit. Dry fog system have been provided in the iron ore circuit at crushing and screening points of raw material handling areas at the following locations. • Pneumatic dust handling system has been provided at ESP hoppers in the Sinter Plant-I. • Chain conveyor dust handling system has been provided at ESP hoppers of sinter plants II and III. • 10 Nos. of Mechanized Road sweepers have been deployed for dry sweeping of roads and shop floors with dust suction facility. • Double lip seals with dual sealing system have been installed in the conveying route

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		<p>of RMHS and in junction houses to minimize material spillage.</p> <ul style="list-style-type: none"> • 4 Nos. of additional DE systems have been installed in the sinter conveyor line. Industrial vacuum cleaning system is also in operation.
vi	The National Ambient Air Quality Standards issued by the Ministry vide G.S.R. No. 826(E) dated 16 th November, 2009 shall be followed.	<ul style="list-style-type: none"> • National Ambient Air Quality Standards (NAAQS) are being followed. Online real-time data is being transmitted from all seven CAAQMS. All monitoring parameters are within the norms except PM10 and PM2.5 in few locations for few days depending on the meteorological conditions and external factors such NH construction, road traffic and commercial activities etc.
vii	Gaseous emission levels including secondary fugitive emissions from all the sources shall be controlled within the latest permissible limits issued by the Ministry and regularly monitored. Guidelines / Code of Practice issued by the CPCB shall be followed.	<ul style="list-style-type: none"> • 58 nos. of bag filter, 27 nos. of ESP have been installed with each operating unit to reduce particulate matter levels in ambient air. Details list of pollution control devices is enclosed as Annexure-I. • 09 numbers of Gas Cleaning scrubbers have been installed at Coke Oven I&II, Blast Furnace I&II and BOF. • Fugitive emission and stack emission monitoring is being carried out as per CPCB guidelines and record is being maintained. Monitoring report for the period Oct'23 to Mar'24 is attached as Annexure-II and Annexure-III respectively.
viii	Proper PPE shall be provided to all the workers including contract workers.	<ul style="list-style-type: none"> • Necessary PPEs such as safety helmet, safety shoes, gloves, goggles, ear plugs and earmuffs etc. are being provided to all the workers working in the shop floors including contract workers. This is now a mandatory requirement and one of the conditions of employment in our company & also a part of personal safety action plan for each employee.
ix	The natural drain / nallah present on the northern side of the project site shall not be disturbed. The main gate of the plant beyond	<ul style="list-style-type: none"> • The natural nallah (Kisinda Nallah) present on the northern side of the plant has not been disturbed.

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	the nallah shall be shifted and the area should be developed into garden for public use.	<ul style="list-style-type: none"> • A drop gate has been provided on the main road beyond nallah to control traffic.
x	Water requirement for expansion from River Brahmani shall not exceed 3,400m ³ /hr. All the effluent should be treated and used for ash handling, dust suppression and green belt development. No effluent shall be discharged and 'zero discharge' shall be adopted. Sanitary sewage should be treated in septic tank followed by soak pit for treatment of effluent run-off from the coal washery area, settling pond shall be de-silted regularly and additional settling tank shall be constructed.	<ul style="list-style-type: none"> • Freshwater consumption during the period Oct'23 to Mar'24 for the Steel plant is 2000m³/hr which is well within the requirement of 3400 m³/hr. • All effluents are being treated in primary treatment plants (19 nos.) in steel plant attached with respective units and Effluent Treatment Plants (3 nos.) centrally. • Treated effluent is being reused for dust suppression, ash handling, make up for DRI and green area development. • Process effluent after treatment is being reused. During the period Oct'23 to Mar'24, 2944515 m³ of treated water has been recycled. • The sanitary sewage is being treated in 4Nos. of Sewage Treatment Plant and used for green belt development and low-end application in plant. • Rainwater harvesting pond of capacity 50000 m³ with HDPE liner has been constructed to store & reuse rainwater. • Zero Effluent Discharge (ZED) project is under construction stage and will be implemented in FY 25.
xi	Efforts shall be made to make use of rain water harvested. If needed, capacity of the reservoir should be enhanced to meet the maximum water requirement. Only balance water requirement shall be met from other sources.	<ul style="list-style-type: none"> • Lagoons and HDPE pond have been constructed to harvest rainwater. This water is reused in the process when required. During the period Oct'23 to Mar'24, 75162 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.
xii	Regular monitoring of influent and effluent, surface, sub-surface and ground water (including chromite) should be ensured and treated wastewater should meet the norms prescribed by the State Pollution Control Board or described under the Environment (Protection) Act whichever are more	<ul style="list-style-type: none"> • Monitoring of influent, effluent, surface and groundwater quality is being carried out regularly in Captive Environment laboratory which has been accredited by NABL vide certificate no. TC-10959 dated 02.09.2022 for 44 nos. Parameters.

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	stringent. Leachate study for the effluent generated and analysis shall also be regularly carried out and report submitted to the Ministry's Regional Office at Bhubaneswar, SPCB and CPCB.	<ul style="list-style-type: none"> Leachate study is being carried out and submitted to OSPCB periodically. The monitoring reports for the period from Oct, 2023 to Mar, 2024 are enclosed as Annexure- IV.
xiii	All the blast furnace (BF) slag shall be provided to the cement manufacturers. Scrap shall be used in steel melting shop (SMS) and SMS slag and kiln accretions shall be properly utilized. All the other solid waste including broken refractory mass shall be properly disposed off in environment-friendly manner. Fly ash shall be utilized for the cement manufacturing and filling of mined out area after carrying geo hydrological study to prevent ground water pollution.	<ul style="list-style-type: none"> The entire quantity of blast furnace slag is dispatched to cement manufacturers based on long term MoU with the cement manufacturer. Details of generation and utilization of Blast Furnace slag and LD slag are given as Annexure-V. The SMS slag (LD slag) is processed in material recovery plant (MRP) inside plant premises for separation of metallic from the non-magnetic part and sized for various applications. Some of the key applications of LD slag product are <ul style="list-style-type: none"> ➤ recovered metallics used in steel making process as a scrap, ➤ recovered fines used in sinter making process for replacement of lime, ➤ non-metallic utilization in cement manufacturing, road making, and hard sand applications. Fly ash is also being supplied to <ul style="list-style-type: none"> ➤ nearby fly ash brick manufacturing units, free of cost, for maximum utilization of ash. ➤ Cement plants through bulker. ➤ Construction of national highway (NH-55 & NH 149). <p>Balance if any is being utilized in reclamation of low lying areas & abandoned stone quarries as per guidelines of CPCB/OSPCB after grant of necessary consents.</p>
xiv	Proper handling, storage, utilization and disposal of all the solid waste shall be ensured and regular report regarding toxic metal content in the waste material and its composition, end use of solid / hazardous	<ul style="list-style-type: none"> Solid waste handling, storage, utilization and disposal are being done scientifically. The toxic metal content and compositional analysis of solid waste are being carried out

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	waste should be submitted to the Ministry's Regional Office at Bhubaneswar, SPCB and CPCB.	<p>regularly. The analysis report of solid waste is attached as Annexure-VI.</p> <ul style="list-style-type: none"> • Annual return (Form-IV) of hazardous waste is being regularly submitted to SPCB Odisha. Latest return was submitted vide letter No. TSM/SPCB/BS07/2023-07/351 dated June 19, 2023.
xv	Vehicular pollution due to transportation of raw material and finished products shall be controlled. Proper arrangements shall also be made to control dust emissions during loading and unloading of the raw material and finished product.	<ul style="list-style-type: none"> • Vehicles carrying raw materials are being covered with tarpaulin to proact during transportation. • Water sprinkling arrangement has been made by installation of 128 numbers of rotary gun sprinklers at raw material handling areas to control dust emissions during loading and unloading of raw materials at site. • Additionally, dry fog dust suppression system having 242 nos. of nozzles have been installed in entire coal circuit and at the unloading points of raw material handling area to control fugitive dust. • Five Nos. of wheel washing systems are in operation at DRI, RMHS, BFPP1, BFPP2 and WHRB. • 10 Nos. of mechanized road sweepers is in operation for dry sweeping of internal roads and shop floors with dust suction facility.
xvi	The raw materials should regularly (six monthly) be monitored for trace metals and management plan shall be submitted to SPCB and MOEF Regional Office at Bhubaneswar.	<ul style="list-style-type: none"> • The analysis of trace metals in raw materials is being done by CSIR-IMMT, Bhubaneswar. Copy of the latest report is enclosed as Annexure-VII.
xvii	All internal roads shall be black topped. The roads shall be regularly cleaned with mechanical sweepers. A 3-tier avenue plantation using native species shall be developed along the roads.	<ul style="list-style-type: none"> • 43 km of internal roads have been concreted/paved. All internal roads are being cleaned regularly by using mechanical road sweepers. • Avenue plantation using native species has been developed along the roads.

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xviii	An action plan for transfer from wet to dry quenching shall be submitted to the SPCB and MOEF Regional Office at Bhubaneswar within three months. The target date shall not be more than six years from the date of environmental clearance accorded for 3.1 MTPA Steel Plant i.e. 22.9.2008. Adequate space shall be provided for the retro fitting the dry coke quenching facility.	<ul style="list-style-type: none"> • Coke dry quenching has been commissioned at both Coke Oven – I & Coke Oven – II.
xix	Risk and tragedy Management Plan along with the mitigation measures shall be prepared and a copy submitted to the Ministry's Regional Office at Bhubaneswar, SPCB and CPCB within three months of issue of environment clearance letter.	<ul style="list-style-type: none"> • Risk and tragedy Management plan (on-site emergency plan) has been approved by the Directorate of Factories and Boilers, Odisha vide letter no. IV(IH)(3-149/11/3143 dated 19.10.2022. The approval letter is attached as Annexure-VIII.
xx	As proposed, green belt shall be developed in 33 % of plant area as per the CPCB guidelines in consultation with the DFO.	<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'24, 33% of area (This includes Plant, R&R and CSR) has been covered under green belt. Rapid afforestation using MiyaWaki method in consultation with IIT, Kharagpur has also been implemented along the boundary wall. • Plantation of saplings are done regularly based on the availability of vacant area. • During the period Oct'23 to Mar'24, 6008 nos. of plant have been planted. Proper maintenance of green coverage is being ensured throughout the year.
xxi	All the recommendations made in the Charter on Corporate Responsibility for Environment Protection (CREP) for the Steel Plants should be implemented.	<ul style="list-style-type: none"> • Tata Steel Limited has implemented all CREP recommendations. The CREP compliance is attached herewith as Annexure-XIV.
xxii	All the commitments made to the public during the Public Hearing in Public Consultation meeting held on 28th October, 2010 should be satisfactorily implemented and a separate budget for implementing the same should be allocated and information submitted to the Ministry's Regional Office at Bhubaneswar.	<ul style="list-style-type: none"> • Compliance to the commitments made to the public during Public Hearing are complied. Public hearing compliance report is attached as Annexure XV.

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xxiii	At least 5 % of the total cost of the project should be earmarked towards the Enterprise Social Commitment (ESC) based on Public Hearing issues and item-wise details along with time bound action plan should be prepared and submitted to the Ministry's Regional Office at Bhubaneswar. Implementation of such program should be ensured accordingly in a time bound manner.	<ul style="list-style-type: none"> • Various CSR activities have been undertaken since the inception of the plant by providing facilities of sanitation, drinking water, education, health care, road, communication etc. Further, CSR activities and its related expenditure has been substantially increased after acquisition of the industry by Tata Steel Limited. • We are well with in compliance of w.r.t CSR expenditure @ 2% for the company under section 135(1) of the Companies Act, 2013. • Detail CSR expenditure for the year Oct'23 to Mar'24 is enclosed as Annexure-IX.
xxiv	The company shall provide housing for construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, safe drinking water, medical health care, creche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.	All necessary infrastructure and housing facilities were provided for workers during construction phase of the plant within the site.
xxv	The company shall set up State-of-the-art-environment control/monitoring and research lab with R& D facilities for waste utilization studies. The laboratory staff shall be provided with adequate training for use and maintenance of the equipment's. An action plan in this regard shall be submitted to SPCB and MOEF Regional Office at Bhubaneswar within three months.	Monitoring of influent, effluent, surface and groundwater quality is being carried out regularly in internal Environment laboratory which has been accredited by NABL vide certificate no. TC-10959 dated 02.09.2022. for 44 nos. Parameters. An environment research group is also working for research activity in environment technology.

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GENERAL CONDITION:

SL	CONDITIONS	COMPLIANCE STATUS
i	The project authorities must strictly adhere to the stipulations made by the Orissa State Pollution Control Board and the State Government.	All relevant stipulations made by State Pollution Control Board, Odisha and the State Government are being complied with.
ii	No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment and Forests.	<p>As per MoEF&CC notification as per the MoEF& CC Notification No. S.O.980(E) dated: 02.03.2021 "no increase in pollution load" (NIPL) was studied by expert agency for the followings and the same were verified by State Pollution Control Board.</p> <p>I. Enhancement of Hot Metal production from 3.919 MTPA to 5.0 MTPA vide OSPCB letter no. 246/IND-II-NOC-NIPL/24 dated 04.01.2022. CTO was granted vide letter No 4463/IND-I-CON-5440 dated 23.03.2023 with validity upto 31.03.2025.</p> <p>II. Installation of one no. of LRF of 190 T/heat and expansion of carrying capacity of two nos. of existing ladle from 180 T/heat to 190 T/heat vide OSPCB letter no.886/IND-II-NOC-NIPL/27 dated 20.01.2022. CTO of LRF 3x190 Ton/heat was also granted by OSPCB and valid till 31.03.2025.</p>
iii	The gaseous emissions from various process units shall conform to the load/mass-based standards notified by this Ministry on 19th May, 1993 and standards prescribed from time to time. The State Board may specify more stringent standards for the relevant parameters keeping in view the nature of the industry and its size and location.	<ul style="list-style-type: none"> 58 nos. of bag filter, 27 nos. of ESP have been installed with each operating unit to reduce particulate matter levels in ambient air. Details list of pollution control devices is enclosed as Annexure-I. 09 numbers of Gas Cleaning scrubbers have been installed at Coke Oven I&II, Blast Furnace I&II and BOF.
iv	At least four ambient air quality monitoring stations shall be established in the downward direction as well as where maximum ground level concentration of PM ₁₀ , SO ₂ and NO _x are anticipated in consultation with the SPCB. Data on ambient air quality and stack	Seven CAAQM stations have been established in consultation with the SPCB in Tata Steel Ltd. Meramandali complex. Half yearly reports are being submitted to the Regional Office of MoEF&CC, SPCB and CPCB at regular

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	emission shall be regularly submitted to this Ministry including its Regional Office at Bhubaneswar and the SPCB/CPCB once in six months.	<p>intervals. Summary of AAQ monitoring report is attached as Annexure-X.</p> <p>The latest half yearly compliance report was submitted vide letter no. TSM/MoEF&CC/BS-01/2023-03/394 dated 30.11.2023.</p>
v	Industrial waste water shall be properly collected, treated so as to conform to the standards prescribed under GSR 422 (E) dated 19th May, 1993 and 31st December 1993 or as amended from time to time. The treated waste water shall be utilized for plantation purpose.	<p>The industrial as well as domestic wastewater is being treated and reused for various purposes like slag quenching, coke quenching, dust suppression and green belt development inside the plant premises.</p> <p>The monitoring reports of Industrial wastewater are being submitted to SPCB/CPCB/MOEF&CC at regular intervals.</p>
vi	The overall noise levels in and around the plant area shall be kept well within the standards 85 dB(A) by providing noise control measures including acoustic hoods, silencers, enclosures etc. on all sources of noise generation. The ambient noise levels should conform to the standards prescribed under EPA Rules, 1989 viz. 75 dB (A) (daytime) and 70 dB (A) (nighttime).	<p>Acoustic hoods, silencers, enclosures etc. on all sources of noise generation have been provided. Work zone noise monitoring is being carried out and records being maintained.</p> <p>The ambient and work zone noise level monitoring report is enclosed as Annexure-XI.</p>
vii	Occupational health surveillance of the workers should be done on a regular basis and records maintained as per the Factories Act. The workers including the contract workers shall be provided with proper personal protection equipment.	<p>Occupational health surveillance of the workers is being done periodically and records maintained as per the Factories Act.</p> <p>Necessary PPEs are being provided to all the employees including the contractual workers.</p>
viii	The company shall develop surface water harvesting structures to harvest the rain water for utilization in the lean season besides recharging the ground water table.	<p>Lagoons and HDPE pond have been constructed to harvest rainwater. This water is reused in the process when required. During the period Oct'23 to Mar'24, 75162 m³ of rainwater has been utilized in process.</p> <p>RWH potential has been studied by engaging an expert agency & the suggested projects are being implemented in phases. In the first phase 50000 Cum capacity storage pond has been constructed in the year 2021. Also, rainwater collected from DRI & RMHS area are channelized through drains into a series of</p>

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		storage pond (3 nos. of lagoons are in operation).
ix	The project proponent shall also comply with all the environmental protection measures and safeguards recommended in the EIA/EMP report. Further, the company must undertake socio-economic development activities in the surrounding villages like community development programmes, educational programmes, drinking water supply and health care etc.	<ul style="list-style-type: none"> • Compliance to all environmental protection measures as recommended in EIA / EMP report is ensured. • Various socio-economic development programs covering education, safe drinking water, sports, health care etc. are undertaken in nearby villages. • Details of breakup of CSR initiatives are enclosed as Annexure-IX.
x	The requisite funds shall be earmarked towards capital cost and recurring cost/annum for environment pollution control measures to implement the conditions stipulated by the Ministry of Environment and Forests as well as the State Government. An implementation schedule for implementing all the conditions stipulated herein shall be submitted to the Regional Office of the Ministry at Bhubaneswar. The funds so provided shall not be diverted for any other purpose.	<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.
xi	A copy of clearance letter shall be sent by the proponent to concerned Panchayat, Zila Parishad/Municipal Corporation, Urban Local Body and the local NGO, If any, from whom suggestions/representations, if any, were received while processing the proposal. The clearance letter shall also be put on the web site of the company by the proponent.	Clearance letter was sent to all concerned and uploaded in our Company web site, which can be viewed at http://www.tatasteel.com .
xii	The project proponent shall upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and shall update the same periodically. It shall simultaneously be sent to the Regional Office of the MOEF at Bhubaneswar. The respective Zonal Office of CPCB and the SPCB. The criteria pollutant levels namely PM ₁₀ , SO ₂ , NO _x (ambient levels as well as stack emissions) or critical sectoral	<p>Compliance status is uploaded in the Company's web site at http://www.tatasteel.com. The compliance report including results of monitored data is periodically submitted to the Regional Office of MoEF&CC, CPCB and SPCB, Odisha.</p> <p>Parameters being monitored in ambient air and stack emission are being displayed near the main gate of the Company.</p>

Compliance Status of Environmental Clearance for Expansion of Integrated Steel Plant (3.1 MTPA to 5.6 MTPA) at Tata Steel Limited, Meramandali, District Dhenkanal, Odisha vide MoEF&CC File no. J-11011/829/2008-IA-II (I) dated 20.07.2012 and subsequent amendment dated 10.09.2015, 11.05.2015, 17.09.2019 & 15.07.2022.

(For the period from October' 2023 to March' 2024)

	parameters, indicated for the projects, shall be monitored and displayed at a convenient location near the main gate of the Company in the public domain.	
xiii	The project proponent shall also submit six monthly reports on the status of the compliance of the stipulated environmental conditions including results of monitored data (both in hard copies as well as by e-mail) to the Regional Office of MOEF&CC, the respective Zonal Office of CPCB and the SPCB. The Regional Office of this Ministry at Bhubaneswar / CPCB / SPCB shall monitor the stipulated conditions	<ul style="list-style-type: none"> • The half yearly compliance report is being submitted to the Regional Office of the MoEF&CC, CPCB and SPCB. • The latest half yearly compliance report was submitted vide our letter no. TSM/MoEF&CC/BS-01/2023-03/394 dated 30.11.2023.
xiv	The environmental statement for each financial year ending 31 st March in Form-V as is mandated to be submitted by the project proponent to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be put on the website of the company along with the status of compliance of environmental conditions and shall also be sent to the respective Regional Office of the MOEF at Bhubaneswar by e-mail.	<ul style="list-style-type: none"> • The Environmental Statement in Form-V is being submitted to SPCB/CPCB/MOEF&CC regularly. • The Environment Statement for the FY 2022-23 was submitted vide letter no. TSL/SPCB/BS-03/2022-14/249, dated 25.09.2023.
xv	The Project Proponent shall inform the public that the project has been accorded environmental clearance by the Ministry and copies of the clearance letter are available with the SPCB and may also be seen at Website of the Ministry of Environment and Forests at http://envfor.nic.in . This shall be advertised within seven days from the date of issue of the clearance letter, at least in two local newspapers that are widely circulated in the region of which one shall be in the vernacular language of the locality concerned and a copy of the same should be forwarded to the Regional office at Bhubaneswar.	<ul style="list-style-type: none"> • The advertisement was published in both Odia & English newspapers named "The Sambad" and "The New Indian Express" respectively on dated 24.07.2012. • The same has already been communicated to the Regional Office of MOEF&CC, Bhubaneswar vide our letter no. BSL/MoEF&CC/BS-01/2012-08 dated 24.07.2012.
xvi	Project authorities shall inform the Regional Office as well as the Ministry, the date of	All the project activities related to 5.6 MTPA integrated steel plant has been completed.

Compliance Status of Environmental Clearance for Expansion of Integrated Steel Plant (3.1 MTPA to 5.6 MTPA) at Tata Steel Limited, Meramandali, District Dhenkanal, Odisha vide MoEF&CC File no. J-11011/829/2008-IA-II (I) dated 20.07.2012 and subsequent amendment dated 10.09.2015, 11.05.2015, 17.09.2019 & 15.07.2022.

(For the period from October' 2023 to March' 2024)

	financial closure and final approval of the project by the concerned authorities and the date of commencing the land development work.	Consent to Operate has been obtained from OSPCB vide letter No 4463/IND-I-CON-5440 dated 23.03.2023 with validity upto 31.03.2025.
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SPECIFIC CONDITIONS:

SL	CONDITIONS	COMPLIANCE STATUS
i	Efforts shall be made to reduce RSPM levels in the ambient air and a time bound action plan shall be submitted. Online ambient air quality monitoring and continuous stack monitoring facilities for all the stacks and sufficient air pollution control devices like ESP and Bag house etc. shall be provided to keep the emission levels below 100 mg/Nm ³ . Bag filters should be provided to the induction furnace to control the particulate emission below 100 mg/Nm ³ . Inter-locking system shall be provide to ESP's. Monitoring reports shall be submitted to the Ministry's Regional office at BBSR, CPCB, and OPCB on six monthly basis.	<ul style="list-style-type: none"> • 58 nos. of bag filter, 27 nos. of ESP have been installed with each operating unit to reduce particulate matter levels in ambient air. Details list of pollution control devices is enclosed as Annexure-I. • 20 nos. online CEMS w.r.t gas and 39 nos. online CEMS w.r.t dust have been installed and operated continuously. • To monitor the ambient air quality, we have installed 7 numbers of Continuous Ambient Air Quality Monitoring Stations (CAAQMS) in the entire complex of Tata Steel Limited in consultation with SPCB, Odisha. • Six monthly monitoring report is being submitted regularly to MoEF&CC, CPCB and SPCB. • During FY21, detail analysis was done on the various point sources, line sources & area sources & implemented various improvement project e.g. installation of new technology power supply controller at Sinter plant (HFTR- High frequency transformer rectifier in process ESP & Micro pulse in dedusting ESP of sinter plant is the first of its kind technology application in ESP).
ii	Electrostatic precipitators (ESP's) to DRI plant, waste heat recovery boiler (WHRB) and fluidized bed boiler (FBB) and bag house to blast furnace (BF) shall be provided to control gaseous emission within 100 mg/Nm ³ . The gases from the DRI Kilns and BF after recovery of heat in WHRB shall be passed through ESP to control gaseous emissions. Smoke hood and fume extraction system with cyclone and bag filters should be provided to IF, LRF and CCM to keep the dust in work zone environment within the permissible limit. Cyclone and bag filters shall be provided to SMS.	<p>Following facilities have been installed to control dust emissions:</p> <p>DRI & WHRB:</p> <ul style="list-style-type: none"> • The Plant has installed 10 nos. of DRI Kiln of 500 TPD each with WHRB system connected to 10 nos. of ESP at the hot end of the DRI Kiln and 5 nos. of De-dusting system at the cold end of the DRI kiln. <p>BLAST FURNACE:</p> <ul style="list-style-type: none"> • Two nos. of bag filter have been installed in Cast House and stock house. To keep the emission well within the norms. <p>IF, LRF & CCM:</p>

Compliance Status of Environmental Clearance of Expansion of Integrated Steel Plant (1.5 MTPA to 3.1 MTPA at Tata Steel Works, Meramandali, District Dhenkanal, Odisha vide MoEF&CC Letter nos. J-11011/829/2008-IA-II (I) dated 27.09.2008. (For the period from October' 2023 to March' 2024)

		<ul style="list-style-type: none"> Smoke hood and fume extraction system of adequate capacity have been provided to IF, LRF & CCM to keep the dust in work zone environment within the permissible limit. <p>SMS II:</p> <ul style="list-style-type: none"> Two nos. of fume extraction system along with cyclonic system and bag filters have been installed to take care of the fugitive emissions in the Steel Making Shop.
iii	All the standards prescribed for the coke oven plants shall be followed as per the latest guidelines. Proper and full utilization of coke oven gases in power plant using waste heat recovery steam generators shall be ensured and no flue gases should be discharged into the air.	<ul style="list-style-type: none"> All efforts are being taken to comply with the prescribed standards and guidelines for the coke oven facility, for which 4 and 11 nos. of bag filter installed in coke oven-1 and coke oven-2 respectively. Also, wastewater treatment plant (BOD plant) has been installed at both coke oven plant. The cleaned Coke Oven Gas (COG) is utilized in HSM, CO battery heating, Lime Plant, BF power plant and gas fired boiler for power generation. Provisions have also been made for storage of COG in gas holder tank of capacity 50,000 m³.
iv	Dry coke quenching method shall be adopted in the proposed recovery type of the coke oven within 5 years of grant of environmental clearance.	<ul style="list-style-type: none"> Coke dry quenching has been commissioned for Coke Oven – I & Coke Oven – II and now in operation.
v	Gaseous emission levels including secondary fugitive emissions from all the sources shall be controlled within the latest permissible limits issued by the Ministry and regularly monitored. Guidelines / Code of Practice issued by the CPCB shall be followed.	<ul style="list-style-type: none"> 58 nos. of bag filter, 27 nos. of ESP have been installed with each operating unit to reduce particulate matter levels in ambient air. Details list of pollution control devices is enclosed as Annexure-I. Fugitive emission and stack emission monitoring is being carried out as per CPCB guidelines and record is being maintained. Monitoring report for the period Oct'23 to Mar'24 is attached as Annexure-II and Annexure-III respectively.

Compliance Status of Environmental Clearance of Expansion of Integrated Steel Plant (1.5 MTPA to 3.1 MTPA at Tata Steel Works, Meramandali, District Dhenkanal, Odisha vide MoEF&CC Letter nos. J-11011/829/2008-IA-II (I) dated 27.09.2008. (For the period from October' 2023 to March' 2024)

vi	Bag filters, dust suppression system and extraction system shall be provided to raw materials handling areas, crusher house, junction towers, feed points, etc. to control fugitive emissions. Water sprinkling shall be done at loading and unloading points.	<ul style="list-style-type: none"> • Two bag filters, and adequate no. of DFDS and SFDS have been provided at coal circuit. • Five numbers of bag filters have also been provided in the iron ore circuit at crushing and screening points of raw material handling areas at the following locations: • Pneumatic dust handling system has been provided at ESP hoppers in the Sinter Plant-I. • Chain conveyor dust handling system has been provided at ESP hoppers of sinter plants II and III. • 242 numbers of nozzles in dry fog dust suppression system have been provided at 46 numbers of junction houses of raw material handling area to control dust emissions during loading and unloading of raw materials at site. • Further, 128 nos. of rotary gun sprinklers have been installed throughout the raw material handling yards. • 10 Nos. of Mechanized road sweepers have been deployed for dry sweeping of roads and shop floors with dust suction facility.
vii	Vehicular pollution due to transportation of raw material and finished products shall be controlled. Proper arrangements shall also be made to control dust emissions during loading and unloading of the raw material and finished product.	<ul style="list-style-type: none"> • Vehicles carrying raw materials are being covered with tarpaulin. • Water sprinkling arrangement has been made by installation of 128 numbers of rotary gun sprinklers at raw material handling areas to control dust emissions during loading and unloading of raw materials at site. • Additionally, dry fog dust suppression system having 242 nos. of nozzles have been installed in entire coal circuit and at the unloading points of raw material handling area to control fugitive dust. • Five Nos. of wheel washing systems have been installed at RMHS, BFPP1, BFPP2, WHRB and DRI.

Compliance Status of Environmental Clearance of Expansion of Integrated Steel Plant (1.5 MTPA to 3.1 MTPA at Tata Steel Works, Meramandali, District Dhenkanal, Odisha vide MoEF&CC Letter nos. J-11011/829/2008-IA-II (I) dated 27.09.2008. (For the period from October' 2023 to March' 2024)

viii	<p>Total water requirement should not exceed 1, 29,600 m³/day. Permission for drawl of 2,40,000 m³/day is obtained from Department of water resources, Govt. of Orissa, vide letter dated 4th December, 2003. No ground water shall be used. Closed circuit circulating/ cooling water shall be provided to reduce the water consumption. The wastewater from the de-mineralized (DM) plant shall be neutralized in neutralization pit. The wastewater from BF-GCP and coal washery shall be treated in thickener and used in the pig casting machine. Acidic and alkaline effluent from DM water plant shall be neutralized and reused in the plant through ash pond. Blow down from boilers and cooling tower shall be reused in the plant itself. All the other effluent shall be treated in effluent treated plant (ETP) and all the treated wastewater from process or for dust suppression, green belt development and various other activities at the sites. No wastewater shall be discharged outside the premises and zero effluent discharge shall be ensured. Domestic effluent shall be treated in existing sewage treatment plant (ETP) and used for green belt development.</p>	<ul style="list-style-type: none"> • Rate of water consumption during the period Oct'23 to Mar'24 water consumption for the Steel plant is approx. 2000 m³/hr. • All effluents are being treated in primary treatment plants (19 nos.) in steel plant attached with respective units and Effluent Treatment Plants (3 nos.) centrally. • Treated effluent is being reused for dust suppression, ash handling, make up for DRI & cooling towers and for green area development. • Process effluent after treatment is being reused. During the period Oct'23 to Mar'24, 2944515 m³ of water has been recycled. However, we are further improving the efficiency of the water management system by technology intervention to increase the utilization. • The sanitary sewage is being treated in 4 Sewage Treatment Plants and used for green belt development and low-end application in plant. • Rainwater harvesting pond of capacity 50000m³ with HDPE liner has been constructed to store & reuse rainwater. • Zero Effluent Discharge (ZED) project is under construction and will be implemented by October 2024.
ix	<p>Phenolic effluent shall be treated in BOD plant and used for quenching of hot coke. Continuous monitoring of total organic compounds shall be done at the outlet of ETP (BOD plant)</p>	<ul style="list-style-type: none"> • The Phenolic effluent is being treated in the BOD plant and treated effluent is being reused for quenching of hot Coke at Coke Oven-I. • Online analyzer has been installed to have a check on the treated water quality of the effluent generated from the BOD Plant.

Compliance Status of Environmental Clearance of Expansion of Integrated Steel Plant (1.5 MTPA to 3.1 MTPA at Tata Steel Works, Meramandali, District Dhenkanal, Odisha vide MoEF&CC Letter nos. J-11011/829/2008-IA-II (I) dated 27.09.2008. (For the period from October' 2023 to March' 2024)

x	DRI fines, coke breeze, sinter dust, GCP dust, SMS dust, Scale, Iron ore fines shall be used in sinter plant. The coal washery rejects and middling shall be used in AFBC based power plant and shall not be disposed off anywhere else. All the blast furnace slag shall be granulated and provided to cement manufactures for further utilization.	<ul style="list-style-type: none"> • DRI fines are being used in SMS and Sinter Dust, GCP dust, SMS dust, Scales, Iron Ore Fines are used in Sinter plant. • The entire quantity of blast furnace slag is dispatched to cement manufacturers based on long term MoU with the cement manufacturer. • Details of generation and utilization of Blast Furnace slag & LD Slag are given as Annexure-V. • SMS slag is being used in sinter plant after processing in metal recovery plant. • Balance slag is being used for the soling of roads.
xi	AFBC plant shall be installed before installation of sponge iron plant so that utilization of char in the AFBC boiler is ensured. All the char from DRI plant shall be utilized in AFBC boiler of power plant and no char shall be disposed off anywhere else. Unusable scrap, coal and iron ore fines will be used in SMS. All the other solid wastes including broken refractory mass and kiln accretions shall be properly disposed off in environment- friendly manner.	<ul style="list-style-type: none"> • AFBC plant is not in operation. • Char is being stored in demarcated places and utilized in CFBC boiler. • All unusable scrap, coal and iron ore fines are being utilized in SMS. • Refractory mass and kiln accretions are being properly disposed off.
xii	All the slag from SMS, EAF, LRF and IF shall be used for land filling and road making only after passing through Toxic Chemical Leachability Potential (TCLP) test. Otherwise, slag shall be disposed in secured landfill as per CPCB guidelines. Used oil shall be sold to authorized recyclers/ re-processors only.	<ul style="list-style-type: none"> • The SMS slag (LD slag) is processed in material recovery plant (MRP) for separation of metallic from the non-magnetic part and sized for various applications. Some of the key applications of LD slag product are <ul style="list-style-type: none"> ➤ recovered metallics used in steel making process as a scrap, ➤ recovered fines used in sinter making process for replacement of lime, ➤ non-mag utilization in cement manufacturing, road making, and hard sand applications. • Used oil is being sold to authorized recyclers/re-processors.

xiii	Proper handling, storage, utilization and disposal of all the solid waste shall be ensured and regular report regarding toxic metal content in the waste material and its composition, end use of solid/hazardous waste shall be submitted to Ministry's Regional office at BBSR, CPCB and OPCB.	<ul style="list-style-type: none"> • Solid waste handling, storage, utilization and disposal are being done scientifically. The toxic metal content and compositional analysis of solid waste are being carried out regularly. The analysis report of solid waste is attached as Annexure-VI. • Annual return of hazardous waste is being regularly submitted to SPCB Odisha. A copy of HW annual return for the period April'22 to March'23 is enclosed as Annexure-XII.
xiv	A time bound action plan shall be submitted to reduce solid waste its proper utilization and disposal.	<ul style="list-style-type: none"> • The solid wastes generated from various plant units are being efficiently recycled back within the plant processes. During FY24 overall solid utilization was 98%. Necessary steps are being taken for maximum utilization of solid waste.
xv	Proper utilization of fly ash shall be ensured as per Fly Ash Notification 1999 as amendment in 2003.	<ul style="list-style-type: none"> • The entire quantity of blast furnace slag is dispatched to cement manufacturers based on long term MoU with the cement manufacturer. • Details of generation and utilization of Blast Furnace slag & LD Slag are given as Annexure-V. • The SMS slag (LD slag) is processed in material recovery plant (MRP) for separation of metallic from the non-magnetic part and sized for various applications. Some of the key applications of LD slag product are <ul style="list-style-type: none"> ➤ recovered metallics used in steel making process as a scrap, ➤ recovered fines used in sinter making process for replacement of lime, ➤ non-mag utilization in cement manufacturing, road making, and hard sand applications. • Fly ash is being supplied/Used to <ul style="list-style-type: none"> ○ Nearby fly ash brick manufacturing units, free of cost, for maximum utilization of ash.

Compliance Status of Environmental Clearance of Expansion of Integrated Steel Plant (1.5 MTPA to 3.1 MTPA at Tata Steel Works, Meramandali, District Dhenkanal, Odisha vide MoEF&CC Letter nos. J-11011/829/2008-IA-II (I) dated 27.09.2008. (For the period from October' 2023 to March' 2024)

		<ul style="list-style-type: none"> ○ Cement plants through rake & bulker. ○ Construction of national highway (NH-55). ○ In filling low lying areas & abandoned stone quarries as per guidelines of CPCB/ OSPCB after grant of necessary consents.
xvi	As proposed, green belt shall be developed in 550 acres (33%) out of total 1, 664.5 acres in and around the plant as per the CPCB guidelines in consultation with DFO.	<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'24, 33% of area (This includes Plant, R&R and CSR) 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 Oct,23 to Mar,24 is 6008 nos. has been planted and details plantation is Annexure-XIII. ● Proper maintenance of green coverage is being ensured throughout the year by a dedicated horticulture team.
xvii	All the recommendations made in the Charter on Corporate Responsibility for Environment Protection (CREP) for the steel plants shall be implemented.	<ul style="list-style-type: none"> ● Tata Steel Limited has implemented all CREP recommendations. CREP compliance is attached as Annexure-XIV.

GENERAL CONDITIONS:

SL	CONDITIONS	COMPLIANCE STATUS
i	The project authorities must strictly adhere to the stipulations made by the Orissa State Pollution Control Board and the State Government.	All relevant stipulations made by SPCB and the State Government are being complied with.
ii	No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment and Forests.	<ul style="list-style-type: none"> As per MoEF&CC notification as per the MoEF& CC Notification No. S.O.980(E) dated: 02.03.2021 "no increase in pollution load" (NIPL) was studied by expert agency for the followings and the same were verified by State Pollution Control Board. <ul style="list-style-type: none"> I. Enhancement of Hot Metal production from 3.919 MTPA to 5.0 MTPA vide OSPCB letter no. 246/IND-II-NOC-NIPL/24 dated 04.01.2022. CTO was granted vide letter No 4463/IND-I-CON-5440 dated 23.03.2023 with validity upto 31.03.2025. II. Installation of one no. of LRF of 190 T/heat and expansion of carrying capacity of two nos. of existing ladle from 180 T/heat to 190 T/heat vide OSPCB letter no.886/IND-II-NOC-NIPL/27 dated 20.01.2022. CTO was granted vide letter No 531/IND-I-CON-5440 dated 09.01.2024 with validity upto 31.03.2025.
iii	The gaseous emissions from various process units shall conform to the load/mass-based standards notified by this Ministry on 19th May, 1993 and standards prescribed from time to time. The State Board may specify more stringent standards for the relevant parameters keeping in view the nature of the industry and its size and location. At no time the emission level shall go beyond the prescribed standards. Interlocking facility shall be provided so that process can be automatically stopped in case emission level exceeds the limit.	<ul style="list-style-type: none"> All the existing units have been provided with adequate air pollution control devices to keep the emission within the stipulated standards. Results of gaseous emission levels from various stacks conform to the standards and a detailed monitoring report is enclosed as Annexure-III.

Compliance Status of Environmental Clearance of Expansion of Integrated Steel Plant (1.5 MTPA to 3.1 MTPA at Tata Steel Works, Meramandali, District Dhenkanal, Odisha vide MoEF&CC Letter nos. J-11011/829/2008-IA-II (I) dated 27.09.2008. (For the period from October' 2023 to March' 2024)

iv	At least four ambient air quality monitoring stations shall be established in the downward direction as well as where maximum ground level concentration of PM10, SO2 and NOx are anticipated in consultation with the SPCB. Data on ambient air quality and stack emission shall be regularly submitted to this Ministry including its Regional Office at Bhubaneswar and the SPCB/CPCB once in six months.	<ul style="list-style-type: none"> Seven CAAQM stations have been established in consultation with the SPCB in Tata Steel Meramandali complex. Half yearly reports are being submitted to the Regional Office of MoEF&CC, SPCB and CPCB at regular intervals. Summary of AAQ monitoring report is attached as Annexure-X. The last half yearly compliance report was submitted vide letter no. TSM/MoEF&CC/BS-01/2023-03/394 dated 30.11.2023.
v	In-plant control measures for checking fugitive emissions from all the vulnerable sources shall be provided. Further, specific measures like water sprinkling around the coal stock piles and asphaltting or concreting of the roads shall be done to control fugitive emission.	<p>To have a control on fugitive emissions, following measures have taken:</p> <ul style="list-style-type: none"> Bag filters have been installed at various junction houses. Continuous sprinkling of water is being done around the coal stockpiles. Water sprinkling arrangement has been made by installation of 128 numbers of rotary gun sprinklers at raw material handling areas to control dust emissions during loading and unloading of raw materials at site. Construction of Paved Quality Concrete (PQC) roads are being made within the plant premises and is being cleaned and maintained through mechanized housekeeping systems. Periodical water sprinkling on all the internal roads within the plant premises is being done as per the planned schedule. Double lip seals with dual sealing system have been installed. Installed dust collector system in conveyor line.
vi	Industrial waste water shall be properly collected, treated so as to conform to the standards prescribed under GSR 422 (E) dated 19th May, 1993 and 31st December, 1993 or as amended form time to time. The treated waste water shall be utilized for plantation purpose.	<ul style="list-style-type: none"> The industrial as well as domestic wastewater is being treated and utilized for various purposes like slag quenching, coke quenching, dust suppression and green belt development inside the plant premises. The monitoring reports of Industrial wastewater are being submitted to

Compliance Status of Environmental Clearance of Expansion of Integrated Steel Plant (1.5 MTPA to 3.1 MTPA at Tata Steel Works, Meramandali, District Dhenkanal, Odisha vide MoEF&CC Letter nos. J-11011/829/2008-IA-II (I) dated 27.09.2008. (For the period from October' 2023 to March' 2024)

		SPCB/CPCB/MOEF&CC at regular intervals.
vii	The overall noise levels in and around the plant area shall be kept well within the standards 85 dB(A) by providing noise control measures including acoustic hoods, silencers, enclosures etc. on all sources of noise generation. The ambient noise levels should conform to the standards prescribed under EPA Rules, 1989 viz. 75 dB (A) (daytime) and 70 dB (A) (night time).	<ul style="list-style-type: none"> Acoustic hoods, silencers, enclosures etc. on all sources of noise generation have been provided. Work zone noise monitoring is being carried out and record is being maintained. A report of ambient noise levels recorded within the premises is enclosed as Annexure-XI.
viii	Occupational health surveillance of the workers should be done on a regular basis and records maintained as per the Factories Act.	<ul style="list-style-type: none"> Occupational health surveillance of the workers is being periodically done. PME once in a year, Food handler test : Once in a year. Necessary PPEs are provided to all the employees including the contractual workers.
ix	The company shall develop surface rain water harvesting structures to harvest the rain water for utilization in the lean season besides recharging the ground water table.	<ul style="list-style-type: none"> Lagoons and HDPE pond have been constructed to harvest rainwater. This water is reused in the process when required. During the period Oct'23 to Mar'24, 75162 m³ of rainwater has been utilized in process. RWH potential has been studied by engaging an expert agency & the suggested projects are being implemented in phases. In the first phase 50000 m³ capacity storage pond has been constructed in the year 2021. Also, rainwater collected from DRI & RMHS area are channelized through drains into a series of storage pond (3 nos lagoons are in operation).
x	The project proponent shall also comply with all the environmental protection measures and safeguards recommended in the EIA/EMP report. Further, the company must undertake socio-economic development activities in the surrounding villages like community development programmes, educational programmes, drinking water supply and health care etc.	<ul style="list-style-type: none"> Compliance with all environmental protection measures as recommended in EIA / EMP report is ensured. Various socio-economic development programs covering education, safe drinking water, sports and health care etc are undertaken in nearby villages. A detailed breakup of CSR initiatives is enclosed as Annexure- IX.

Compliance Status of Environmental Clearance of Expansion of Integrated Steel Plant (1.5 MTPA to 3.1 MTPA at Tata Steel Works, Meramandali, District Dhenkanal, Odisha vide MoEF&CC Letter nos. J-11011/829/2008-IA-II (I) dated 27.09.2008. (For the period from October' 2023 to March' 2024)

xi	The adequate funds shall be earmarked towards capital cost and recurring cost / annum for environment pollution control measures to implement the conditions stipulated by the Ministry of Environment and Forests as well as the State Government. The funds so provided shall not be diverted for any other purpose.	<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.
xii	The Regional Office of this Ministry at Bhubaneswar / CPCB/ OPCA shall monitor the stipulated conditions. A six monthly compliance report and the monitored data along with statistical interpretation shall be submitted to them regularly.	<ul style="list-style-type: none"> The half yearly compliance report is being submitted to the Regional Office of the MoEF&CC, CPCB and SPCB. The last half yearly compliance report was submitted vide our letter no. TSM/MoEF&CC/BS-01/2023-03/394 dated 30.11.2023.
xiii	The Project Proponent shall inform the public that the project has been accorded environmental clearance by the Ministry and copies of the clearance letter are available with the SPCB and may also be seen at Website of the Ministry of Environment and Forests at http://envfor.nic.in . This shall be advertised within seven days from the date of issue of the clearance letter, at least in two local newspapers that are widely circulated in the region of which one shall be in the vernacular language of the locality concerned and a copy of the same should be forwarded to the Regional office at Bhubaneswar.	<ul style="list-style-type: none"> The advertisement was published in both Odia & English newspapers named "The Sambad" and "The New Indian Express" respectively. The same has already been communicated to the Regional Office of MOEF&CC, Bhubaneswar vide letter no. BSL/ENV/10/08 dated 17.10.2008.
xiv	Project authorities shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities and the date of commencing the land development work.	<ul style="list-style-type: none"> Project was completed and in operation. Consent to Operate was granted vide letter no. 4463/IND-I-CON-5440 dated 23.03.2023.

SPECIFIC CONDITIONS:

SL	CONDITIONS	COMPLIANCE STATUS
i	The gaseous emissions from various process units shall conform to the load/mass based standards notified by the Ministry on 19th May, 1993 and standards prescribed from time to time. The state board may specify more stringent standards for the parameters keeping in the view the nature of the industry and its size and location. At no time the emission level should go beyond the prescribed standards. In the event of failure of any pollution control system adopted by the unit, the respective unit should not be restarted until the control measures are rectified to achieve the desired efficiency.	<ul style="list-style-type: none"> • 58 nos. of bag filter, 27 nos. of ESP have been installed with each operating unit to reduce particulate matter levels in ambient air. Details list of pollution control devices is enclosed as Annexure-I. • Results of gaseous emission levels from various stacks conform to the standards and details are enclosed as Annexure-II. • 10 Nos. of Mechanized road sweepers have been deployed to clean all concrete roads, and shop floors of individual units. • Water tankers have been deployed for water sprinkling whenever it is required. • Due to all these latest and most efficient air pollution control measures, ambient air quality in the complex is as per the AAQ standard. • 20 numbers of online gas analyzers for gaseous parameters have been provided on stacks. • 39 numbers of online dust monitors have also been installed and commissioned at the stacks. • To monitor the ambient air quality, we have installed 7 numbers of Continuous Ambient Air Quality Monitoring Stations (CAAQMS) in the entire complex of Tata Steel Limited in consultation with SPCB, Odisha.
ii	There shall be no discharge of process effluent. As reflected in the EIA/EMP report, the company shall undertake water conservation measures by recycling the water from the gas cleaning plant and cooling tower blow down. The plant design shall be based on 100% recirculation system to achieve zero discharge. The domestic waste water after treatment in STP shall be used for green belt development.	<ul style="list-style-type: none"> • Rate of water consumption during the period Oct'23 to Mar'24 water consumption for the Steel plant was 2000 m³/hr. • All effluents are being treated in primary treatment plants (19 nos.) in steel plant attached with respective units and Effluent Treatment Plants (3 nos.) centrally. • Treated water is being reused for dust suppression, ash handling, make up for DRI and for green area development. • Process effluent after treatment is being reused. During the period Oct'23 to Mar'24,

		<p>2944515 m3 of water has been recycled. However, we are further improving the efficiency of the water management system by technology intervention to increase the utilization.</p> <ul style="list-style-type: none"> • The sanitary sewage is being treated in 4 Sewage Treatment Plants and used for green belt development and low-end application in plant. • Rainwater harvesting of capacity 50000m3 with HDPE liner has been constructed to store & reuse rainwater. • Zero Effluent Discharge (ZED) project will be implemented by October 2024.
iii	In plant control measures for checking fugitive emissions from spillage/raw materials handling shall be provided. Further specific measures like provisions of dust extraction & dust suppression system for product & raw materials handling, conveyor transfer points, water sprinkling system at waste disposal area to control the fugitive emissions shall be provided. Data on fugitive emission shall be regularly monitored & records maintained.	<ul style="list-style-type: none"> • Two Bag filter, adequate no. of Dry Fog Dust Suppression System (DFDS) and Single Fluid Dedusting System (SFDS) have been provided at the coal circuit. • Dust suppression system have been provided in the iron ore circuit at crushing and screening points of raw material handling areas. • Pneumatic dust handling system has been provided at ESP hoppers in the Sinter Plant-I. • Chain conveyor dust handling system has been provided at ESP hoppers of sinter plants II and III. • 242 numbers of nozzles in dry fog dust suppression system have been provided at junction houses of raw material handling area. • Further, 128 nos. of rotary gun sprinklers have been installed throughout the raw material handling yards. • Mechanized road sweepers have been deployed for dry sweeping on roads and shop floors. • Regular monitoring of fugitive emission is carried out and report being submitted. • To improve AQI further, the company is analyzing the various point sources, line sources & area sources & continuously

Compliance Status of Environmental Clearance of Expansion of Integrated Steel Plant (1.5 MTPA to 3.1 MTPA at Tata Steel Works, Meramandali, District Dhenkanal, Odisha vide MoEF&CC Letter nos. J-11011/829/2008-IA-II (I) dated 29.06.2005. (For the period from October' 2023 to March' 2024)

		working to reduce workplace emission by standardizing maintenance practices, adopting new technology (HFTR, MFTR. Mist Gun water sprinklers, Portable Donaldson Dust extraction system) & also installation new dust extraction system wherever required.
iv	The company shall use gas from the DRI for power generation & blast furnace gas for BF Stoves, sinter plant & furnace heating. The exhaust gas from the kiln shall be cleaned by dry gas cleaning system. The waste gas shall be passed through dust settling chamber to settle the coarse dust particulate & post combustion chamber to burn the CO in the flue gas. The boiler shall utilize the waste heat for steam generation. The particulate emissions shall be controlled by installation of ESP & the particulate emissions shall not exceed 100 mg/Nm ³ .	<ul style="list-style-type: none"> The Plant has installed 10 nos. of DRI Kiln of 500 TPD each with WHRB system connected to 10 nos. of ESP at the hot end of the DRI Kiln and 5 nos. of De-dusting system at the cold end of the DRI kiln. The particulate emission from the Stack is well within the limit. The monitoring data are enclosed as Annexure-III.
v	The company shall install centralized de-dusting system to control the primary emissions from the induction furnace top as canopy hood at the top of furnace to capture secondary emissions.	<ul style="list-style-type: none"> The centralized de-dusting system has been established to control primary emissions from the induction furnace top as canopy hood to capture secondary emissions.
vi	The company shall take measures for installation of continuous ambient air quality monitoring stations and data sent electronically to SPCB/CPCB.	<ul style="list-style-type: none"> 07Nos. CAAQM stations have been established in consultation with the SPCB in Tata Steel Meramandali complex. Half yearly reports are being submitted to the Regional Office of MoEF&CC, SPCB and CPCB at regular intervals. Summary of AAQ monitoring report is enclosed as Annexure-X. The last half yearly compliance report was submitted vide letter no. TSM/MoEF&CC/BS-01/2023-03/394 dated 30.11.2023.

vii	SMS slag from induction furnace, EAF & LF shall be used for road making and railway blast. Coal washery middling and char from DRI shall be used for power generation. BF Slag should be granulated & sold to cement manufacturers. Scrap, coal & iron ore fines shall be reused. Fly ash shall be used for bricks manufacturing.	<ul style="list-style-type: none"> • The entire quantity of blast furnace slag is dispatched to cement manufacturers based on long term MoU with the cement manufacturer. • Details of generation and utilization of Blast Furnace slag & LD Slag are given as Annexure-V. • The SMS slag (LD slag) is processed in material recovery plant (MRP) for separation of metallic from the non-magnetic part and sized for various applications. Some of the key applications of LD slag product are <ul style="list-style-type: none"> ➤ recovered metallics used in steel making process as a scrap, ➤ recovered fines used in sinter making process for replacement of lime, ➤ non-mag utilization in cement manufacturing, road making, and hard sand applications. • Fly ash is being supplied/Used to <ul style="list-style-type: none"> ○ Nearby fly ash brick manufacturing units, free of cost, for maximum utilization of ash. ○ Cement plants through rake & bulker. ○ Construction of national highway (NH-55 & 149). ○ In filling low lying areas & abandoned stone quarries as per guidelines of CPCB/ OSPCB after grant of necessary consents.
viii	Resettlement & Rehabilitation plan for displacement of families shall be as per the land acquisition Act & state government guidelines.	<ul style="list-style-type: none"> • The Resettlement & Rehabilitation plan for displacement of families has already made as per the Land Acquisition Act & State Government guidelines.
ix	A green belt of adequate width density shall be developed in 195 acres of plant area. Selection of plant species as per the CPCB guidelines.	<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'24, 33% of area (This includes Plant, R&R and CSR) has been covered under green belt. Rapid

Compliance Status of Environmental Clearance of Expansion of Integrated Steel Plant (1.5 MTPA to 3.1 MTPA at Tata Steel Works, Meramandali, District Dhenkanal, Odisha vide MoEF&CC Letter nos. J-11011/829/2008-IA-II (I) dated 29.06.2005. (For the period from October' 2023 to March' 2024)

		<p>afforestation using MiyaWaki method in consultation with IIT, Kharagpur has been initiated.</p> <ul style="list-style-type: none"> Plantation of saplings are done regularly based on the availability of vacant area. During the period Oct'23 to Mar'24, 6008 nos. of plant has been planted and details plantation is Annexure-XIII. Proper maintenance of green coverage is being ensured throughout the year by a dedicated horticulture team.
x	The company shall undertake community welfare measures for the local villagers & earmark separate funds for construction of schools, hospitals, community hall for peripheral development of all the villagers located around the plant site.	<ul style="list-style-type: none"> The following community welfare measures are being undertaken. <ul style="list-style-type: none"> a. Education: School Infrastructure, education project: QUEST and drinking water at schools b. Drinking Water in the village (Through pipeline, tube well and deep bore well). c. Health: Primary Health Service through mobile medical unit and control of Dengue & Malaria are being under taken. d. A detailed breakup of CSR initiatives is enclosed as Annexure- IX.
xi	The company shall obtain forest clearance for diversion of 151.92 acres of village forest land under forest (conservation) act, 1980 before undertaking construction activity.	<ul style="list-style-type: none"> Necessary forest clearances have already been obtained vide file no. 8-84/2005-FC dated 13.11.2006 enclosed as Annexure-XVI.
xii	Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the factories act.	<ul style="list-style-type: none"> Occupational health surveillance of the workers is being periodically done. PME once in a year, Food handler test : Once in a year. Necessary PPEs are provided to all the employees including the contractual workers.
xiii	Recommendations made in the CREP shall be implemented	<ul style="list-style-type: none"> Tata Steel Limited has implemented all CREP recommendations.

Compliance Status of Environmental Clearance of Expansion of Integrated Steel Plant (1.5 MTPA to 3.1 MTPA at Tata Steel Works, Meramandali, District Dhenkanal, Odisha vide MoEF&CC Letter nos. J-11011/829/2008-IA-II (I) dated 29.06.2005. (For the period from October' 2023 to March' 2024)

xiv	Company shall keep proper housekeeping within the plant premises.	<ul style="list-style-type: none"> Various initiatives are being taken for proper housekeeping within the Plant premises. Mechanized Road Sweepers, truck mounted mix canon have also deployed to clean up roads periodically.
xv	The company shall undertake rainwater harvesting measures to harvest the rainwater for utilization in the lean season as well as to recharge the ground water table.	<ul style="list-style-type: none"> Lagoons and HDPE pond have been constructed to harvest rainwater. This water is reused in the operation process when required. During the period Oct'23 to Mar'24, 75162 m³ of rainwater has been utilized in process. RWH potential has been studied by engaging an expert agency & the suggested projects are being implemented in phases. In the first phase 50000 Cum capacity storage pond has been constructed in the year 2021. Also, rainwater collected from DRI & RMHS area are channelized through drains into a series of storage pond (3nos. of lagoons are been in operation).

GENERAL CONDITION:

SL	CONDITIONS	COMPLIANCE STATUS
i	The project authorities must strictly adhere to the stipulations made by the Orissa State Pollution Control Board and the State Government.	<ul style="list-style-type: none"> All relevant stipulations made by SPCB and the State Government are being complied.
ii	No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment and Forests.	<ul style="list-style-type: none"> As per MoEF&CC notification as per the MoEF& CC Notification No. S.O.980(E) dated: 02.03.2021 "no increase in pollution load" (NIPL) was studied by expert agency for the followings and the same were verified by State Pollution Control Board. <ul style="list-style-type: none"> I. Enhancement of Hot Metal production from 3.919 MTPA to 5.0 MTPA vide OSPCB letter no. 246/IND-II-NOC-NIPL/24 dated 04.01.2022. CTO was granted vide letter No 4463/IND-I-CON-5440 dated 23.03.2023 with validity upto 31.03.2025.

Compliance Status of Environmental Clearance of Expansion of Integrated Steel Plant (1.5 MTPA to 3.1 MTPA at Tata Steel Works, Meramandali, District Dhenkanal, Odisha vide MoEF&CC Letter nos. J-11011/829/2008-IA-II (I) dated 29.06.2005. (For the period from October' 2023 to March' 2024)

		<p>II. Installation of one no. of LRF of 190 T/heat and expansion of carrying capacity of two nos. of existing ladle from 180 T/heat to 190 T/heat vide OSPCB letter no.886/IND-II-NOC-NIPL/27 dated 20.01.2022. CTO was granted vide letter No 531/IND-I-CON-5440 dated 09.01.2024 with validity upto 31.03.2025.</p>
iii	<p>At least four ambient air quality monitoring stations shall be established in the downward direction as well as where maximum ground level concentration of PM₁₀, SO₂ and NO_x are anticipated in consultation with the SPCB. Data on ambient air quality and stack emission shall be regularly submitted to this Ministry including its Regional Office at Bhubaneswar and the SPCB/CPCB once in six months.</p>	<ul style="list-style-type: none"> • Seven CAAQM stations have been established in consultation with the SPCB in Tata Steel Meramandali integrated complex. Half yearly reports are being submitted to the Regional Office of MoEF&CC, SPCB and CPCB at regular intervals. Summary of AAQ monitoring report is attached as Annexure-X. • The last half yearly compliance report was submitted vide letter no. TSM/MoEF&CC/BS-01/2023-03/394; dated 30.11.2023.
iv	<p>Industrial wastewater shall be properly collected, treated so as to conform to the standards prescribed under GSR 422 (E) dated 19th May, 1993 and 31st December, 1993 or as amended from time to time. The treated wastewater shall be utilized for plantation purpose.</p>	<p>The industrial as well as domestic wastewater is being treated and reused in various purposes like slag quenching, coke quenching, dust suppression and green belt development inside the plant premises.</p> <p>The monitoring reports of Industrial wastewater are being submitted to SPCB/CPCB/MOEF&CC at regular intervals.</p>
v	<p>The overall noise levels in and around the plant area shall be kept well within the standards 85 dB(A) by providing noise control measures including acoustic hoods, silencers, enclosures etc. on all sources of noise generation. The ambient noise levels should conform to the standards prescribed under EPA Rules, 1989 viz. 75 dB (A) (daytime) and 70 dB (A) (nighttime).</p>	<ul style="list-style-type: none"> • Acoustic hoods, silencers, enclosures etc. on all sources of noise generation have been provided. Work zone noise monitoring is being carried out and maintained record. • A report of ambient noise levels recorded within the premises is enclosed as Annexure-XI.

Compliance Status of Environmental Clearance of Expansion of Integrated Steel Plant (1.5 MTPA to 3.1 MTPA at Tata Steel Works, Meramandali, District Dhenkanal, Odisha vide MoEF&CC Letter nos. J-11011/829/2008-IA-II (I) dated 29.06.2005. (For the period from October' 2023 to March' 2024)

vi	The project proponent shall also comply with all the environmental protection measures and safeguards recommended in the EIA/EMP report. Further, the company must undertake socio-economic development activities in the surrounding villages like community development programmes, educational programmes, drinking water supply and health care etc.	<ul style="list-style-type: none"> • Compliance to all environmental protection measures as recommended in EIA / EMP report is ensured. • Various socio-economic development programs covering education, safe drinking water, sports and health care etc. are undertaken in nearby villages. • A detailed breakup of CSR initiatives is enclosed as Annexure- IX.
vii	The project authority will provide separate fund both recurring and non-recurring to implement the conditions stipulated by the MoEF as well as the State Govt. along with the implementation schedule for all the conditions stipulated therein. The funds so provided should not be diverted for any other purposes.	<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.
viii	The Regional Office of the Ministry at Bhubaneswar / CPCB / SPCB will monitor the stipulated conditions. A six monthly compliance report and monitoring data along with statistical interpretation should be submitted to them regularly.	<ul style="list-style-type: none"> • Six monthly compliance report and monitoring data are being submitted regularly. Last report has been submitted vide letter No. TSM/MoEF&CC/BS-01/2023-03/394; dated 30.11.2023.
ix	The Project Proponent shall inform the public that the project has been accorded environmental clearance by the Ministry and copies of the clearance letter are available with the SPCB and may also be seen at Website of the Ministry of Environment and Forests at http://envfor.nic.in . This shall be advertised within seven days from the date of issue of the clearance letter, at least in two local newspapers that are widely circulated in the region of which one shall be in the vernacular language of the locality concerned and a copy of the same should be forwarded to the Regional office at Bhubaneswar.	<ul style="list-style-type: none"> • Published in Times of India (English) dated 06.07.2005 and in Samaya (Oriya) dated 07.07.2005. • The same has already been communicated to the Regional Office of MOEF&CC, Bhubaneswar.

Compliance Status of Environmental Clearance of Expansion of Integrated Steel Plant (1.5 MTPA to 3.1 MTPA at Tata Steel Works, Meramandali, District Dhenkanal, Odisha vide MoEF&CC Letter nos. J-11011/829/2008-IA-II (I) dated 29.06.2005. (For the period from October' 2023 to March' 2024)

x	Project authorities shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities and the date of commencing the land development work.	<ul style="list-style-type: none"> Project was completed and in operation. CTO was granted vide letter No 4463/IND-I-CON-5440 dated 23.03.2023 with validity upto 31.03.2025.
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LIST OF ENCLOSURES

Sl. No.	Enclosure	Details
1.	Annexure -I	List of APCDs
2.	Annexure -II	Fugitive Emission Monitoring Report
3.	Annexure -III	Gaseous Emission Monitoring Report
4.	Annexure -IV	Water Analysis Report
5.	Annexure -V	BF Slag & LD Slag Generation & Utilization Details
6.	Annexure -VI	Solid Waste Analysis Report
7.	Annexure -VII	Raw Material Analysis Report
8.	Annexure -VIII	Onsite emergency plan approval letter
9.	Annexure -IX	CSR Report
10.	Annexure -X	AAQ Monitoring Report along with 12 parameters
11.	Annexure -XI	Ambient & Work zone Noise Report
12.	Annexure -XII	Hazardous Waste Annual Return
13.	Annexure -XIII	Plantation Details
14.	Annexure -XIV	CREP Compliance
15.	Annexure -XV	PH Compliance
16.	Annexure-XVI	Forest Clearance Stage -II

DETAILS OF AIR POLLUTION CONTROL DEVICES

SL	Process	Bag filters (Nos.)	ESP (Nos.)	Other Pollution Control Devices
1.	RMHS & RMPP	02	-	Gun Sprinklers-128 nos. DFS Nozzles-242 nos. Auto DFS-24nos.
2.	Coke oven - I	04	-	Scrubber-01 nos.
3.	Coke oven - II	11	-	Scrubber-04 nos.
4.	Sinter Plant-I	01	03	-
5.	Sinter plant – II & III	08	04	-
6.	DRI	05	15	-
7.	Blast Furnace-I	03	-	Scrubber-01 nos.
8.	Blast Furnace-II	04	-	Scrubber-01 nos.
9.	Lime Plant	10	-	-
10.	SMS-II	07	-	-
11.	SMS-III	03	-	Scrubber-02 nos.
12.	Blast Furnace Power Plant-I	-	03	-
13.	Blast Furnace Power Plant-II	-	02	-
14.	Total	58	27	

SUMMARY OF FUGITIVE EMISSION RESULTS MONTHLY AVARAGE VALUES				
Period: October 2023 to March 2024				
TATA STEEL LIMITED				
Name of units	Location	PM 10 in µg/m3	Standard in µg/m3	
RMHS				
1.	Near JH-21 Yard-7 (Iron ore conveying)	402	2000	
2.	Coal Yard -7 Lucky Mineral Office	332		
3.	Infront of PCI building	547		
RMPP				
4.	Near tertiary Crushing & Screening Building Area	942	2000	
5.	Near Iron Crusher Area	623		
B.B. Plant				
6.	Storage building	606	2000	
7.	Flux crushing and screen building	656		
Coke Oven-I				
8.	Fine crusher station	622	4000	
9.	Secondary crusher	583		
Coke Oven-II				
10.	Coke treatment building	610	4000	
11.	Coal crushing building	747		
DRI				
12.	Near PSB-1 building	1200	2000	
13.	Near PSB-2 building	1150		
14.	Near PSB-3 building	983		
15.	Near PSB- 4 building	830		
16.	Near PSB-5 building	805		
Sinter Plant I				
17.	Near proportionating Building	402	2000	
18.	Near SP-1 Mixing House	400		
Sinter Plant II				
19.	Near SP-2 chimney Backside area	300		
20.	Near 7003 conveyor Belt	482		
Sinter Plant III				
21.	Near cooler SP-3 D/15	310		
22.	Near Chiller Plant SP-2,3 & parking area	302		
Blast Furnace-I				
23.	Near Stock House	765	4000	
24.	Near Cast house Area	448		
Blast Furnace-II				

Annexure-II

25.	Near Cast house Entrance	250	3000
26.	Near Slug pit area	308	
27.	Stock House Near ECR Building	1207	
Lime Plant			
28.	Near Screen Area-1	1357	-
SMS-II			
29.	SMS-2 Furnace area	545	4000
SMS-III			
30.	BOF Furnace area	283	3000
HSM			
31.	Near Coil Yard area	298	-
CRM			
32.	Near canteen area	245	-
BFPP-2			
33.	Near Ash silo Area	580	3000
BFPP-1			
34.	Near Ash silo Area	588	4000
110 MW			
35.	Near Ash silo Area	973	-
IBMD			
36.	BOF sludge yard	448	-
37.	Near Scarp dumping yard	340	

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

SUMMARY OF STACK MONITORING

Period: From October 23 to March, 24

S.N	Stack Attached to	Average Monthly Result of Particulate Matter in mg/Nm ³						Standard as per CTO
		Oct'23	Nov'23	Dec'23	Jan'24	Feb'24	Mar'24	
1	AFBC	SD	SD	SD	SD	SD	SD	-
2	Sinter Plant -1 (85 M2 ESP)	24.4	28.9	28.9	29.6	25.4	25.5	100
3	Blast Furnace –I, Cast House	21.2	28.2	16.4	16.2	15.5	16	100
4	Blast Furnace –I, Stock House	9.6	10.4	8.2	6.2	6.7	6.6	100
5	SMS- 1	Shut Down (Plant not in Operation)						100
6	SMS 2 (FES 1)	19.8	14.2	10.7	4.6	6.3	3.0	100
7	SMS 2 (FES 2)	13.8	19.8	18.3	20.6	24.0	24.4	100
8	BFPP ESP 1	16.5	12.5	16.5	14.4	13.5	12.8	50
9	BFPP ESP 2	29.9	SD	39.3	36.4	29.8	29.8	50
10	BFPP ESP 3	20.7	15.3	47.4	14.6	SD	SD	50
11	Sinter Plant- 2	33.0	34.5	31.0	31.2	32.6	28.7	50
12	Sinter Plant- 3	40.2	37.4	29.2	29.2	36.8	39.7	50
13	SMS- 3 BOF (secondary chimney)	6.0	5.2	11.3	13.2	13.4	9.9	50
14	BFPP- 2 Boiler- 2	17.4	12.6	12.9	11.4	19.7	6.0	50
15	BFPP- 2 Boiler- 3							50
16	Coke oven (Battery- 1)	31.3	27.6	20.8	20.4	24.2	27.0	50
17	Coke oven (Battery- 2)	20.1	19.3	15.1	16.6	22.6	26.6	50
18	Coke oven- 2 (Battery- 2)	23.4	24.0	24.6	24.8	23.0	23.5	50
19	Blast Furnace –2, Cast House	8.2	10.8	9.4	10.8	8.8	9.3	50
20	Blast Furnace –2, Stock House	11.5	12.4	8.9	3.5	2.6	3.3	50
21	WHRB-1	14.7	13.4	18.0	25.2	27.4	31.4	50
22	WHRB-2	14.8	25.7	27.1	15.5	26.5	31.9	50
23	WHRB-3	SD	10.2	16.9	34.1	20.5	19.3	50
24	WHRB-4	SD	7.2	28.4	25.7	22.0	12.7	50
25	WHRB-5	12.2	12.7	15.2	22.7	SD	18.9	50
26	WHRB-6	22.2	17.1	13.4	14.9	15.4	18.7	50
27	WHRB-7	21.5	24.2	23.6	21.8	22.8	27.8	50
28	WHRB-8	SD	18.7	17.1	20.5	11.1	5.7	50
29	WHRB-9	20.9	20.1	20.6	9.0	10.5	13.8	50
30	WHRB-10	19.1	15.2	SD	SD	11.4	17.5	50
31	DRI, Dedusting- 1	20.1	19.6	18.5	26.3	15.9	16.2	100
32	DRI, Dedusting- 2	SD	13.5	21.3	22.3	24.2	22.8	100
33	DRI, Dedusting- 3	22.2	21.0	22.6	14.2	13.3	18.9	100
34	DRI, Dedusting- 4	6.4	5.4	6.9	7.9	7.1	7.3	100
35	DRI, Dedusting- 5	24.1	20	13.6	16.6	21.9	29.8	100

SD- Shut Down (Plant not in Operation)

SUMMARY OF STACK MONITORING

Period: From October 2023 to March 2024

Month		Oct'23		Nov'23		Dec'23		Jan'24		Feb'24		March'24	
S.N.	Stack Attached to	Result in mg/Nm3											
		SO ₂	NO _x	SO ₂	NO _x	SO ₂	NO _x	SO ₂	NO _x	SO ₂	NO _x	SO ₂	NO _x
1	BFPP ESP 1	1097	162	1098	169	864	146	1112	166	1244	164	1333	173
2	BFPP ESP 2	674	142	SD		976	278	992	290	1100	348	1178	408
3	BFPP ESP 3	702	302	929	353	SD		723	188	SD		SD	
4	Sinter Plant- 2	182	91.2	204	86.1	198	86	237	98.4	256	109	276	210
5	Sinter Plant- 3	410	372	353	206	242	58.1	435	180	324	108	296	215
6	BFPP- 2 Boiler- 2	896	58.9	896	58.9	904	62.7	904	62.7	933	42.3	1122	62.4
7	BFPP- 2 Boiler- 3												
8	Coke oven (Battery-1)	54	234	274	323	150	232	27.5	313	83.2	269	59.5	282
9	Coke oven (Battery-2)	113	395	284	427	130	321	15.5	207	27.0	97.6	11.5	122
10	Coke oven- 2 (Battery- 2)	56.5	132	56.5	116	56.5	125	21.3	24.5	25.9	30.2	95.3	33.5
11	WHRB-1	391	29.7	661	52.3	851	55.3	799	55.6	751	47.7	821	49.8
12	WHRB-2	594	29	582	31.5	582	31.5	351	67	764	46.0	660	46.0
13	WHRB-3	SD		291	51.3	291	51.3	291	51.3	274	38.0	343	30.5
14	WHRB-4	SD		349	34.9	349	125.1	472	36	82	5.4	60.2	95.4
15	WHRB-5	421	29.7	516	33	871	21.8	414	19.9	SD		646	29.1
16	WHRB-6	485	5.26	485	43.9	485	43.9	416	54.1	367	41.3	158	76.7
17	WHRB-7	475	40.3	475	59.9	512	33	502	108	631	105	465	146
18	WHRB-8	598	76.3	644	45.3	644	45.3	644	45.3	SD		388	36.1
19	WHRB-9	539	83.9	576	45	471	54.3	821	32.6	800	31.5	281	26.6
20	WHRB-10	292	28.1	378	31.1	SD		158	92.6	357	142	378	31.8

SD: Shut Down (Plant not in Operation); UM: Under Maintenance

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

Summary of Surface Water Quality Analysis

(Period: From October 2023 to December 2023)

S.N	Parameter	Unit	Kishinda Nala		Lingra Nala		Brahamani River	
			U/S	D/S	U/S	D/S	U/S	D/S
1	pH Value	-	6.88-7.4	6.62-7.50	6.69-7.50	6.69-7.12	6.87-7.58	6.69-7.0
2	Colour	Hazen	BDL(DL:0.005)	BDL(DL:1.0)	BDL(DL:1.0)	BDL(DL:1.0)	BDL(DL:1.0)	BDL(DL:1.0)
3	Temperature	Deg C	25-25.4	25-25.2	25-25.2	25-25.2	25-25.2	25-25.2
4	Total Suspended Solids		10.6-24.1	2.8-28.5	2.8-5.6	4.2-5.2	4.2-30.2	4.1-40.8
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	BDL(DL:2.0)	BDL(DL:2.0)	BDL(DL:2.0)	BDL(DL:2.0)	BDL(DL:2.0)	BDL(DL:2.0)
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	24-64.64	24.48-40	40-40.8	40-40.8	16.6-24.48	16.6-24.48
10	Chlorides as Cl	mg/l	19.79-39.59	19.79-29.69	19.79-29.69	24.74-29.69	14.85-19.79	14.85-19.79
11	COD	mg/l	11.52-23	7.7-19.2	7.7-11.5	11.5-15.4	15.4-19.2	19.2-30.7
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	0.89-4.45	0.25-0.92	0.25-0.39	0.28-0.30	0.21-0.32	0.24-0.35
15	Hexa Chromium as Cr +6	mg/l	BDL(DL:.01)	BDL(DL:.01)	BDL(DL:.01)	BDL(DL:.01)	BDL(DL:.01)	BDL(DL:.01)
16	Iron as Fe	mg/l	0.34-3.1	0.08-1.8	0.08-0.28	0.28-0.30	0.18-2.59	0.16-3.07
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	0.08-0.16	0.08-0.1	0.1-0.11	BDL(DL:0.05)	0.08-0.12	0.11-0.15
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:.3)	BDL(DL:.3)	BDL(DL:.3)	BDL(DL:.3)	BDL(DL:.3)	BDL(DL:.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)

Summary of Surface Water Quality Analysis
(Period: From January 2024 to March 2024)

S.N	Parameter	Unit	Kishinda Nala		Lingra Nala		Brahamani River	
			U/S	D/S	U/S	D/S	U/S	D/S
1	pH Value	-	7.33 - 7.8	6.66 – 6.8	7.5 – 7.62	6.97 – 7.66	6.7 – 6.89	7.2 - 7.4
2	Colour	Hazen	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:1.0)	BDL (DL:1.0)
3	Temperature	Deg C	< 26	< 26	< 26	< 26	< 26	< 26
4	Total Suspended Solids	mg/l	2.8 - 14	3.1 -4.2	<2.5 – 3.4	3.5 – 4.9	3.8-5.2 – 4.9	3.5 – 4.8
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	BDL (DL:2.0)	BDL (DL:2.0)	BDL (DL:2.0)	BDL (DL:2.0)	BDL (DL:2.0)	BDL (DL:2.0)
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	47.52 – 80.8	47.52 – 72.72	39.6 – 60.6	47.52 – 60.6	4.9 – 20.2	15.84 – 20.2
10	Chlorides as Cl	mg/l	29.99 - 98.97	68.58 – 88.17	29.39 – 54.43	48.98 – 58.78	14.7 - 23.5	14.7 - 29.39
11	COD	mg/l	16 - 27	8 - 16	7.7 - 20	11.5 - 16	8.0 - 15.4	12 – 19.2
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	BDL (DL:0.1	BDL (DL:0.1	BDL (DL:0.1	BDL (DL:0.1	BDL (DL:0.1	BDL (DL:0.1
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	BDL (DL:0.005)	BDL (DL:0.005)	BDL (DL:0.005)	BDL (DL:0.005)	BDL (DL:0.005)	BDL (DL:0.005)
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	0.08 - 0.22	BDL (DL:0.05)	BDL (DL:0.05)	BDL (DL:0.05)	BDL (DL:0.05)	BDL (DL:0.05)
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 October 2023 to March 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	7.0-7.56	12-56	3.1-28
2.	AEL STP	7.05-7.74	11-74	10-28
3.	BF-1 STP	6.88-7.85	<2.5-41	<2.0-10.7

Summary of Effluent Treatment Plant Analysis
(Period: From October 2023 to March 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)	6.90-7.98	2.6-54	<4.0-23	<2.0-5.4	<5	0.29-1.9
2.	ETP-2 (Outlet)	7.01-7.49	3.5-43	11-29	2.4-6.8	<5	0.23-0.56
3.	ETP-3 (Outlet)	6.8-8.32	3.7-59	16-64	3.7-19	<5	0.37-2.5
4.	CRM (ETP Outlet)	7.01-7.56	2.5-42	<4.0-180	<2.0-26.7	<5	0.22-1.1
5.	BF-1 (Thickener Outlet)	7.04-7.60	57-125	45-216	-	<5	3.5-94
6.	BF-2 (Thickener Outlet)	6.74-7.36	6.9-63	8-80	-	<5	0.21-1.6
7.	BOF (Thickener Outlet)	7.2-7.52	19-99	3.5-85	-	<5	10-48

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)	6.69-7.86	3.7-77	28-190	7.2-26.7	<5.0	<0.02-0.18	0.17-0.48
9.	Coke Oven-2 (BOD-2 Outlet)	6.97-7.56	10-82	24-160	6.1-43	<5.0	<0.02-0.44	0.01-0.43

Summary of ground water level monitoring report inside plant premises

(Period: From October 2023 to March 2024)

S.N.	Location with description	Sample Code	Depth of Monitoring Bore Well	Longitude	Latitude
1	Colony near STP	GW-1	165ft	20°49.045'	85°15.734'
2	RMHS Near Wagon Tippler	GW-2	300ft	20°47.752'	85°15.993'
3	Near Blast Furnace-2	GW-3	162ft	20°47.25'	85°15.613'
4	Near Railway bridge	GW-4	156ft	20°48.920'	85°15.858'

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	-	6.74	7.20	6.90	6.7	6.5-8.5
2	Colour	Hazen	Colourless	Colourless	Colourless	Colourless	15
3	Odour	-	Unobjectionable	Unobjectionable	Unobjectionable	Unobjectionable	-
4	T. Hardness (as CaCO ₃)	mg/l	420	164.9	388	388	300
5	Calcium as Ca	mg/l	93.12	38.8	93.12	93.12	75
6	Magnesium as Mg	mg/l	37.25	16.3	37.25	37.25	30
7	Iron as Fe	mg/l	0.09	0.14	0.08	0.09	0.3
8	Chloride as Cl	mg/l	79.18	29.69	49.48	79.18	250
9	Fluoride as F-	mg/l	1.21	0.24	0.72	1.21	1
10	Dissolved solids	mg/l	560	196	490	560	500
11	Nitrate as NO ₃	mg/l	0.86	0.84	1.2	0.86	45
12	Chromium as Cr+6	mg/l					0.05
13	Alkalinity as CaCO ₃	mg/l	380	150	220	380	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
					March'24
1	Kharagprasad	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

November 2023

[illegible]

25	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)	BDL (DL:0.001)	BDL (DL:0.001)	BDL (DL:0.001)
26	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)	BDL(DL:0.01)	BDL(DL:0.01)	BDL(DL:0.01)
27	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)	BDL (DL:0.005)	BDL (DL:0.005)	BDL (DL:0.005)
28	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)	BDL (DL:0.0002)	BDL (DL:0.0002)	BDL (DL:0.0002)
29	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)	BDL(DL:0.01)	BDL(DL:0.01)	BDL(DL:0.01)
30	Total 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)	BDL (DL:0.005)	BDL (DL:0.005)	BDL (DL:0.005)
31	E. coli	/100ml	Not Detected	Not Detected	Not Detected	Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected

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	<5	<5	<5	<5	<5	<5	<5	<5	<5
4	Turbidity	N.T. U	3.45	1.7	2.70	0.75	1.19	1.66	7.75	1.10	4.71
5	Total Dissolved Solids (as TDS)	mg/l	277.0	1268.0	493	503	186.0	7.29	565.0	484.0	591.0
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	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	1.0	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	12.3	182.0	3.76	49.6	3.12	12.1	10.63	3.58	17.2

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 as CaCO3	mg/l	160	608.0	332.0	316.0	104.0	632.0	324.0	372.0	436.0
24	Zinc as Zn	mg/l	0.057	0.079	0.084	0.073	0.227	0.064	0.064	0.089	0.108
25	Cadmium as Cd	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)
26	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)	BDL(DL:0.01)	BDL(DL:0.01)	BDL(DL:0.01)
27	Lead as Pb	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)
28	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)	BDL (DL:0.0002)	BDL (DL:0.0002)	BDL (DL:0.0002)
29	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)	BDL(DL:0.01)	BDL(DL:0.01)	BDL(DL:0.01)
30	Total 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)	BDL (DL:0.005)	BDL (DL:0.005)	BDL (DL:0.005)
31	E. coli	/100ml	Not Detected	Not Detected	Not Detected	Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected

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

Details of BF Granulated Slag Generation and Utilization
(Period: October 2023 – March 2024)

Month	Quantity Generated (MT)	Quantity Dispatched (MT)
Oct'23	173969	173969
Nov'23	115424	115424
Dec'23	162768	162768
Jan'24	153463	153463
Feb'24	169389	169389
Mar'24	163921	163921
Total	938934	938934

Details of LD Slag Generation and Utilization
(Period: October 2023 – March 2024)

Month	Quantity Generated (MT)	Quantity Dispatched (MT)
Oct'23	86419	198834
Nov'23	86313	254799
Dec'23	87746	302279
Jan'24	85206	316090
Feb'24	74506	295996
Mar'24	89097	301494
Total	509287	1669492

NB. 1160205MT of legacy LD Slag has been utilized during this period.



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NITR/CI+/2024/L10468 Dt. 23.05.2024

**BF-1 SLAG QUALITY ANALYSIS REPORT**

1. Name of the Industry : M/s. TATA Steel, Meramandali, Odisha
 2. Sampling Location : BF-1 SLAG
 3. Date of Sampling : 1st March, 2024
 4. Date of Analysis : 20th March, 2024
 5. Sample Collected By : TATA STEEL, MERAMANDALI

Sl. No.	Parameter	Testing Methods	Unit	Analysis Results
COMPOSITIONAL ANALYSIS REPORT				
1	SiO ₂	Photometric/XRF	%	32.64±0.5
2	FeO	Photometric/XRF	%	0.89±0.1
3	Al ₂ O ₃	Photometric/XRF	%	22.26±0.5
4	CaO	Photometric/XRF	%	32.46±0.5
5	MgO	Photometric/XRF	%	8.20±0.5
6	MnO	Photometric/XRF	%	0.018±0.01
7	Sulphur	Photometric/XRF	%	0.39±0.01
8	TiO ₂	Photometric/XRF	%	0.837±0.01
9	K ₂ O	Photometric/XRF	%	0.795±0.01
10	Basicity	Photometric/XRF	-----	1.02

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BF-1 SLAG QUALITY ANALYSIS REPORT

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2. Sampling Location : BF-1 SLAG
3. Date of Sampling : 1st March, 2024
4. Date of Analysis : 20th March, 2024
5. Sample Collected By : TATA STEEL, MERAMANDALI

Sl. No.	Parameter	Testing Methods	Unit	Analysis Results
TRACE ANALYSIS REPORT				
1	Hg	US-EPA Method	mg/Kg	0.932
2	As	US-EPA Method	mg/Kg	396
3	Se	US-EPA Method	mg/Kg	6.8
4	Sb	US-EPA Method	mg/Kg	198
5	Ba	US-EPA Method	mg/Kg	172
6	Cd	US-EPA Method	mg/Kg	53.02
7	Cr	US-EPA Method	mg/Kg	39.26
8	Cr(VI)	US-EPA Method	mg/Kg	0.924
9	Pb	US-EPA Method	mg/Kg	1.01
10	Mn	US-EPA Method	mg/Kg	1.009
11	Ag	US-EPA Method	mg/Kg	3.06
12	Co	US-EPA Method	mg/Kg	181
13	Cu	US-EPA Method	mg/Kg	522
14	Mo	US-EPA Method	mg/Kg	BDL
15	Ni	US-EPA Method	mg/Kg	79.32
16	V	US-EPA Method	mg/Kg	BDL
17	Zn	US-EPA Method	mg/Kg	84

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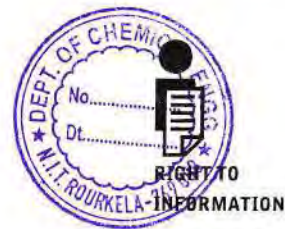
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BF-1 GCP SLUDGE QUALITY ANALYSIS REPORT

1. Name of the Industry : M/s. TATA Steel, Meramandali, Odisha
2. Sampling Location : BF-1 GCP SLUDGE
3. Date of Sampling : 1st MARCH, 2024
4. Date of Analysis : 20th MARCH, 2024
5. Sample Collected By : TATA STEEL, Meramandali

Sl. No.	Parameter	Testing Methods	Unit	Analysis Results
COMPOSITIONAL ANALYSIS REPORT				
1	pH	-----	-----	7.7
2	MOISTURE	-----	%	38
3	Cr	Photometric/XRF	%	1.63±0.5
4	Fe	Photometric/XRF	%	30.28±0.5
5	Ni	Photometric/XRF	%	2.63±0.1
6	Mn	Photometric/XRF	%	1.44±0.01
7	F	Photometric/XRF	PPM	1.19±0.01

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2. Sampling Location : BF-1 GCP SLUDGE
3. Date of Sampling : 1st MARCH, 2024
4. Date of Analysis : 20th MARCH, 2024
5. Sample Collected By : TATA STEEL, Meramandali

Sl. No.	Parameter	Testing Methods	Unit	Analysis Results
TRACE ANALYSIS REPORT				
1	Hg	US-EPA Method	mg/Kg	0.546
2	As	US-EPA Method	mg/Kg	13.16
3	Se	US-EPA Method	mg/Kg	0.654
4	Sb	US-EPA Method	mg/Kg	1.121
5	Ba	US-EPA Method	mg/Kg	123.9
6	Cd	US-EPA Method	mg/Kg	5.9
7	Cr	US-EPA Method	mg/Kg	128.6
8	Cr(VI)	US-EPA Method	mg/Kg	0.869
9	Pb	US-EPA Method	mg/Kg	0.94
10	B	US-EPA Method	mg/Kg	311.9
11	Ag	US-EPA Method	mg/Kg	1.07
12	Co	US-EPA Method	mg/Kg	31.2
13	Cu	US-EPA Method	mg/Kg	54.6
14	Mo	US-EPA Method	mg/Kg	5.48
15	Ni	US-EPA Method	mg/Kg	354.51
16	V	US-EPA Method	mg/Kg	92.08
17	Zn	US-EPA Method	mg/Kg	85.012
18	F ⁻	US-EPA Method	mg/Kg	0.028
19	CN ⁻	US-EPA Method	mg/Kg	0.031
20	Hydrazine	US-EPA Method	mg/Kg	0.0103

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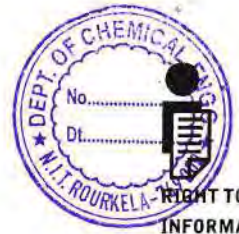
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BF-1 FLUE DUST QUALITY ANALYSIS REPORT

1. Name of the Industry : M/s. TATA Steel, Meramandali, Odisha
2. Sampling Location : BF-1FLUE DUST
3. Date of Sampling : 1st MARCH, 2024
4. Date of Analysis : 20th MARCH, 2024
5. Sample Collected By : TATA STEEL, Meramandali

Sl. No.	Parameter	Testing Methods	Unit	Analysis Results
COMPOSITIONAL ANALYSIS REPORT				
1	SiO ₂	Photometric/XRF	%	7.852±0.5
2	Fe ₂ O ₃	Photometric/XRF	%	51.46±0.1
3	Al ₂ O ₃	Photometric/XRF	%	2.59±0.5
4	CaO	Photometric/XRF	%	1.831±0.5
5	MgO	Photometric/XRF	%	1.601±0.5
6	MnO	Photometric/XRF	%	0.17±0.01
7	Na ₂ O	Photometric/XRF	%	0.076±0.01
8	TiO ₂	Photometric/XRF	%	0.069±0.01
9	P ₂ O ₅	Photometric/XRF	%	0.008±0.01
10	K ₂ O	Photometric/XRF	%	0.021±0.01
11	C	Photometric/XRF	%	30.23±0.5
10	LOI	-----	%	5.34±0.5

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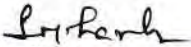
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BF-1 FLUE DUST QUALITY ANALYSIS REPORT

1. Name of the Industry : M/s. TATA Steel, Meramandali, Odisha
2. Sampling Location : BF-1FLUE DUST
3. Date of Sampling : 1st MARCH, 2024
4. Date of Analysis : 20th MARCH, 2024
5. Sample Collected By : TATA STEEL, Meramandali

Sl. No.	Parameter	Testing Methods	Unit	Analysis Results
TRACE ANALYSIS REPORT				
1	Hg	US-EPA Method	mg/Kg	0.09
2	As	US-EPA Method	mg/Kg	31.6
3	Se	US-EPA Method	mg/Kg	3.45
4	Sb	US-EPA Method	mg/Kg	2.14
5	Ba	US-EPA Method	mg/Kg	192.5
6	Cd	US-EPA Method	mg/Kg	0.83
7	Cr	US-EPA Method	mg/Kg	81.49
8	Cr(VI)	US-EPA Method	mg/Kg	0.936
9	Pb	US-EPA Method	mg/Kg	58.20
10	Mn	US-EPA Method	mg/Kg	64.89
11	Ag	US-EPA Method	mg/Kg	1.89
12	Co	US-EPA Method	mg/Kg	13.4
13	Cu	US-EPA Method	mg/Kg	28.023
14	Mo	US-EPA Method	mg/Kg	4.41
15	Ni	US-EPA Method	mg/Kg	33.19
16	V	US-EPA Method	mg/Kg	163.55
17	Zn	US-EPA Method	mg/Kg	120.17


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BF-2 SLAG QUALITY ANALYSIS REPORT



1. Name of the Industry : M/s. TATA Steel, Meramandali, Odisha
2. Sampling Location : BF-2 SLAG
3. Date of Sampling : 1st March, 2024
4. Date of Analysis : 20th March, 2024
5. Sample Collected By : TATA STEEL, MERAMANDALI

Sl. No.	Parameter	Testing Methods	Unit	Analysis Results
COMPOSITIONAL ANALYSIS REPORT				
1	SiO ₂	Photometric/XRF	%	31.92±0.5
2	FeO	Photometric/XRF	%	0.821±0.1
3	Al ₂ O ₃	Photometric/XRF	%	21.98±0.5
4	CaO	Photometric/XRF	%	33.02±0.5
5	MgO	Photometric/XRF	%	7.99±0.5
6	MnO	Photometric/XRF	%	0.017±0.01
7	Sulphur	Photometric/XRF	%	0.379±0.01
8	TiO ₂	Photometric/XRF	%	0.829±0.01
9	K ₂ O	Photometric/XRF	%	0.789±0.01
10	Basicity	Photometric/XRF	-----	0.999

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BF-2 SLAG QUALITY ANALYSIS REPORT

1. Name of the Industry : M/s. TATA Steel, Meramandali, Odisha
2. Sampling Location : BF-2 SLAG
3. Date of Sampling : 1st March, 2024
4. Date of Analysis : 20th March, 2024
5. Sample Collected By : TATA STEEL, MERAMANDALI

Sl. No.	Parameter	Testing Methods	Unit	Analysis Results
TRACE ANALYSIS REPORT				
1	Hg	US-EPA Method	mg/Kg	0.947
2	As	US-EPA Method	mg/Kg	389
3	Se	US-EPA Method	mg/Kg	6.7
4	Sb	US-EPA Method	mg/Kg	196
5	Ba	US-EPA Method	mg/Kg	169
6	Cd	US-EPA Method	mg/Kg	52.89
7	Cr	US-EPA Method	mg/Kg	38.47
8	Cr(VI)	US-EPA Method	mg/Kg	0.918
9	Pb	US-EPA Method	mg/Kg	1.02
10	Mn	US-EPA Method	mg/Kg	1.008
11	Ag	US-EPA Method	mg/Kg	3.07
12	Co	US-EPA Method	mg/Kg	182
13	Cu	US-EPA Method	mg/Kg	524
14	Mo	US-EPA Method	mg/Kg	BDL
15	Ni	US-EPA Method	mg/Kg	78.42
16	V	US-EPA Method	mg/Kg	BDL
17	Zn	US-EPA Method	mg/Kg	86

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BF-2 GCP SLUDGE QUALITY ANALYSIS REPORT

1. Name of the Industry : M/s. TATA Steel, Meramandali, Odisha
2. Sampling Location : BF-2 GCP SLUDGE
3. Date of Sampling : 1st MARCH, 2024
4. Date of Analysis : 20th MARCH, 2024
5. Sample Collected By : TATA STEEL, Meramandali

Sl. No.	Parameter	Testing Methods	Unit	Analysis Results
COMPOSITIONAL ANALYSIS REPORT				
1	pH	-----	-----	7.6
2	MOISTURE	-----	%	37.50
3	Cr	Photometric/XRF	%	1.599±0.5
4	Fe	Photometric/XRF	%	30.264±0.5
5	Ni	Photometric/XRF	%	2.629±0.1
6	Mn	Photometric/XRF	%	1.439±0.01
7	F	Photometric/XRF	PPM	1.184±0.01

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Sl. No.	Parameter	Testing Methods	Unit	Analysis Results
TRACE ANALYSIS REPORT				
1	Hg	US-EPA Method	mg/Kg	0.549
2	As	US-EPA Method	mg/Kg	13.19
3	Se	US-EPA Method	mg/Kg	0.661
4	Sb	US-EPA Method	mg/Kg	1.127
5	Ba	US-EPA Method	mg/Kg	124.1
6	Cd	US-EPA Method	mg/Kg	5.86
7	Cr	US-EPA Method	mg/Kg	127.5
8	Cr(VI)	US-EPA Method	mg/Kg	0.859
9	Pb	US-EPA Method	mg/Kg	0.96
10	B	US-EPA Method	mg/Kg	312.9
11	Ag	US-EPA Method	mg/Kg	1.08
12	Co	US-EPA Method	mg/Kg	30.89
13	Cu	US-EPA Method	mg/Kg	55.1
14	Mo	US-EPA Method	mg/Kg	5.51
15	Ni	US-EPA Method	mg/Kg	353.69
16	V	US-EPA Method	mg/Kg	91.968
17	Zn	US-EPA Method	mg/Kg	86.124
18	F ⁻	US-EPA Method	mg/Kg	0.0265
19	CN ⁻	US-EPA Method	mg/Kg	0.0331
20	Hydrazine	US-EPA Method	mg/Kg	0.0103

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BF-2 FLUE DUST QUALITY ANALYSIS REPORT



RIGHT TO
INFORMATION

1. Name of the Industry : M/s. TATA Steel, Meramandali, Odisha
2. Sampling Location : BF-2 FLUE DUST
3. Date of Sampling : 1st MARCH, 2024
4. Date of Analysis : 20th MARCH, 2024
5. Sample Collected By : TATA STEEL, Meramandali

Sl. No.	Parameter	Testing Methods	Unit	Analysis Results
COMPOSITIONAL ANALYSIS REPORT				
1	SiO ₂	Photometric/XRF	%	7.769±0.5
2	Fe ₂ O ₃	Photometric/XRF	%	51.82±0.1
3	Al ₂ O ₃	Photometric/XRF	%	2.63±0.5
4	CaO	Photometric/XRF	%	1.845±0.5
5	MgO	Photometric/XRF	%	1.589±0.5
6	MnO	Photometric/XRF	%	0.169±0.01
7	Na ₂ O	Photometric/XRF	%	0.069±0.01
8	TiO ₂	Photometric/XRF	%	0.068±0.01
9	P ₂ O ₅	Photometric/XRF	%	0.007±0.01
10	K ₂ O	Photometric/XRF	%	0.022±0.01
11	C	Photometric/XRF	%	30.25±0.5
10	LOI	-----	%	5.349±0.5

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BF-2 FLUE DUST QUALITY ANALYSIS REPORT

1. Name of the Industry : M/s. TATA Steel, Meramandali, Odisha
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4. Date of Analysis : 20th MARCH, 2024
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Sl. No.	Parameter	Testing Methods	Unit	Analysis Results
TRACE ANALYSIS REPORT				
1	Hg	US-EPA Method	mg/Kg	0.088
2	As	US-EPA Method	mg/Kg	30.95
3	Se	US-EPA Method	mg/Kg	3.43
4	Sb	US-EPA Method	mg/Kg	2.19
5	Ba	US-EPA Method	mg/Kg	194.6
6	Cd	US-EPA Method	mg/Kg	0.840
7	Cr	US-EPA Method	mg/Kg	81.478
8	Cr(VI)	US-EPA Method	mg/Kg	0.935
9	Pb	US-EPA Method	mg/Kg	59.05
10	Mn	US-EPA Method	mg/Kg	63.953
11	Ag	US-EPA Method	mg/Kg	1.91
12	Co	US-EPA Method	mg/Kg	14.2
13	Cu	US-EPA Method	mg/Kg	29.033
14	Mo	US-EPA Method	mg/Kg	4.512
15	Ni	US-EPA Method	mg/Kg	33.23
16	V	US-EPA Method	mg/Kg	166.68
17	Zn	US-EPA Method	mg/Kg	119.83

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SMS LD SLAG QUALITY ANALYSIS REPORT



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INFORMATION

1. Name of the Industry : M/s. TATA Steel, Meramandali, Odisha
2. Sampling Location : SMS LD SLAG
3. Date of Sampling : 1st March, 2024
4. Date of Analysis : 20th March, 2024
5. Sample Collected By : TATA STEEL, Meramandali

Sl. No.	Parameter	Testing Methods	Unit	Analysis Results
COMPOSITIONAL ANALYSIS REPORT				
1	SiO ₂	Photometric/XRF	%	13.084±0.5
2	FeO	Photometric/XRF	%	19.56±0.1
3	Al ₂ O ₃	Photometric/XRF	%	1.23±0.5
4	CaO	Photometric/XRF	%	43.821±0.5
5	MgO	Photometric/XRF	%	10.78±0.5
6	MnO	Photometric/XRF	%	1.12±0.01
7	Sulphur	Photometric/XRF	%	0.068±0.01
8	TiO ₂	Photometric/XRF	%	1.231±0.01
9	P ₂ O ₅	Photometric/XRF	%	1.594±0.01
10	Basicity	Photometric/XRF	-----	3.51

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SMS LD SLAG QUALITY ANALYSIS REPORT



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2. Sampling Location : SMS LD SLAG
3. Date of Sampling : 1st March, 2024
4. Date of Analysis : 20th March, 2024
5. Sample Collected By : TATA STEEL, Meramandali

Sl. No.	Parameter	Testing Methods	Unit	Analysis Results
TRACE ANALYSIS REPORT				
1	Hg	US-EPA Method	mg/Kg	0.958
2	As	US-EPA Method	mg/Kg	22.24
3	Se	US-EPA Method	mg/Kg	0.73
4	Sb	US-EPA Method	mg/Kg	1.104
5	Ba	US-EPA Method	mg/Kg	122.90
6	Cd	US-EPA Method	mg/Kg	7.1
7	Cr	US-EPA Method	mg/Kg	129.8
8	Cr(VI)	US-EPA Method	mg/Kg	0.949
9	Pb	US-EPA Method	mg/Kg	1.019
10	Mn	US-EPA Method	mg/Kg	302.4
11	Ag	US-EPA Method	mg/Kg	2.01
12	Co	US-EPA Method	mg/Kg	33.21
13	Cu	US-EPA Method	mg/Kg	59.01
14	Mo	US-EPA Method	mg/Kg	6.89
15	Ni	US-EPA Method	mg/Kg	1052.32
16	V	US-EPA Method	mg/Kg	101.05
17	Zn	US-EPA Method	mg/Kg	81.17

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ETP SLUDGE CRM QUALITY ANALYSIS REPORT

1. Name of the Industry : M/s. TATA Steel, Meramandali, Odisha
2. Sampling Location : ETP SLUDGE CRM
3. Date of Sampling : 01st March, 2024
4. Date of Analysis : 20th JULY, 2024
5. Sample Collected By : TATA STEEL, Meramandali

Sl. No.	Parameter	Testing Methods	Unit	Analysis Results
COMPOSITIONAL ANALYSIS REPORT				
1	pH	-----	-----	7.86
2	MOISTURE	-----	%	42
3	Cr	Photometric/XRF	%	1.71±0.5
4	Fe	Photometric/XRF	%	26.09±0.5
5	Ni	Photometric/XRF	%	0.66±0.1
6	Mn	Photometric/XRF	%	0.28±0.01
7	F	Photometric/XRF	PPM	47±0.01

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ETP SLUDGE CRM QUALITY ANALYSIS REPORT

1. Name of the Industry : M/s. TATA Steel, Meramandali, Odisha
2. Sampling Location : ETP SLUDGE CRM
3. Date of Sampling : 1st JULY, 2023
4. Date of Analysis : 20th JULY, 2023
5. Sample Collected By : TATA STEEL, Meramandali

Sl. No.	Parameter	Testing Methods	Unit	Analysis Results
TRACE ANALYSIS REPORT				
1	Hg	US-EPA Method	mg/Kg	0.958
2	As	US-EPA Method	mg/Kg	21.62
3	Se	US-EPA Method	mg/Kg	0.697
4	Sb	US-EPA Method	mg/Kg	1.08
5	Ba	US-EPA Method	mg/Kg	123.88
6	Cd	US-EPA Method	mg/Kg	7.13
7	Cr	US-EPA Method	mg/Kg	129.5
8	Cr(VI)	US-EPA Method	mg/Kg	0.942
9	Pb	US-EPA Method	mg/Kg	1.018
10	B	US-EPA Method	mg/Kg	303.89
11	Ag	US-EPA Method	mg/Kg	2.065
12	Co	US-EPA Method	mg/Kg	33.10
13	Cu	US-EPA Method	mg/Kg	58.09
14	Mo	US-EPA Method	mg/Kg	6.89
15	Ni	US-EPA Method	mg/Kg	1054.32
16	V	US-EPA Method	mg/Kg	102.06
17	Zn	US-EPA Method	mg/Kg	81.15
18	F ⁻	US-EPA Method	mg/Kg	BDL
19	CN ⁻	US-EPA Method	mg/Kg	BDL
20	Hydrazine	US-EPA Method	mg/Kg	BDL
21	Phenols	US-EPA Method	mg/Kg	BDL

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22	Total N	US-EPA Method	mg/Kg	3.456
23	NH ₄ - N	US-EPA Method	mg/Kg	0.258
24	NO ₃ -N	US-EPA Method	mg/Kg	2.608
25	OIL	US-EPA Method	mg/Kg	54.66

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FLYASH BF-PP-1 QUALITY ANALYSIS REPORT

1. Name of the Industry : M/s. TATA Steel, Meramandali, Odisha
2. Sampling Location : FLYASH BF- PP- 1
3. Date of Sampling : 1st March, 2024
4. Date of Analysis : 20th March, 2024
5. Sample Collected By : TATA STEEL, Meramandali

Sl. No.	Parameter	Testing Methods	Unit	Analysis Results
COMPOSITIONAL ANALYSIS REPORT				
1	SiO ₂	Photometric/XRF	%	55.19±0.5
2	Fe ₂ O ₃	Photometric/XRF	%	3.63±0.1
3	Al ₂ O ₃	Photometric/XRF	%	25.89±0.5
4	CaO	Photometric/XRF	%	3.54±0.5
5	MgO	Photometric/XRF	%	1.18±0.5
6	MnO	Photometric/XRF	%	0.02±0.01
7	Na ₂ O	Photometric/XRF	%	0.37±0.01
8	TiO ₂	Photometric/XRF	%	1.31±0.01
9	P ₂ O ₅	Photometric/XRF	%	0.26±0.01
10	K ₂ O	Photometric/XRF	%	0.715
10	LOI	-----	%	6.49

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FLYASH BF-PP-1 QUALITY ANALYSIS REPORT

1. Name of the Industry : M/s. TATA Steel, Meramandali, Odisha
2. Sampling Location : FLYASH BF-PP-1
3. Date of Sampling : 1st March, 2024
4. Date of Analysis : 20th March, 2024
5. Sample Collected By : TATA STEEL, Meramandali

Sl. No.	Parameter	Testing Methods	Unit	Analysis Results
TRACE ANALYSIS REPORT				
1	Hg	US-EPA Method	mg/Kg	0.107
2	As	US-EPA Method	mg/Kg	31.89
3	Se	US-EPA Method	mg/Kg	3.61
4	Sb	US-EPA Method	mg/Kg	2.18
5	Ba	US-EPA Method	mg/Kg	196.9
6	Cd	US-EPA Method	mg/Kg	0.815
7	Cr	US-EPA Method	mg/Kg	79.43
8	Cr(VI)	US-EPA Method	mg/Kg	0.948
9	Pb	US-EPA Method	mg/Kg	56.69
10	Mn	US-EPA Method	mg/Kg	64.67
11	Ag	US-EPA Method	mg/Kg	1.89
12	Co	US-EPA Method	mg/Kg	11.98
13	Cu	US-EPA Method	mg/Kg	29.1
14	Mo	US-EPA Method	mg/Kg	4.61
15	Ni	US-EPA Method	mg/Kg	34.31
16	V	US-EPA Method	mg/Kg	163.59
17	Zn	US-EPA Method	mg/Kg	122.16


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FLYASH BF-PP-2 QUALITY ANALYSIS REPORT



RIGHT TO
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1. Name of the Industry : M/s. TATA Steel, Meramandali, Odisha
2. Sampling Location : FLYASH BF- PP- 2
3. Date of Sampling : 1st March, 2024
4. Date of Analysis : 20th March, 2024
5. Sample Collected By : TATA STEEL, Meramandali

Sl. No.	Parameter	Testing Methods	Unit	Analysis Results
COMPOSITIONAL ANALYSIS REPORT				
1	SiO ₂	Photometric/XRF	%	56.03±0.5
2	Fe ₂ O ₃	Photometric/XRF	%	3.91±0.1
3	Al ₂ O ₃	Photometric/XRF	%	24.43±0.5
4	CaO	Photometric/XRF	%	3.58±0.5
5	MgO	Photometric/XRF	%	1.15±0.5
6	MnO	Photometric/XRF	%	0.01±0.01
7	Na ₂ O	Photometric/XRF	%	0.33±0.01
8	TiO ₂	Photometric/XRF	%	1.27±0.01
9	P ₂ O ₅	Photometric/XRF	%	0.25±0.01
10	K ₂ O	Photometric/XRF	%	0.689
10	LOI	-----	%	6.48

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FLYASH BF-PP-2 QUALITY ANALYSIS REPORT

1. Name of the Industry : M/s. TATA Steel, Meramandali, Odisha
2. Sampling Location : FLYASH BF-PP-2
3. Date of Sampling : 1st March, 2024
4. Date of Analysis : 20th JULY, 2024
5. Sample Collected By : TATA STEEL, Meramandali

Sl. No.	Parameter	Testing Methods	Unit	Analysis Results
TRACE ANALYSIS REPORT				
1	Hg	US-EPA Method	mg/Kg	0.103
2	As	US-EPA Method	mg/Kg	30.975
3	Se	US-EPA Method	mg/Kg	3.71
4	Sb	US-EPA Method	mg/Kg	2.23
5	Ba	US-EPA Method	mg/Kg	187.5
6	Cd	US-EPA Method	mg/Kg	0.794
7	Cr	US-EPA Method	mg/Kg	78.73
8	Cr(VI)	US-EPA Method	mg/Kg	0.938
9	Pb	US-EPA Method	mg/Kg	55.07
10	Mn	US-EPA Method	mg/Kg	63.88
11	Ag	US-EPA Method	mg/Kg	1.82
12	Co	US-EPA Method	mg/Kg	11.91
13	Cu	US-EPA Method	mg/Kg	29.36
14	Mo	US-EPA Method	mg/Kg	4.59
15	Ni	US-EPA Method	mg/Kg	34.37
16	V	US-EPA Method	mg/Kg	164.69
17	Zn	US-EPA Method	mg/Kg	121.86


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SMS FeS DUST QUALITY ANALYSIS REPORT

1. Name of the Industry : M/s. TATA Steel, Meramandali, Odisha
2. Sampling Location : SMS FeS DUST
3. Date of Sampling : 1st March, 2024
4. Date of Analysis : 20th March, 2024
5. Sample Collected By : TATA STEEL, Meramandali

Sl. No.	Parameter	Testing Methods	Unit	Analysis Results
COMPOSITIONAL ANALYSIS REPORT				
1	SiO ₂	Photometric/XRF	%	7.978±0.5
2	Fe ₂ O ₃	Photometric/XRF	%	50.62±0.1
3	Al ₂ O ₃	Photometric/XRF	%	2.58±0.5
4	CaO	Photometric/XRF	%	1.91±0.5
5	MgO	Photometric/XRF	%	1.84±0.5
6	MnO	Photometric/XRF	%	0.20±0.01
7	Na ₂ O	Photometric/XRF	%	0.081±0.01
8	TiO ₂	Photometric/XRF	%	0.073±0.01
9	P ₂ O ₅	Photometric/XRF	%	0.0075±0.01
10	K ₂ O	Photometric/XRF	%	0.023±0.01
11	C	Photometric/XRF	%	30.512±0.5
10	LOI	-----	%	5.42±0.5

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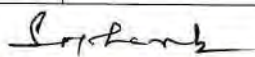
SMS FeS Dust QUALITY ANALYSIS REPORT




RIGHT TO
INFORMATION

1. Name of the Industry : M/s. TATA Steel, Meramandali, Odisha
2. Sampling Location : SMS FeS DUST
3. Date of Sampling : 1st March, 2024
4. Date of Analysis : 20th March, 2024
5. Sample Collected By : TATA STEEL, Meramandali

Sl. No.	Parameter	Testing Methods	Unit	Analysis Results
TRACE ANALYSIS REPORT				
1	Hg	US-EPA Method	mg/Kg	0.09
2	As	US-EPA Method	mg/Kg	31.25
3	Se	US-EPA Method	mg/Kg	3.69
4	Sb	US-EPA Method	mg/Kg	2.28
5	Ba	US-EPA Method	mg/Kg	178.6
6	Cd	US-EPA Method	mg/Kg	0.812
7	Cr	US-EPA Method	mg/Kg	82.48
8	Cr(VI)	US-EPA Method	mg/Kg	0.964
9	Pb	US-EPA Method	mg/Kg	58.80
10	Mn	US-EPA Method	mg/Kg	68.10
11	Ag	US-EPA Method	mg/Kg	1.992
12	Co	US-EPA Method	mg/Kg	12.74
13	Cu	US-EPA Method	mg/Kg	28.87
14	Mo	US-EPA Method	mg/Kg	4.682
15	Ni	US-EPA Method	mg/Kg	34.195
16	V	US-EPA Method	mg/Kg	164.31
17	Zn	US-EPA Method	mg/Kg	119.16


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BFPP-1 BED ASH QUALITY ANALYSIS REPORT

1. Name of the Industry : M/s. TATA Steel, Meramandali, Odisha
2. Sampling Location : BFPP- 1 BED ASH
3. Date of Sampling : 1st March, 2024
4. Date of Analysis : 20th March, 2024
5. Sample Collected By : TATA STEEL, Meramandali

Sl. No.	Parameter	Testing Methods	Unit	Analysis Results
COMPOSITIONAL ANALYSIS REPORT				
1	SiO ₂	Photometric/XRF	%	56.45±0.5
2	Fe ₂ O ₃	Photometric/XRF	%	3.78±0.1
3	Al ₂ O ₃	Photometric/XRF	%	24.43±0.5
4	CaO	Photometric/XRF	%	2.75±0.5
5	MgO	Photometric/XRF	%	1.24±0.5
6	MnO	Photometric/XRF	%	0.013±0.01
7	Na ₂ O	Photometric/XRF	%	0.34±0.01
8	TiO ₂	Photometric/XRF	%	1.18±0.01
9	P ₂ O ₅	Photometric/XRF	%	0.38±0.01
10	K ₂ O	Photometric/XRF	%	0.72±0.01
10	LOI	-----	%	5.63±0.5

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5. Sample Collected By : TATA STEEL, Meramandali

Sl. No.	Parameter	Testing Methods	Unit	Analysis Results
TRACE ANALYSIS REPORT				
1	Hg	US-EPA Method	mg/Kg	0.071
2	As	US-EPA Method	mg/Kg	27.86
3	Se	US-EPA Method	mg/Kg	2.75
4	Sb	US-EPA Method	mg/Kg	2.26
5	Ba	US-EPA Method	mg/Kg	161.6
6	Cd	US-EPA Method	mg/Kg	0.79
7	Cr	US-EPA Method	mg/Kg	77.56
8	Cr(VI)	US-EPA Method	mg/Kg	0.854
9	Pb	US-EPA Method	mg/Kg	53.8
10	Mn	US-EPA Method	mg/Kg	64.8
11	Ag	US-EPA Method	mg/Kg	1.88
12	Co	US-EPA Method	mg/Kg	12.46
13	Cu	US-EPA Method	mg/Kg	28.38
14	Mo	US-EPA Method	mg/Kg	4.38
15	Ni	US-EPA Method	mg/Kg	31.36
16	V	US-EPA Method	mg/Kg	156.8
17	Zn	US-EPA Method	mg/Kg	121.24

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BFPP-2 BED ASH QUALITY ANALYSIS REPORT

1. Name of the Industry : M/s. TATA Steel, Meramandali, Odisha
2. Sampling Location : BFPP- 2 BED ASH
3. Date of Sampling : 1st March, 2024
4. Date of Analysis : 20th March, 2024
5. Sample Collected By : TATA STEEL, Meramandali

Sl. No.	Parameter	Testing Methods	Unit	Analysis Results
COMPOSITIONAL ANALYSIS REPORT				
1	SiO ₂	Photometric/XRF	%	59.06±0.5
2	Fe ₂ O ₃	Photometric/XRF	%	3.83±0.1
3	Al ₂ O ₃	Photometric/XRF	%	21.35±0.5
4	CaO	Photometric/XRF	%	2.56±0.5
5	MgO	Photometric/XRF	%	1.17±0.5
6	MnO	Photometric/XRF	%	0.16±0.01
7	Na ₂ O	Photometric/XRF	%	0.29±0.01
8	TiO ₂	Photometric/XRF	%	1.209±0.01
9	P ₂ O ₅	Photometric/XRF	%	0.24±0.01
10	K ₂ O	Photometric/XRF	%	0.64±0.01
10	LOI	-----	%	5.07±0.1

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5. Sample Collected By : TATA STEEL, Meramandali

Sl. No.	Parameter	Testing Methods	Unit	Analysis Results
TRACE ANALYSIS REPORT				
1	Hg	US-EPA Method	mg/Kg	0.08
2	As	US-EPA Method	mg/Kg	28.42
3	Se	US-EPA Method	mg/Kg	2.74
4	Sb	US-EPA Method	mg/Kg	2.27
5	Ba	US-EPA Method	mg/Kg	156.8
6	Cd	US-EPA Method	mg/Kg	0.79
7	Cr	US-EPA Method	mg/Kg	76.42
8	Cr(VI)	US-EPA Method	mg/Kg	0.794
9	Pb	US-EPA Method	mg/Kg	53.3
10	Mn	US-EPA Method	mg/Kg	65.8
11	Ag	US-EPA Method	mg/Kg	1.842
12	Co	US-EPA Method	mg/Kg	12.41
13	Cu	US-EPA Method	mg/Kg	25.29
14	Mo	US-EPA Method	mg/Kg	4.27
15	Ni	US-EPA Method	mg/Kg	30.34
16	V	US-EPA Method	mg/Kg	158.6
17	Zn	US-EPA Method	mg/Kg	120.14

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FLYASH (165MW PP) QUALITY ANALYSIS REPORT

1. Name of the Industry : M/s. TATA Steel, Meramandali, Odisha
2. Sampling Location : FLYASH (165 MW PP)
3. Date of Sampling : 1st March, 2024
4. Date of Analysis : 25th March, 2024
5. Sample Collected By : TATA STEEL , Meramandali

Sl. No.	Parameter	Testing Methods	Unit	Analysis Results
COMPOSITIONAL ANALYSIS REPORT				
1	SiO ₂	Photometric/XRF	%	59.89±0.5
2	Al ₂ O ₃	Photometric/XRF	%	21.76±0.5
3	CaO	Photometric/XRF	%	3.68±0.5
4	MgO	Photometric/XRF	%	1.19±0.5
5	MnO	Photometric/XRF	%	0.02±0.01
6	Na ₂ O	Photometric/XRF	%	0.35±0.01
7	TiO ₂	Photometric/XRF	%	1.29±0.01
8	P ₂ O ₅	Photometric/XRF	%	0.24±0.01
10	K ₂ O	Photometric/XRF	%	0.632
11	LOI	-----	%	6.42

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3. Date of Sampling : 1st March, 2024
4. Date of Analysis : 25th March, 2024
5. Sample Collected By : TATA STEEL, Meramandali

Sl. No.	Parameter	Testing Methods	Unit	Analysis Results
TRACE ANALYSIS REPORT				
1	Hg	US-EPA Method	mg/Kg	0.114
2	As	US-EPA Method	mg/Kg	31.056
3	Se	US-EPA Method	mg/Kg	3.68
4	Sb	US-EPA Method	mg/Kg	2.19
5	Ba	US-EPA Method	mg/Kg	183.40
6	Cd	US-EPA Method	mg/Kg	0.806
7	Cr	US-EPA Method	mg/Kg	79.83
8	Cr(VI)	US-EPA Method	mg/Kg	0.929
9	Pb	US-EPA Method	mg/Kg	56.06
10	Mn	US-EPA Method	mg/Kg	63.65
11	Ag	US-EPA Method	mg/Kg	1.79
12	Co	US-EPA Method	mg/Kg	12.98
13	Cu	US-EPA Method	mg/Kg	28.53
14	Mo	US-EPA Method	mg/Kg	4.71
15	Ni	US-EPA Method	mg/Kg	36.41
16	V	US-EPA Method	mg/Kg	175.88
17	Zn	US-EPA Method	mg/Kg	124.84

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BED ASH (165 MW PP) QUALITY ANALYSIS REPORT

1. Name of the Industry : M/s. TATA Steel, Meramandali, Odisha
2. Sampling Location : BED ASH (165MW PP)
3. Date of Sampling : 1st March, 2024
4. Date of Analysis : 25th March, 2024
5. Sample Collected By : TATA STEEL ,Meramandali

Sl. No.	Parameter	Testing Methods	Unit	Analysis Results
COMPOSITIONAL ANALYSIS REPORT				
1	SiO ₂	Photometric/XRF	%	61.08±0.5
2	Fe ₂ O ₃	Photometric/XRF	%	2.96±0.1
3	Al ₂ O ₃	Photometric/XRF	%	20.07±0.5
4	CaO	Photometric/XRF	%	2.38±0.5
5	MgO	Photometric/XRF	%	1.14±0.5
6	MnO	Photometric/XRF	%	0.145±0.01
7	Na ₂ O	Photometric/XRF	%	0.285±0.01
8	TiO ₂	Photometric/XRF	%	1.199±0.01
9	P ₂ O ₅	Photometric/XRF	%	0.25±0.01
10	K ₂ O	Photometric/XRF	%	0.76±0.01
10	LOI	-----	%	5.10±0.1

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4. Date of Analysis : 25th March, 2024
5. Sample Collected By : TATA STEEL, Meramandali

Sl. No.	Parameter	Testing Methods	Unit	Analysis Results
TRACE ANALYSIS REPORT				
1	Hg	US-EPA Method	mg/Kg	0.07
2	As	US-EPA Method	mg/Kg	27.67
3	Se	US-EPA Method	mg/Kg	2.68
4	Sb	US-EPA Method	mg/Kg	2.56
5	Ba	US-EPA Method	mg/Kg	154.75
6	Cd	US-EPA Method	mg/Kg	0.76
7	Cr	US-EPA Method	mg/Kg	73.40
8	Cr(VI)	US-EPA Method	mg/Kg	0.786
9	Pb	US-EPA Method	mg/Kg	54.62
10	Mn	US-EPA Method	mg/Kg	67.74
11	Ag	US-EPA Method	mg/Kg	1.756
12	Co	US-EPA Method	mg/Kg	11.92
13	Cu	US-EPA Method	mg/Kg	24.48
14	Mo	US-EPA Method	mg/Kg	4.27
15	Ni	US-EPA Method	mg/Kg	32.45
16	V	US-EPA Method	mg/Kg	157.58
17	Zn	US-EPA Method	mg/Kg	122.24

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SMS BOF SLUDGE QUALITY ANALYSIS REPORT

1. Name of the Industry : M/s. TATA Steel, Meramandali, Odisha
2. Sampling Location : SMS BOF SLUDGE
3. Date of Sampling : 1st March, 2024
4. Date of Analysis : 25th March, 2024
5. Sample Collected By : TATA STEEL, Meramandali

Sl. No.	Parameter	Testing Methods	Unit	Analysis Results
COMPOSITIONAL ANALYSIS REPORT				
1	pH	-----	-----	7.85
2	MOISTURE	-----	%	41
3	Cr	Photometric/XRF	%	1.64±0.5
4	Fe	Photometric/XRF	%	24.15±0.5
5	Ni	Photometric/XRF	%	0.617±0.1
6	Mn	Photometric/XRF	%	0.285±0.01
7	F	Photometric/XRF	PPM	48±0.01

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SMS BOF SLUDGE QUALITY ANALYSIS REPORT



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4. Date of Analysis : 25th March, 2024
5. Sample Collected By : TATA STEEL, Meramandali

Sl. No.	Parameter	Testing Methods	Unit	Analysis Results
TRACE ANALYSIS REPORT				
1	Hg	US-EPA Method	mg/Kg	0.485
2	As	US-EPA Method	mg/Kg	12.81
3	Se	US-EPA Method	mg/Kg	0.645
4	Sb	US-EPA Method	mg/Kg	1.116
5	Ba	US-EPA Method	mg/Kg	123.65
6	Cd	US-EPA Method	mg/Kg	6.22
7	Cr	US-EPA Method	mg/Kg	126.86
8	Cr(VI)	US-EPA Method	mg/Kg	0.820
9	Pb	US-EPA Method	mg/Kg	0.942
10	B	US-EPA Method	mg/Kg	308.54
11	Ag	US-EPA Method	mg/Kg	1.09
12	Co	US-EPA Method	mg/Kg	34.20
13	Cu	US-EPA Method	mg/Kg	55.64
14	Mo	US-EPA Method	mg/Kg	5.847
15	Ni	US-EPA Method	mg/Kg	341.97
16	V	US-EPA Method	mg/Kg	92.08
17	Zn	US-EPA Method	mg/Kg	84.024
18	F ⁻	US-EPA Method	mg/Kg	0.047
19	CN ⁻	US-EPA Method	mg/Kg	0.029

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INFORMATION

20	Hydrazine	US-EPA Method	mg/Kg	0.0118
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SMS -2 LD SLUDGE QUALITY ANALYSIS REPORT

1. Name of the Industry : M/s. TATA Steel, Meramandali, Odisha
2. Sampling Location : SMS-2 LD SLUDGE
3. Date of Sampling : 10th JULY, 2023
4. Date of Analysis : 22th JULY, 2023
5. Sample Collected By : Mr.P.SAHU, N.I.T, Rourkela

Sl. No.	Parameter	Testing Methods	Unit	Analysis Results
COMPOSITIONAL ANALYSIS REPORT				
1	pH	-----	-----	7.9
2	MOISTURE	-----	%	46
3	Cr	Photometric/XRF	%	1.67±0.5
4	Fe	Photometric/XRF	%	30.32±0.5
5	Ni	Photometric/XRF	%	2.67±0.1
6	Mn	Photometric/XRF	%	1.54±0.01
7	F	Photometric/XRF	PPM	1.23±0.01

Tested BY
Er. Samarendu Mohanty
Tech. Asst. (SG-II)
Chemical Engg. NIT, Rourkela

Reviewed BY
Prof. Soumya S. Mohapatra
Asst. Professor
Department of Chemical Engineering
Principal Investigator



राष्ट्रीय प्रौद्योगिकी संस्थान

NATIONAL INSTITUTE OF TECHNOLOGY

राउरकेला ROURKELA - 769008, ओडिशा ODISHA



SMS-2 LD SLUDGE QUALITY ANALYSIS REPORT

1. Name of the Industry : M/s. TATA Steel, Meramandali, Odisha
2. Sampling Location : SMS-2 LD SLUDGE
3. Date of Sampling : 10th JULY, 2023
4. Date of Analysis : 22th JULY, 2023
5. Sample Collected By : Mr.P.SAHU, N.I.T, Rourkela

Sl. No.	Parameter	Testing Methods	Unit	Analysis Results
TRACE ANALYSIS REPORT				
1	Hg	US-EPA Method	mg/Kg	0.576
2	As	US-EPA Method	mg/Kg	13.2
3	Se	US-EPA Method	mg/Kg	0.67
4	Sb	US-EPA Method	mg/Kg	1.13
5	Ba	US-EPA Method	mg/Kg	124.6
6	Cd	US-EPA Method	mg/Kg	6.2
7	Cr	US-EPA Method	mg/Kg	129.7
8	Cr(VI)	US-EPA Method	mg/Kg	.876
9	Pb	US-EPA Method	mg/Kg	0.96
10	B	US-EPA Method	mg/Kg	312.6
11	Ag	US-EPA Method	mg/Kg	1.09
12	Co	US-EPA Method	mg/Kg	32.2
13	Cu	US-EPA Method	mg/Kg	53.5
14	Mo	US-EPA Method	mg/Kg	5.54
15	Ni	US-EPA Method	mg/Kg	353.32
16	V	US-EPA Method	mg/Kg	93.01
17	Zn	US-EPA Method	mg/Kg	86.013
18	F ⁻	US-EPA Method	mg/Kg	0.029
19	CN ⁻	US-EPA Method	mg/Kg	0.036

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20	Hydrazine	US-EPA Method	mg/Kg	0.0102
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Tested BY

Er. Samarendu Mohanty

Tech. Asst. (SG-II)

Chemical Engg. NIT, Rourkela

Reviewed BY

Prof. Soumya S. Mohapatra

Asst. Professor

Department of Chemical Engineering

Principal Investigator



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RIGHT TO

INFORMATION



FLYASH SILO-1 BF-PP-2 QUALITY ANALYSIS REPORT

1. Name of the Industry : M/s. TATA Steel, Meramandali, Odisha
2. Sampling Location : FLYASH SILO-1 BF- PP- 2
3. Date of Sampling : 10th JULY, 2023
4. Date of Analysis : 25th JULY, 2023
5. Sample Collected By : Mr.P.SAHU ,N.I.T, Rourkela

Sl. No.	Parameter	Testing Methods	Unit	Analysis Results
COMPOSITIONAL ANALYSIS REPORT				
1	SiO ₂	Photometric/XRF	%	51.22±0.5
2	Fe ₂ O ₃	Photometric/XRF	%	3.32±0.1
3	Al ₂ O ₃	Photometric/XRF	%	22.01±0.5
4	CaO	Photometric/XRF	%	3.67±0.5
5	MgO	Photometric/XRF	%	1.26±0.5
6	MnO	Photometric/XRF	%	0.02±0.01
7	Na ₂ O	Photometric/XRF	%	0.34±0.01
8	TiO ₂	Photometric/XRF	%	1.25±0.01
9	P ₂ O ₅	Photometric/XRF	%	0.22±0.01
10	K ₂ O	Photometric/XRF	%	0.76
10	LOI	-----	%	3.58

Er. Samarendu Mohanty

Tested BY

Er. Samarendu Mohanty
Tech. Asst. (SG-II)
Chemical Engg. NIT, Rourkela

Prof. Soumya S. Mohapatra

Reviewed BY

Prof. Soumya S. Mohapatra
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NATIONAL INSTITUTE OF TECHNOLOGY
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FLYASH SILO-1 BF-PP-2 QUALITY ANALYSIS REPORT

1. Name of the Industry : M/s. TATA Steel, Meramandali, Odisha
2. Sampling Location : FLYASH SILO-1 BF- PP- 2
3. Date of Sampling : 10th JULY, 2023
4. Date of Analysis : 25th JULY, 2023
5. Sample Collected By : Mr.P.SAHU ,N.I.T, Rourkela

Sl. No.	Parameter	Testing Methods	Unit	Analysis Results
TRACE ANALYSIS REPORT				
1	Hg	US-EPA Method	mg/Kg	0.13
2	As	US-EPA Method	mg/Kg	34.4
3	Se	US-EPA Method	mg/Kg	3.54
4	Sb	US-EPA Method	mg/Kg	2.09
5	Ba	US-EPA Method	mg/Kg	178.6
6	Cd	US-EPA Method	mg/Kg	0.73
7	Cr	US-EPA Method	mg/Kg	67.46
8	Cr(VI)	US-EPA Method	mg/Kg	0.816
9	Pb	US-EPA Method	mg/Kg	53.9
10	Mn	US-EPA Method	mg/Kg	62.8
11	Ag	US-EPA Method	mg/Kg	2.13
12	Co	US-EPA Method	mg/Kg	11.5
13	Cu	US-EPA Method	mg/Kg	25.1
14	Mo	US-EPA Method	mg/Kg	4.46
15	Ni	US-EPA Method	mg/Kg	34.18
16	V	US-EPA Method	mg/Kg	184.5
17	Zn	US-EPA Method	mg/Kg	114.13

Er. Samarendu Mohanty

Tested BY

Er. Samarendu Mohanty
Tech. Asst. (SG-II)
Chemical Engg. NIT, Rourkela

Soumya S. Mohapatra
Reviewed BY

Prof. Soumya S. Mohapatra
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BF-2 LD GCP SLUDGE QUALITY ANALYSIS REPORT

1. Name of the Industry : M/s. TATA Steel, Meramandali, Odisha
2. Sampling Location : BF-2 LD GCP SLUDGE
3. Date of Sampling : 10th JULY, 2023
4. Date of Analysis : 22th JULY, 2023
5. Sample Collected By : Mr. P. SAHU, N.I.T., Rourkela

Sl. No.	Parameter	Testing Methods	Unit	Analysis Results
COMPOSITIONAL ANALYSIS REPORT				
1	pH	-----	-----	7.9
2	MOISTURE	-----	%	46
3	Cr	Photometric/XRF	%	1.67±0.5
4	Fe	Photometric/XRF	%	26.12±0.5
5	Ni	Photometric/XRF	%	0.67±0.1
6	Mn	Photometric/XRF	%	0.29±0.01
7	F	Photometric/XRF	PPM	46±0.01

Signature

Dr. Samarendra Mohanty
Tech. Asst. (SG-II)
Chemical Engg. NIT, Rourkela

Signature

Reviewed BY

Prof. Soumya S. Mohapatra
Asst. Professor
Department of Chemical Engineering
Principal Investigator



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राउरकेला ROURKELA – 769008, ओडिशा ODISHA



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BF-2 LD GCP SLUDGE QUALITY ANALYSIS REPORT

1. Name of the Industry : M/s. TATA Steel, Meramandali, Odisha
2. Sampling Location : BF-2 LD GCP SLUDGE
3. Date of Sampling : 10th JULY, 2023
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5. Sample Collected By : Mr.P.SAHU, N.I.T, Rourkela

Sl. No.	Parameter	Testing Methods	Unit	Analysis Results
TRACE ANALYSIS REPORT				
1	Hg	US-EPA Method	mg/Kg	0.576
2	As	US-EPA Method	mg/Kg	13.2
3	Se	US-EPA Method	mg/Kg	0.67
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5	Ba	US-EPA Method	mg/Kg	124.6
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9	Pb	US-EPA Method	mg/Kg	0.96
10	B	US-EPA Method	mg/Kg	312.6
11	Ag	US-EPA Method	mg/Kg	1.09
12	Co	US-EPA Method	mg/Kg	32.2
13	Cu	US-EPA Method	mg/Kg	53.5
14	Mo	US-EPA Method	mg/Kg	5.54
15	Ni	US-EPA Method	mg/Kg	353.32
16	V	US-EPA Method	mg/Kg	93.01
17	Zn	US-EPA Method	mg/Kg	86.013
18	F ⁻	US-EPA Method	mg/Kg	0.029
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राउरकेला ROURKELA - 769008, ओडिशा ODISHA



RIGHT TO

INFORMATION



20	Hydrazine	US-EPA Method	mg/Kg	0.0102
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Er. Samarendu Mohanty

Tested BY

Soumya S. Mohapatra

Reviewed BY

Prof. Soumya S. Mohapatra
Asst. Professor
Department of Chemical Engineering
Principal Investigator

Er. Samarendu Mohanty
Tech. Asst. (SG-II)
Chemical Engg. NIT, Rourkela



सीएसआईआर - खनिज एवं पदार्थ प्रौद्योगिकी संस्थान
 (वैज्ञानिक तथा औद्योगिक अनुसंधान परिषद)
 भुवनेश्वर-751013, ओडिशा, भारत
CSIR - INSTITUTE OF MINERALS & MATERIALS TECHNOLOGY
 Council of Scientific & Industrial Research
 Bhubaneswar - 751013, Odisha, INDIA



TEST REPORT

Ref. No. IMMT/CCD/03/2024

Date: 08.03.2024

Name & Address of the Party:

Tata Steel Ltd.
 At-Narendrapur, P.O.-Kusupanga
 Via-Meramandali, Dist-Dhenkanal
 Pin-759121, Odisha.

Your Ref. No.:

Work Order No.: 3000156889/A06, Date: 26.10.2023

Sample Details:

1. Indian Coal (01 No.) 2. Imported Coal (01 No.)
 3. Iron Ore (01 No.) 4. Lime stone (01 No.)
 5. Dolomite (01 No.)

Date of Receiving:

08.01.2024

Date(s) of Conducting Test:

22.01.2024

Date of Completion of Test:

26.02.2024

Method Adopted:

1. Proximate analysis of coal samples by classical methods.
2. Major and trace element analysis of Coal, Iron ore, lime stone and Dolomite samples through wet chemical route by gravimetric, nephelometric, AAS and ICP-OES techniques.
3. Coal samples were leached with distilled water at a solid:liquid ratio of 1:20 for fluoride analysis.

Detail Report: Following data tables are enclosed:

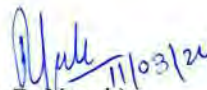
Table-1. Proximate analysis of coal samples.

Table-2. Chemical composition analysis of coal samples.

Table-3. Trace element analysis of coal samples.

Table-4. Chemical composition analysis of Iron ore, Lime stone and Dolomite samples.

Table-5. Trace element analysis of Iron ore, Lime stone and Dolomite samples.


 (Dr. B. Nayak)
 Chief Scientist
 PL & Head, CCD


 (J. Das)
 Pr. Technical Officer
 Central Characterization Dept.

N.B.: The samples are not drawn by CSIR-IMMT. Liability, if any, for the institute arising in connection with the testing shall be subject to ceiling of amount received by the institute from the client. The report should not be interpreted in part.

TEST REPORT

Ref. No. IMMT/CCD/03/2024

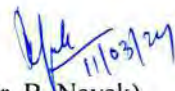
Date: 08.03.2024


Table-1. Proximate analysis of coal samples.

Sample ID	Moisture (%)	Volatile Matter (%)	Ash (%)	Fixed Carbon (%)
Indian coal	2.21	25.32	41.65	30.82
Imported coal	2.67	25.53	15.29	56.51

Table-2. Chemical composition analysis of coal samples.

Sl. No.	Component	Concentration in Test Samples, %	
		Indian Coal	Imported Coal
1	SiO ₂	23.87	8.05
2	Al ₂ O ₃	10.76	5.41
3	Fe ₂ O ₃	1.93	0.27
4	TiO ₂	0.69	0.25
5	MnO	0.008	0.004
6	CaO	0.43	0.32
7	MgO	0.07	0.07
8	Na ₂ O	0.29	0.18
9	K ₂ O	0.41	0.14
10	P ₂ O ₅	0.16	0.11
11	S/SO ₃	0.42/1.05	0.50/1.25
12	LOI	59.07	82.65


(Dr. B. Nayak)
Chief Scientist
PL & Head, CCD


(J. Das)
Pr. Technical Officer
Central Characterization Dept.


TEST REPORT


Ref. No. IMMT/CCD/03/2024

Date: 08.03.2024

Table-3. Trace element analysis of coal samples

Sl. No.	Parameters	Trace element concentrations in test samples		
		Unit	Indian coal	Imported coal
1	Pb	mg/kg	21.66	3.69
2	Cd	mg/kg	0.34	0.09
3	Cu	mg/kg	37.25	9.37
4	Ni	mg/kg	25.80	17.65
5	Co	mg/kg	15.43	5.64
6	Cr	mg/kg	53.61	22.90
7	Zn	mg/kg	35.82	13.82
8	Ag	mg/kg	1.17	0.31
9	Sb	mg/kg	5.86	1.61
10	Mo	mg/kg	4.15	0.56
11	V	mg/kg	58.97	13.41
12	Se	mg/kg	0.56	0.12
13	Ba	mg/kg	156.4	17.05
14	As	mg/kg	76.8	9.31
15	Hg	mg/kg	1.32	0.68
16	B	%	0.26	0.14
17	F ⁻ in water leaching (1:20) solutions.	mg/L	0.17	0.09


(Dr. B. Nayak)
Chief Scientist
PL & Head, CCD


(J. Das)
Pr. Technical Officer
Central Characterization Dept.


TEST REPORT

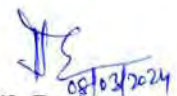
Ref. No. IMMT/CCD/03/2024

Date: 08.03.2024

Table-4. Chemical composition analysis of Iron ore, Lime stone and Dolomite samples.

Sl. No.	Component	Concentration in Test Samples, %		
		Iron Ore	Lime Stone	Dolomite
1	SiO ₂	3.35	1.47	10.12
2	Al ₂ O ₃	4.21	0.93	2.30
3	Fe ₂ O ₃	83.4	0.13	0.78
4	TiO ₂	1.3	0.013	0.056
5	MnO	0.01	0.006	0.015
6	CaO	0.44	49.85	34.67
7	MgO	0.008	9.56	8.75
8	Na ₂ O	0.42	1.35	0.99
9	K ₂ O	0.13	0.16	0.39
10	P ₂ O ₅	0.06	0.004	0.019
11	S/SO ₃	0.1/0.25	0.07/0.18	0.09/0.23
12	LOI	5.38	35.22	40.60


(Dr. B. Nayak)
Chief Scientist
PL & Head, CCD


(J. Das)
Pr. Technical Officer
Central Characterization Dept.


TEST REPORT

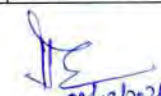
Ref. No. IMMT/CCD/03/2024

Date: 08.03.2024

Table-5. Trace element analysis of Iron ore, Lime stone and Dolomite samples.

Sl. No.	Parameters	Trace element concentrations in test samples			
		Unit	Iron Ore	Lime Stone	Dolomite
1	Pb	mg/kg	1.05	0.14	0.21
2	Cd	mg/kg	0	0	0
3	Cu	mg/kg	7.42	4.87	7.92
4	Ni	mg/kg	0.95	6.53	12.38
5	Co	mg/kg	7.92	9.79	6.16
6	Cr	mg/kg	47.13	20.22	29.80
7	Zn	mg/kg	23.65	5.51	14.52
8	Ag	mg/kg	0.04	0.19	0.21
9	Sb	mg/kg	0.13	0.09	0.04
10	Mo	mg/kg	0	0.196	0.22
11	V	mg/kg	25.27	2.96	12.91
12	Se	mg/kg	0	0	0
13	Ba	mg/kg	56.2	14.2	6.52
14	As	mg/kg	3.59	22.04	29.63
15	Hg	mg/kg	0.42	0.51	0.63
16	B	%	0.43	0.49	0.62


(Dr. B. Nayak)
Chief Scientist
PL & Head, CCD


(J. Das)
Pr. Technical Officer
Central Characterization Dept.



Government of Odisha
DIRECTORATE OF FACTORIES AND BOILERS, ODISHA.
 KHARAVEL NAGAR, UNIT-3, BHUBANESWAR-751001, PH. NO. 2396070.

Letter No. IV (IH) (3)-149/11/ 3143 / Dated, the 19/10/2022

To

✓ The Occupier
 M/s. TATA Steel Meramundali,
 At- Narendrapur, PO- Kusupanga, Meramundali,
 Dist. - Dhenkanal.

Sub: Acceptance of Updated On-Site Emergency Plan

Ref: Your letter Your L. No. TSM/DFBC/22/62 dated 12.08.2022.

Sir,

In inviting the reference on the subject cited above & in pursuance of provision under Rule 12 of the Odisha Factories (Control of Major Accident Hazard) Rules, 2001, the updated On-Site Emergency Plan of your MAH factory having identified **Hazardous substances LDO, HSD, LPG, LIQUID OXYGEN, HYDROGEN, NaOH, H₂SO₄ & TRANSFORMER OIL** bearing Sl.No. 176/22 is hereby provisionally accepted, subject to conditions as mentioned hereunder:-

01. Consequent upon any modification / alteration in future the On-Site Emergency plan shall be prepared and submitted for acceptance.
02. The **possible hazards** associated with the factory and '**Dos**' and '**Don'ts**' shall be displayed in prominent place adjacent to main gate & conspicuous places inside the factory with the measures to be taken in case of such incident.
03. Each key personnel of the command structure shall be provided with a **worksheet** containing their duties and responsibilities.
04. **Mock Drill** shall be scheduled through PARESHRAM portal at least once in every six months involving zonal Asst. Director of Factories and Boilers / Divisional Dy. Directors of Factories and Boilers concerned & DCG members.
05. Annual report on hold of Mock Drills shall be submitted to the authorities of District Administration under intimation to Assistant Director of Factories & Boilers/Deputy Director of Factories & Boilers/Director of Factories & Boilers
06. Awareness programmes on hazard & mitigation shall be made amongst workers and people living in the vicinity


The accepted copy of the updated On-Site Plan is sent herewith, the receipt of which may please be acknowledged and photocopy of the same be provided to the following authorities.

- Addl. Secretary to Govt. of Odisha, Home (Special Section) Department, Bhubaneswar.
- Principal Secretary to Govt. of Odisha, Labour & ESI Department, Bhubaneswar
- Collector & District Magistrate, Dhenkanal.
- Superintendent of Police, Dhenkanal.

P.T.O.

- District Fire Office, Dhenkanal.
- Chief Medical Officer, Dhenkanal.
- Asst. Director of Factories & Boilers, Dhenkanal Zone.
- Dy. Director of Factories & Boilers, Angul Division.

Yours faithfully,

Memo No. 3144 / Dated, the 19/10/2022  Director of Factories and Boilers, Odisha
Copy to the Asst. Director of Factories and Boilers Dhenkanal Zone / Dy. Director of Factories and Boilers, Angul Division for information and necessary action.


Dy. Director of Factories and Boilers, Safety

(-) copy to renewal file

CSR EXPENDITURE AND ACTIVITY HIGHLIGHTS
(Around Tata Steel Ltd. Meramandali)

Period: From April'23 to March'24

PROGRAM HEAD	Expenditure (Rupees) in Lakh	MAJOR INTERVENTIONS/REMARKS
Health & drinking wtr	327.43	Public Health Unit; Rishta; Dengue/Malaria control, Cataract, Non communicable disease control
Education	912.85	PISCI culture, Lemon grass, SRI farming
Livelihood	173.55	Odapada pond renovation work. 9 acre
Infrastructure & misc.	792.16	Installation of tubewells; deep bore wells, pipeline system and water supply through tanker
Sports	50.80	School infrastructure; Education project: QUEST
Empowerment	94.48	WEE Project
Ethnicity	2.38	Volleyball coaching
Relief fund	0.03	Odia New year celebration (Maha Bisuva Sankranti)
TOTAL	2353.68	

**SUMMARY OF AMBIENT AIR QUALITY
MONTHLY AVERAGE VALUES**

Month	Locations of Monitoring	Monthly Average				
		Unit in $\mu\text{g}/\text{m}^3$				Unit in mg/m^3
	Pollutant	PM ₁₀	PM _{2.5}	SO ₂	NO _x	CO
	Standard	100	60	80	80	2
Oct'23	CAAQMS-1	47.35	36.10	15.01	11.81	0.70
	CAAQMS-2	105.00	36.26	15.86	9.28	0.78
	CAAQMS-3	69.52	38.71	13.63	12.60	0.51
	CAAQMS-4	114.59	65.95	7.13	UM	0.34
	CAAQMS-5	132.68	68.19	17.49	9.76	0.52
	CAAQMS-6	131.20	57.88	9.72	25.71	0.61
	CAAQMS-7	159.82	52.26	31.44	25.61	1.05
Nov'23	CAAQMS-1	40.1	23.1	21.3	21.1	0.7
	CAAQMS-2	103.4	28.5	24.7	8.9	0.7
	CAAQMS-3	53.3	35.1	12.1	13.2	0.8
	CAAQMS-4	110.5	54.2	6.5	UM	0.2
	CAAQMS-5	87.0	37.4	14.9	8.0	0.5
	CAAQMS-6	87.9	31.4	9.4	21.5	UM
	CAAQMS-7	84.3	29.6	36.7	17.8	0.8
Dec'23	CAAQMS-1	40.5	26.1	17.7	26.3	0.7
	CAAQMS-2	95.2	29.3	17.0	9.3	0.8
	CAAQMS-3	45.4	25.8	12.7	9.8	0.9
	CAAQMS-4	104.1	41.2	6.3	UM	0.3
	CAAQMS-5	89.0	40.9	13.8	7.9	0.5
	CAAQMS-6	82.1	27.4	10.0	23.1	UM
	CAAQMS-7	113.9	42.4	16.7	8.7	0.7
Jan'24	CAAQMS-1	30.82	19.40	12.00	20.57	0.66
	CAAQMS-2	85.84	29.32	15.85	9.59	0.72
	CAAQMS-3	59.76	19.95	27.91	33.53	0.80
	CAAQMS-4	32.70	17.14	5.52	UM	0.22
	CAAQMS-5	49.13	19.45	12.00	7.55	0.51
	CAAQMS-6	49.52	17.04	9.04	20.50	0.62
	CAAQMS-7	54.24	22.38	11.61	8.60	0.76

Feb'24	CAAQMS-1	61.13	25.86	15.74	25.06	0.66
	CAAQMS-2	87.72	35.52	16.57	9.66	0.66
	CAAQMS-3	61.34	23.12	2.05	18.67	0.66
	CAAQMS-4	58.73	28.98	5.61	12.01	0.66
	CAAQMS-5	92.18	22.85	17.17	8.02	0.66
	CAAQMS-6	91.12	23.70	9.72	21.87	0.66
	CAAQMS-7	115.44	43.94	16.98	21.87	0.66
Mar'24	CAAQMS-1	63.87	22.77	13.61	18.46	0.66
	CAAQMS-2	72.80	32.50	24.91	9.46	0.72
	CAAQMS-3	58.98	20.24	2.63	18.80	0.80
	CAAQMS-4	64.04	18.99	5.63	13.18	0.22
	CAAQMS-5	55.79	16.32	13.20	8.79	0.52
	CAAQMS-6	67.16	16.64	8.18	27.42	1.08
	CAAQMS-7	73.64	40.29	25.48	22.82	0.76

All values are in $\mu\text{g}/\text{m}^3$ except CO values are in mg/m^3 . All Values are derived from 24 hourly average data except CO values which are derived from 8 hourly average data.

CAAQMS 1: Near Township; CAAQMS 2: Near Utility Department; CAAQMS 3: Near CRM; CAAQMS 4: Near Water Complex; CAAQMS 5: Near Coke Oven 2; CAAQMS 6: Near Wagon Tippler; CAAQMS 7: Near Material Gate, UM: Under Maintenance.

Environment Laboratory TATA Steel Meramandali, Odisha

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Annexure-XI

Ref.No. EMD/LAB/2023-24/138
Dt. 07.11.2023

S.N	Name of the unit	Location	Noise level in dB(A)		
			Min	Max	Leq
1	BF-2 Cast House	Control room	56.1	60.1	58.4
2	BF-2 Stock House	Near B F-2 Furnace area	80.7	83.8	82.2
3	Lime Plant	Control room office	48.4	59.3	56.7
4	BF PP-1 Boiler-03	Inside office building	59.0	66.6	61.9
5	Gas fired boiler 250 TPH Area	Near Control room office	55.4	69.3	58.7
		Office and Control Room	51.8	75.2	62.4
6	DRI	KILN NO-1, Near 1& 2 control room office	51.3	63.3	54.9
		KILN NO-3, Near 3& 4 control room office	51.6	61.6	52.7
		KILN NO-5, Near 5& 6 control room office	51.3	63.7	53.7
		KILN NO-7, Near 7& 8 control room office	51.5	73	58.2
		KILN NO-8, Near 9&10 control room office	51.4	77.9	60.1
7	BF-1 Cast House	Near B F-1 Furnace	81.1	82.6	80.8
8	BF-1 Stock House	BF-1 Office	48.9	60.2	58.7
		Near CRM Mill Complex Area	78.9	86.8	84.5
		Near I.L.L	SD	SD	SD
		Near ETP area	SD	SD	SD
		Near GP-1 Zinc Pot	SD	SD	SD
		Near GP-2 Zinc Pot	82.9	86.4	84.8
		Near GP-3 Zinc Pot	85.1	90	87.5
		Colour Coating Line	83.2	91.5	87.5
9	CRM	Mill-1	85.5	90.6	88.7
		Mill-2	51.2	58.4	56.3
		Mill-3	85.3	95.4	88.6
		CRM Plant Office	78.1	90.5	83.3
		ECL	85.9	89.4	86.9
		CRCA	SD	SD	SD
		SPM	78.9	86.8	84.5
		RGM	SD	SD	SD
10	Sinter Plant-1	9 m office room	56.7	70.3	62.8
		15 m office	69.3	80.7	71.1
		19 m office	55.0	71.2	63.7
		Store area	70.0	77.7	71
		Electrical office	54.4	64.4	55.6
11	Coke Oven-1	Control room office	53.4	85.5	55.7
12	Sinter Plant-02	Laboratory	50.3	58.3	54.5
13	Sinter Plant-03	Control Room Area	58	82.8	64.6
		Control Room Area	57.6	80.3	63.9
14	BOF Shop	BOF office area	54.7	69.9	59.5
		Near Wage bridge area	68.7	80.5	73.6

Environment Laboratory TATA Steel Meramandali, Odisha

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15	SMS-2-FES-1&2	Booster House (ID Fan)	80.3	91.2	84.8
		Near Control room Area	51.2	79.8	60.5
		Near RHF Office area (Pulpit)	68.7	76.5	69.3
		Near Roll Shop area	80.2	84.1	83.4
16	HSM	Near HSM Quality Lab area	46.2	50.2	48.3
		DC pulpit office area	48.2	58.4	55.8
		FM area	85.9	88.5	86.5
		Near DC sampling Station	84.8	86.2	85.6
17	Coke Oven-2	Control Room Office	59.7	63.3	60.2
18	BFPP-2 Boiler-3	Control room	58.9	67.4	60.2
19	Oxygen Plant-02	Control Room Office	43.6	50.2	48.7
20	BB Plant	BB Plant Office	48.9	53.6	50.2
21	RMPP	Control Room Office	48.9	51.2	50.7
23	Coal Washery	Lab & Office Area	43.1	48.5	47.2
24	IBMD	New Sarpa MRP-II (Operator Cabin)	41.2	48.2	45.3
25	IBMD	Office & Operator Cabin (Old MRP)	43.6	48.2	45.3

N: B- All employees are provided ear plug / earmuff in noise prone areas.

A.K. Pradhan
Section I/C

Tushar Koushik
Lab Manager (Lab)

Manoj Kumar Das
Sr. Area Manager (Lab I/C)

...End Report...

Page 2 of 2

Environment Laboratory
TATA Steel Meramandali, Odisha

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Ref.No. EMD/LAB/2023-24/0140
Dt.07.11.2023

S.N	Location	Monitoring Date	Noise Level dB(A) Leq (Day time)	Standard dB(A) Leq(Day Time)	Noise Level dB(A) Leq (Night time)	Standard dB(A) Leq(Night Time)
1	Colony	10.10.2023	52.8	55.0	42.3	45.0
2	Coke Oven-2	13.10.2023	65.1	75.0	58.1	70.0
3	AEL	25.10.2023	64.2	75.0	57.8	70.0

A.K. Pradhan
Section I/C

Tusar Kishor Samal
Sr. Manager (Lab)

Mani feyee Deb
Sr. Area Manager (Lab I/C)

...End Report...

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Environment Laboratory
TATA Steel Meramandali, Odisha

Ref.No. EMD/LAB/2023-24/143
Dt.08.12.2023

S.N	Location	Monitoring Date	Noise Level dB(A) Leq (Day time)	Standard dB(A) Leq(Day Time)	Noise Level dB(A) Leq (Night time)	Standard dB(A) Leq(Night Time)
1	Colony	10.11.23	52.6	55.0	48.8	45.0
2	Coke Oven-2	16.11.23	63.1	75.0	56.8	70.0
3	AEL	21.11.23	64.2	75.0	76.6	70.0

A.K. Pradhan.
Section I/C

for Somnath Das
Manager (Lab)

Maiti Jayendra Das
Sr. Area Manager (Lab I/C)

...End Report...

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Environment Laboratory TATA Steel Meramandali, Odisha

15	SMS-2-FES-1&2	Booster House (ID Fan)	78.4	81.3	80.6
		Near Control room Area	58.6	73.1	62.7
		Near RHF Office area (Pulpit)	52.5	79.2	67.7
		Near Roll Shop area	79.1	84.9	83.0
16	HSM	Near HSM Quality Lab area	40.3	48.2	46.1
		DC pulpit office area	44.3	49.2	47.8
		FM area	84.9	90.0	86.9
		Near DC sampling Station	84.3	86.9	85.1
17	Coke Oven-2	Control Room Office	48.6	68.6	53.6
18	BFPP-2 Boiler-3	Control room	46.2	50.3	49.1
19	Oxygen Plant-02	Control Room Office	53.6	59.4	55.8
20	BB Plant	BB Plant Office	45.1	50.0	48.3
21	RMPP	Control Room Office	51.0	83.8	60.0
22	Coal washery	Lab & Office area	72.3	84.1	75.0
23	RMHS	RMHS Office	54.7	77.7	67.5
24	IBMD	New Sarpa MRP-II (Operator Cabin)	51.5	75.6	62.8
25		Office & Operator Cabin (Old MRP)	54.4	67.9	56.5

N: B- All employees are provided ear plug / earmuff in noise prone areas.

A.K. Pradhan
Section (I/C)

for Somnath Das
Manager (Lab)

Manoj Kumar Das
Sr. Area Manager (Lab I/C)

...End Report...

Page 2 of 2

Environment Laboratory

TATA Steel Meramandali, Odisha

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Ref.No. EMD/LAB/2023-24/141
Dt.08.12.2023

S.N	Name of the unit	Location	Noise level in dB(A)		
			Min	Max	Leg
1	BF-2 Cast House	Control room	45.7	50.3	48.3
		Near B F-2 Furnace area	80.7	84.3	82.1
2	BF-2 Stock House	Control room office	45.2	48.3	46.1
3	Lime Plant	Inside office building	57.0	68.7	60.2
4	BF PP-1 Boiler-03	Near Control room office	44.7	51.3	48.9
5	Gas fired boiler 250 TPH Area	Office and Control Room	48.2	56.9	50.3
6	DRI	KILN NO-1, Near 1& 2 control room office	50.9	85.5	60
		KILN NO-3, Near 3& 4 control room office	48.3	56.9	51.4
		KILN NO-5, Near 5& 6 control room office	50.1	60.4	53.3
		KILN NO-7, Near 7& 8 control room office	45.9	51.3	48.3
		KILN NO-8, Near 9&10 control room office	48.3	55.4	50.1
7	BF-1 Cast House	Near B F-1 Furnace	80.3	83.0	81.5
8	BF-1 Stock House	BF-1 Office	43.9	48.3	47.3
9	CRM	Near CRM Mill Complex Area	78.0	80.7	79.4
		Near T.L.L	SD	SD	SD
		Near ETP area	82.6	86.1	84.0
		Near GP-1 Zinc Pot	85.0	92.1	87.1
		Near GP-2 Zinc Pot	84.5	90.9	87.1
		Near GP-3 Zinc Pot	SD	SD	SD
		Colour Coating Line	80.5	97.5	84.1
		Mill-1	SD	SD	SD
		Mill-2	84.1	92.3	88.4
		Mill-3	84.6	90.4	86.5
		CRM Plant Office	43.5	49.3	45.4
		ECL	86.0	92.3	88.9
		CRCA	77.9	89.2	81.2
		SPM	86.7	91.4	89.0
		RGM	77.4	86.9	80.8
10	Sinter Plant-1	9 m office room	66.9	84.2	73.1
		15 m office	60.9	70.0	65.4
		19 m office	50.7	60.1	58.9
		Store area	77.1	80.2	78.2
		Electrical office	48.9	50.1	49.0
11	Coke Oven-1	Control room office	55.8	79.8	58.3
		Laboratory	54.6	60.6	55.8
12	Sinter Plant-02	Control Room Area	45.1	48.3	45.1
13	Sinter Plant-03	Control Room Area	42.3	49.0	44.8
14	BOF Shop	BOF office area	45.3	48.3	47.1
		Near Wage bridge area	78.5	81.6	80.3

Mitra S. K. Private Limited

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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TEST REPORT

Name & Address of Customer :

TATA STEEL LTD.

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

Report No. :

MSKPL/ED/2023-24/RPD64J

Date :

02/12/2023

Sample No. :

MSKNB/ED/2023-24/11/X43020

Date of receipt of sample:

28/11/2023

Date(s) of performance:

28/11/2023 - 02/12/2023

Location of performance of

Permanent Facility

Reference No. & Date :

3000148695/A06, Date - 15/12/2022

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	24/11/2023
5. Place of sampling	CAAOMS 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	Mr. Chinmaya Biswal
9. Field Equipments Used	MSK/BBSR/FIELD/SLM-03

Report No. : MSKPL/ED/2023-24/RPD64J

Sample No. : MSKNB/ED/2023-24/11/X43020

RESULT

Chemical				
Sl No	Parameter	UOM	Method	Result
1	Leq dB(A) day	dB(A)	IS 9989	72.0
2	Leq dB(A) night	dB(A)	IS 9989	69.2

Opinion : NA

Statement of Conformity NA

----- END -----

Reviewed By

Signature

Name : Mr. Bansi Jena

Designation : Executive Chemist

Authorized Signatory

Signature

Name : Mr. Bansi Jena

Designation : Executive Chemist

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 7 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, Baked food) shall be retained for 15 days from the date of issue of the Test Report

Head Office: Service Centre (8th 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



Mitra S. K. Private Limited

Address of Laboratory :

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



TC-6960



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ULR: TC-495023000038245F

TEST REPORT

Name & Address of Customer :

TATA STEEL LTD.

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

Report No. :

MSKPL/ED/2023-24/VAD64Z

Date :

02/12/2023

Sample No. :

MSKNB/ED/2023-24/11/2M302U

Date of receipt of sample:

28/11/2023

Date(s) of performance:

28/11/2023 - 02/12/2023

Location of performance of

Permanent Facility

Reference No. & Date :

3000148695/A06, Date - 15/12/2022

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	24/11/2023
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	Mr. Chinmaya Biswal
9. Field Equipments Used	MSK/BBSR/FIELD/SLM-03

Report No. : MSKPL/ED/2023-24/VAD64Z

Sample No. : MSKNB/ED/2023-24/11/2M302U

RESULT

Chemical				
Sl No.	Parameter	UOM	Method	Result
1	Leq dB(A) day	dB(A)	IS 9989	72.5
2	Leq dB(A) night	dB(A)	IS 9989	68.7

Opinion : NA

Statement of Conformity NA

— END —

Reviewed By

Signature

Name : Mr. Bang Juna

Designation : Executive Chemist

Authorized Signatory

Signature

Name : Mr. Bang Juna

Designation : Executive Chemist

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 7 days from the date of issue of the Test Report.
The reserved part of sample(s) for chemical analysis (Sox, 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, Raveed food) shall be retained for 15 days from the date of issue of the Test Report.

Head Office: Service Centre (6th Floor): 74B, A. J. C. Bose Road, Kolkata - 700015, West Bengal, India
Tel : 91 33 40143000 / 22650007 Fax : 91 33 22650006
Email : info@mitrask.com Website : www.mitrask.com

Mitra S. K. Private Limited

Address of Laboratory :

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



TC-6950

Doc: MSK/GEN/1947



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ULR: TC-695023000008241F

TEST REPORT

Name & Address of Customer :

TATA STEEL LTD.

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

Report No. :

MSKPL/ED/2023-24/1AD045

Date :

02/12/2023

Sample No. :

MSKNB/ED/2023-24/11/NA302Y

Date of receipt of sample:

25/11/2023

Date(s) of performance:

25/11/2023 - 02/12/2023

Location of performance of

Permanent Facility

Reference No. & Date :

3000148695/A06, Date - 15/12/2022

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	22/11/2023
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	Mr. Chinmaya Biswal
9. Field Equipments Used	MSK/BBSR/FIELD/SLM-03

Report No. : MSKPL/ED/2023-24/1AD645

Sample No. : MSKNB/ED/2023-24/11/NA302Y

RESULT

Chemical

Sl No.	Parameter	UOM	Method	Result
1	Leq dB(A) day	dB(A)	IS 9989	71.7
2	Leq dB(A) night	dB(A)	IS 9989	67.3

Opinion : NA

Statement of Conformity NA

----- END -----

Reviewed By:

Signature

Name

Mr. Banal Jena

Designation

Executive Chemist

Authorized Signatory:

Signature

Name

Mr. Banal Jena

Designation

Executive Chemist

This 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: Shreeji Centre (6th Floor), 74B, A.J.C. Bose Road, Kolkata - 700016, West Bengal, India

Tel. : 91 33 40143000 / 22650007 Fax : 91 33 22680008
Email : info@mitrask.com Website : www.mitrask.com

Mitra S. K. Private Limited

Address of Laboratory :

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



TC-6950

Doc: MSK/GEN/1A/27



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ULR: TC-695023000007976F

TEST REPORT

Name & Address of Customer :

TATA STEEL LTD.

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

Report No. :

MSKPL/ED/2023-24/7PCBFQ

Date :

21/11/2023

Sample No. :

MSKNB/ED/2023-24/11/UH1E55

Date of receipt of sample:

18/11/2023

Date(s) of performance:

16/11/2023 - 21/11/2023

Location of performance of

Permanent Facility

Reference No. & Date :

3000148655/A06, Date - 15/12/2022

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	13/11/2023
5. Place of sampling	Ceagms-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	Mr. Chinmaya Biswal
9. Field Equipments Used	MSK/BBSR/FIELD/SLM-01

Report No. : MSKPL/ED/2023-24/7PCBFQ

Sample No. : MSKNB/ED/2023-24/11/UH1E55

RESULT

Sl No.	Parameter	UOM	Method	Result
1	Leq dB(A) day	dB(A)	IS 9989	71.3
2	Leq dB(A) night	dB(A)	IS 9989	68.0

Opinion : NA

Statement of Conformity NA

— END —

Reviewed By:

Signature

Name : Mr. Dinesh Jena

Designation : Executive Chemist

Authorized Signatory:

Signature

Name : Mr. Bagesh Jena

Designation : Executive Chemist

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 microbiological analysis (Solid & Liquid Waste) shall be retained for 15 days as per CPCB guideline & (Air) if 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

Mitra S. K. Private Limited

Address of Laboratory :

Building No. P-46, Udayan Industrial Estate,
3, Pagladanga Road, Kolkata 700015
West Bengal
Tel. : +91 7044036120
Email: udayanlab@mitrask.com



TC-6950

DIN: MSK/GEN/15017



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ULR: TC-695023000007970F

TEST REPORT

Name & Address of Customer :

TATA STEEL LTD.

NH-55, NARENDRAPUR, MERAMANDI, DHENKANAL
ODISHA India Pin 759120

Report No. :

MSKPL/ED/2023-24/JQCB39

Date :

21/11/2023

Sample No. :

MSKNB/ED/2023-24/11/QV1C7Z

Date of receipt of sample:

14/11/2023

Date(s) of performance:

14/11/2023 - 21/11/2023

Location of performance of

Permanent Facility

Reference No. & Date :

3000148695/A06, Date - 15/12/2022

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	10/11/2023
5. Place of sampling	Casqms-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	Mr. Chinmaya Biswal
9. Field Equipments Used	MSK/BBSR/FIELD/SLM-03

Report No. : MSKPL/ED/2023-24/JQCB39

Sample No. : MSKNB/ED/2023-24/11/QV1C7Z

RESULT

Chemical				
Sl No.	Parameter	UOM	Method	Result
1	Leq dB(A) day	dB(A)	IS 9989	71.7
2	Leq dB(A) night	dB(A)	IS 9989	69.9

Opinion : NA

Statement of Conformity NA

-----END-----

Reviewed By

Signature

Name : Mr. Banerjee

Designation : Executive Chemist

Authorized Signatory

Signature

Name : Mr. Bipin Jana

Designation : Executive Chemist

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: Strachey Centre (3rd Floor), 74B, A. J. C. Bose Road, Kolkata - 700016, West Bengal, India

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Environment Laboratory
TATA Steel Meramandali, Odisha

Ref.No. EMD/LAB/2023-24/0146
Dt.- 01.01.2024

AMBIENT NOISE MONITORING
TATA STEEL Ltd. (Dec' 23)

S.N	Location	Monitoring Date	Noise Level dB(A) Leq (Day time)	Standard dB(A) Leq(Day Time)	Noise Level dB(A) Leq (Night time)	Standard dB(A) Leq(Night Time)
1	Colony	29.12.23	53.9	55.0	53.3	45.0
2	Coke Oven-2	16.12.23	62.8	75.0	58.9	70.0
3	AEL	22.12.23	64.2	75.0	57.9	70.0

Sambatta D L
Section I/C

for the same
for Manager (Lab)

Maibayee D L
Sr .Manager (Lab I/C)

...End Report...

Environment Laboratory TATA Steel Meramandali, Odisha

64

Ref.No. EMD/LAB/2023-24/0144
Dt- 05.01.2024

TATA Steel Meramandali, Odisha
Environment Laboratory

S.N	Name of the unit	Location	Noise level in dB(A)		
			Min	Max	Leg
1	BF-2 Cast House	Control room	51.1	62.1	55.9
		Near B F-2 Furnace area	79.3	82.1	80.7
2	BF-2 Stock House	Control room office	51.3	57.0	52.7
3	Lime Plant	Inside office building	55.3	78.5	64.2
4	BF PP-1 Boiler-03	Near Control room office	45.6	65.9	60.7
5	Gas fired boiler 250 TPH Area	Office and Control Room	44.8	68.3	59.0
6	DRI	KILN NO-1, Near 1 & 2 control room office	60.2	69.3	64.4
		KILN NO-3, Near 3 & 4 control room office	62.4	68.7	65.3
		KILN NO-5, Near 5 & 6 control room office	61.0	71.7	63.6
		KILN NO-7, Near 7 & 8 control room office	61.4	78.0	65.5
		KILN NO-8, Near 9 & 10 control room office	62.2	73.6	65.6
7	BF-1 Cast House	Near B F-1 Furnace	75.3	97.3	79.6
8	BF-1 Stock House	BF-1 Office	43.7	50.3	48.9
9	CRM	Near CRM Mill Complex Area	75.6	84.6	78.2
		Near T.L.L	SD	SD	SD
		Near ETP area	79.0	82.5	80.1
		Near GP-1 Zinc Pot	SD	SD	SD
		Near GP-2 Zinc Pot	87.0	90.4	87.8
		Near GP-3 Zinc Pot	85.8	88.4	87.2
		Colour Coating Line	84.6	86.6	85.6
		Mill-1	85.3	90.7	86.6
		Mill-2	85.4	88.7	86.7
		Mill-3	SD	SD	SD
		CRM Plant Office	48.1	55.6	49.8
		ECL	SD	SD	SD
		CRCA	77.4	84.7	79.8
		SPM	86.6	89.6	88.0
		RGM	79.3	88.7	83.0
10	Sinter Plant-1	9 m office room	63.8	74.8	71.9
		15 m office	51.7	78.6	64.3
		19 m office	61.4	83.3	72.4
		Store area	74.9	78.4	76.9
		Electrical office	51.5	78.3	67.7
11	Coke Oven-1	Control room office	45.3	62.7	60.0
		Laboratory	49.8	50.4	57.6
12	Sinter Plant-02	Control Room Area	49.6	57.7	51.0
13	Sinter Plant-03	Control Room Area	63.6	83.5	66.6
14	BOF Shop	BOF office area	51.7	79.7	65.0
		Near Wage bridge area	69.5	79.8	73.0


Environment Laboratory TATA Steel Meramandali, Odisha

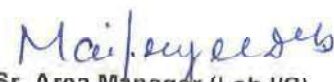
65

15	SMS-2-FES-1&2	Booster House (ID Fan)	80.1	91.0	84.3
		Near Control room Area	60.3	72.1	64.8
		Near RHF Office area (Pulpit)	73.5	82.7	75.4
		Near Roll Shop area	75.8	86.7	81.6
16	HSM	Near HSM Quality Lab area	50.1	60.1	58.4
		DC pulpit office area	61.3	81.0	67.4
		FM area	86.3	95.9	88.6
		Near DC sampling Station	78.4	102.4	85.7
17	Coke Oven-2	Control Room Office	62.7	75.2	65.8
18	BF-PP-2 Boiler-3	Control room	50.8	60.9	58.4
19	Oxygen Plant-02	Control Room Office	55.4	65.3	62.9
20	BB Plant	BB Plant Office	74.4	81.3	80.7
21	RMPP	Control Room Office	52.6	82.0	69.8
22	Coal washery	Lab & Office area	54.6	72.8	58.6
23	RMHS	RMHS Office	54.1	59.0	56.1
24	IRMD	New Sarpa MRP-II (Operator Cabin)	48.5	55.9	51.3
25		Office & Operator Cabin (Old MRP)	51.6	58.9	54.9

N: B- All employees are provided ear plug / earmuff in noise prone areas.


Section (I/C)


Gr Manager (Lab)


Sr. Area Manager (Lab I/C)

...End Report...

Page 2 of 2



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Email: udayanlab@mitrasak.com



TC-6950



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ULR: TC-69502400000093F

TEST REPORT

Name & Address of Customer :

TATA STEEL LTD.

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

Report No. :

MSKPL/ED/2023-24/1 PEC2W

Date :

03/01/2024

Sample No. :

MSKNB/ED/2023-24/12/CV57AD

Date of receipt of sample:

26/12/2023

Date(s) of performance:

29/12/2023 - 03/01/2024

Location of performance of

Permanent Facility

Reference No. & Date :

3000148695/A06, Date - 15/12/2022

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	27/12/2023
5. Place of sampling	Caaqma-4 (IIGM 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	Ranjit Pradhan
9. Field Equipments Used	N/A

Report No. : MSKPL/ED/2023-24/1PEC2W

Sample No. : MSKNB/ED/2023-24/12/CV57AD

RESULT

Chemical

Sl No.	Parameter	UOM	Method	Result
1	Leq dB(A) day	dB(A)	IS 9989	72.1
2	Leq dB(A) night	dB(A)	IS 9989	67.6

Opinion : NA

Statement of Conformity : NA

----- END -----

Reviewed By:

Signature :

Name : Mr. Bansi Jana

Designation : Executive Chemist

Authorized Signatory:

Signature :

Name : Mr. Bansi Jana

Designation : Executive Chemist

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

Address of Laboratory :

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



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ULR: TC-695024000000091F

TEST REPORT

Name & Address of Customer :

TATA STEEL LTD.

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

Report No. :

MSKPL/ED/2023-24/C6EC2S

Date :

03/01/2024

Sample No. :

MSKNB/ED/2023-24/12/XN57AU

Date of receipt of sample:

29/12/2023

Date(s) of performance:

29/12/2023 - 03/01/2024

Location of performance of

Permanent Facility

Reference No. & Date :

3030148695/A05. Date - 15/12/2022

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	26/12/2023
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	Ranjit Pradhan
9. Field Equipments Used	N/A

Report No. : MSKPL/ED/2023-24/C6EC2S

Sample No. : MSKNB/ED/2023-24/12/XN57AU

RESULT

Chemical				
Sl No.	Parameter	UOM	Method	Result
1	Leq dB(A) day	dB(A)	IS 9989	71.2
2	Leq dB(A) night	dB(A)	IS 9989	67.5

Opinion : NA

Statement of Conformity NA

— END —

Reviewed By:

Signature :

Name : Mr. Ranjit Pradhan

Designation : Executive Chemist

Authorized Signatory

Signature

Name : Mr. Ranjit Pradhan

Designation : Executive Chemist

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 CPCRI guidelines & (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

Mitra S. K. Private Limited

Address of Laboratory :

Building No. P- 48, Udayan Industrial Estate,
3, Pagladanga Road, Kolkata 700016
West Bengal
Tel. : 91 7044030120
Email: udayanlab@mitrask.com



TC-6950

68
Doc: MSK/GEN/19/07



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ULR: TC 695024000000238F

TEST REPORT

Name & Address of Customer :

TATA STEEL LTD.

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

Report No. :

MSKPL/ED/2023-24/LREC3A

Date :

05/01/2024

Sample No. :

MSKNB/ED/2023-24/12/ZC61BF

Date of receipt of sample:

01/01/2024

Date(s) of performance:

01/01/2024 - 05/01/2024

Location of performance of

Permanent Facility

Reference No. & Date :

3000148695/A06, Date - 15/12/2022

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	29/12/2023
5. Place of sampling	Coke Oven-1 Laboratory
6. Environmental conditions during sampling & Transport	NA
7. Sampling Plan & Method used	IS 9989:1981
8. Identification of the personnel performing sampling by MSK	Chinmaya Biswal
9. Field Equipments Used	N/A

Report No. : MSKPL/ED/2023-24/LREC3A

Sample No. : MSKNB/ED/2023-24/12/ZC61BF

RESULT

Chemical				
Sl No.	Parameter	UOM	Method	Result
1	Average dB(A)	dB(A)	IS 9989	58.8

Opinion : NA

Statement of Conformity NA

----- END -----

Reviewed By

Signature

Name : Mr. Bansi Jana

Designation : Executive Chemist

Authorized Signatory

Signature

Name : Mr. Bansi Jana

Designation : Executive Chemist

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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Mitra S. K. Private Limited

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Tel : +91 9044038120
Email: udayanlab@mitrask.com



TC-8950

69
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ULR: TC-695024000000237F

TEST REPORT

Name & Address of Customer :

TATA STEEL LTD.

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

Report No. :

MSKPL/ED/2023-24/NPEC3E

Date :

05/01/2024

Sample No. :

MSKNB/ED/2023-24/12/KN61D3

Date of receipt of sample:

01/01/2024

Date(s) of performance:

01/01/2024 - 05/01/2024

Location of performance of

Permanent Facility

Reference No. & Date :

3000148695/A06, Date - 15/12/2022

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	29/12/2023
5. Place of sampling	Coke Oven-1 Control Room Office
6. Environmental conditions during sampling & Transport	NA
7. Sampling Plan & Method used	IS 9989:1981
8. Identification of the personnel performing sampling by MSK	Chinmaye Biswal
9. Field Equipments Used	N/A

Report No. : MSKPL/ED/2023-24/NPEC3E

Sample No. : MSKNB/ED/2023-24/12/KN61D3

RESULT

Chemical

Sl No.	Parameter	UOM	Method	Result
1	Average dB(A)	dB(A)	IS 9989	68.0

Opinion : NA

Statement of Conformity NA

----- END -----

Reviewed By:

Signature :

Name : Mr. Banasi Jana

Designation : Executive Chemist

Authorized Signatory:

Signature :

Name : Mr. Banasi Jana

Designation : Executive Chemist

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 (Solid, 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: udayanlab@mitrask.com



TC-6950

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ULR: TC-695024000000238F

TEST REPORT

Name & Address of Customer :

TATA STEEL LTD.

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

Report No. :

MSKPL/ED/2023-24/A6EC3G

Date :

05/01/2024

Sample No. :

MSKNB/ED/2023-24/12/J161FW

Date of receipt of sample:

01/01/2024

Date(s) of performance:

01/01/2024 - 05/01/2024

Location of performance of

Permanent Facility

Reference No. & Date :

3000148695/A06, Date - 15/12/2022

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	28/12/2023
5. Place of sampling	Coke Oven-1 Near Battery-2 Area
6. Environmental conditions during sampling & Transport	NA
7. Sampling Plan & Method used	IS 9989:1981
8. Identification of the personnel performing sampling by MSK	Chiranjaya Biswal
9. Field Equipments Used	N/A

Report No. : MSKPL/ED/2023-24/A6EC3G

Sample No. : MSKNB/ED/2023-24/12/J161FW

RESULT

Chemical				
Sl No.	Parameter	UOM	Method	Result
1	Average dB(A)	dB(A)	IS 9989	84.1

Opinion : NA

Statement of Conformity NA

----- END -----

Reviewed By:

Signature :

Name : Mr. Baran Jana

Designation : Executive Chemist

Authorized Signatory:

Signature :

Name : Mr. Baran Jana

Designation : Executive Chemist

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

Page 1 of 1

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



TC-6950



Scan for Portal

ULR: TC-695024000000235F

TEST REPORT

Name & Address of Customer :

TATA STEEL LTD.

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

Report No. :

MSKPL/ED/2023-24/HZEC3X

Date :

05/01/2024

Sample No. :

MSKNB/ED/2023-24/12/BL61EU

Date of receipt of sample:

01/01/2024

Date(s) of performance:

01/01/2024 - 05/01/2024

Location of performance of

Permanent Facility

Reference No. & Date :

3000148695/A06, Date - 15/12/2022

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	29/12/2023
5. Place of sampling	Coke Oven-1 Near Battery-1 Area
6. Environmental conditions during sampling & Transport	NA
7. Sampling Plan & Method used	IS 9989:1981
8. Identification of the personnel performing sampling by MSK	Chinmaya Biswal
9. Field Equipments Used	N/A

Report No. : MSKPL/ED/2023-24/HZEC3X

Sample No. : MSKNB/ED/2023-24/12/BL61EU

RESULT

Chemical

Sl No.	Parameter	UOM	Method	Result
1	Average dB(A)	dB(A)	IS 9989	85.1

Opinion : NA

Statement of Conformity NA

----- END -----

Reviewed By:

Signature

Name : Mr. Bimal Jana

Designation : Executive Chemist

Authorized Signatory

Signature

Name : Mr. Bimal Jana

Designation : Executive Chemist

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

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Mitra S. K. Private Limited

Address of Laboratory :

Building No. P- 49, Udayan Industrial Estate,
3, Pagladanga Road, Kolkata 700016
West Bengal
Tel : 91 7044030120
Email: udayanlab@mitrask.com



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ULR: TC-695024000000234F

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/2023-24/N8EC39

05/01/2024

MSKNB/ED/2023-24/12/0L61CE

01/01/2024

01/01/2024 - 05/01/2024

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	29/12/2023
5. Place of sampling	Coke Oven-1 Near Stone Cutter Building Area
6. Environmental conditions during sampling & Transport	NA
7. Sampling Plan & Method used	IS 9989:1981
8. Identification of the personnel performing sampling by MSK	Chinmaya Biswal
9. Field Equipments Used	N/A

Report No. : MSKPL/ED/2023-24/N8EC39

Sample No. : MSKNB/ED/2023-24/12/0L61CE

RESULT

Chemical				
Sl No.	Parameter	UOM	Method	Result
1	Average dB(A)	dB(A)	IS 9989	83.6

Opinion : NA

Statement of Conformity NA

----- END -----

Reviewed By:

Signature :

Name : Mr. Bani Jana

Designation : Executive Chemist

Authorized Signatory:

Signature :

Name : Mr. Bani Jana

Designation : Executive Chemist

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 GPCB 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

Mitra S. K. Private Limited

Address of Laboratory :

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3, Pagladanga Road, Kolkata 700015
West Bengal
Tel : +91 7044035120
Email: udayanlab@mitrask.com



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ULR: TC-695024000000233F



TEST REPORT

Name & Address of Customer :

TATA STEEL LTD.

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

Report No. :

MSKPL/ED/2023-24/DBEC32

Date :

05/01/2024

Sample No. :

MSKNB/ED/2023-24/12/C361BG

Date of receipt of sample:

30/12/2023

Date(s) of performance:

30/12/2023 - 05/01/2024

Location of performance of

Permanent Facility

Reference No. & Date :

3000148695/A06, Date - 15/12/2022

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	28/12/2023
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	Chinmaya Biswal
9. Field Equipments Used	MSK/BB3R/FIELD/SLM-03

Report No. : MSKPL/ED/2023-24/DBEC32

Sample No. : MSKNB/ED/2023 24/12/C361BG

RESULT

Chemical				
Sl No.	Parameter	UOM	Method	Result
1	Leq dB(A) day	dB(A)	IS 9989	71.6
2	Leq dB(A) night	dB(A)	IS 9989	68.4

Opinion : NA

Statement of Conformity NA

----- END -----

Reviewed By:

Signature :

Name : Mr. Banal Jana

Designation : Executive Chemist

Authorized Signatory:

Signature :

Name : Mr. Banal Jana

Designation : Executive Chemist

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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Environment Laboratory

TATA Steel Limited, Meramandali, Odisha

Ref.No. EMD/LAB/2023-24/0147
Dt.07.02.2024

Noise level in dB(A)
at various locations of TATA Steel Limited, Meramandali, Odisha

S.N	Name of the unit	Location	Noise level in dB(A)		
			Min	Max	Leq
1	BF-2 Cast House	Control room	57.4	61.2	59.4
		Near B F-2 Furnace area	78.2	89.4	80.7
2	BF-2 Stock House	Control room office	55.4	62.3	58.7
3	Lime Plant	Inside office building	55.5	71.7	59.4
4	BF PP-1 Boiler-03	Near Control room office	65.5	89.5	73.3
5	Gas fired boiler 250 TPH Area	Office and Control Room	54.9	63.8	58.4
6	DRI	KILN NO-1, Near 1& 2 control room office	57.4	64.2	61.7
		KILN NO-3, Near 3& 4control room office	49.9	65	59.5
		KILN NO-5, Near 5& 6 control room office	44.5	63.2	58.2
		KILN NO-7, Near 7& 8 control room office	46.3	74.7	63
		KILN NO-8, Near 9&10 control room office	46.2	69	58.6
7	BF-1 Cast House	Near B F-1 Furnace	78.5	86.5	80.3
8	BF-1 Stock House	BF-1 Office	60.2	66.2	63.5
9	CRM	Near CRM Mill Complex Area	66.4	83.8	74
		Near T.L.L	82	89.6	86.3
		Near ETP area	77.6	85.6	82.9
		Near GP-1 Zinc Pot	85.1	90.9	87.2
		Near GP-2 Zinc Pot	85	90.8	87.6
		Near GP-3 Zinc Pot	85.4	89.3	87.6
		Colour Coating Line	82.9	87.2	84.5
		Mill-1	81.8	96.8	85.7
		Mill-2	84.1	88.6	86.8
		Mill-3	SD	SD	SD
		CRM Plant Office	49	52.6	51.3
		ECL	86.6	89.2	88.2
		CRCA	78.4	85.2	82.6
		SPM	84.8	98.7	88.9
		RGM	78.7	86.2	82.2
10	Sinter Plant-1	9 m office room	48.3	74	55.5
		15 m office	50.3	67	56.3
		19 m office	61.3	83.3	75.1
		Store area	78	81.3	79.3
		Electrical office	51.4	85.1	73.4
11	Coke Oven-1	Control room office	60.8	71.9	62.8
		Laboratory	54.5	60	57.4
12	Sinter Plant-02	Control Room Area	56.3	62.8	58.4
13	Sinter Plant-03	Control Room Area	54.9	60.3	57.8
14	BOF Shop	BOF office area	53.5	82.8	70.8
		Near Wage bridge area	71.4	90.7	75.8

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Environment Laboratory TATA Steel Limited, Meramandali, Odisha

15	SMS-2-FES-1&2	Booster House (ID Fan)	81.2	86.2	84.1
		Near Control room Area	56.2	67.8	61.3
16	HSM	Near RHF Office area (Pulpit)	81.7	91.1	84.1
		Near Roll Shop area	75.1	82.7	77.5
		Near HSM Quality Lab area	55.9	63.2	60.3
		DC pulpit office area	61.7	86.8	66.5
		FM area	87.5	98.1	90.4
		Near DC sampling Station	76.3	92.4	80.4
17	Coke Oven-2	Control Room Office	48.5	72.4	60.8
18	BFPP-2 Boiler-3	Control room	63	86.2	72.1
19	Oxygen Plant-02	Control Room Office	56.3	81.9	63.3
20	BB Plant	BB Plant Office	55.2	64.1	59.8
21	RMPP	Control Room Office	53.3	71.2	56.2
22	Coal washery	Lab & Office area	53.1	82.9	60.4
23	RMHS	RMI IS Office	50.7	74.3	57.4
24	IBMD	New Sarpa MRP II (Operator Cabin)	54.1	60.2	58.3
25		Office & Operator Cabin (Old MRP)	58.4	69.3	60.4

N: B- All employees are provided ear plug / earmuff in noise prone areas.

T.K. Samal.
Section (I/C)

M
Manager (Lab)
(*Upendra Kumar M.*)
...End Report...

Sr. Area Manager (Lab I/C)

Page 2 of 2

Environment Laboratory
TATA Steel Limited, Meramandali, Odisha

Ref.No. EMD/LAB/2023-24/0149
Dt.- 07.02.2024

AMBIENT NOISE MONITORING
TATA STEEL Ltd. (January' 2024)

S.N	Location	Monitoring Date	Noise Level dB(A) Leq (Day time)	Standard dB(A) Leq(Day Time)	Noise Level dB(A) Leq (Night time)	Standard dB(A) Leq(Night Time)
1	Colony	05.01.2024	50.5	55.0	43.6	45.0
2	Coke Oven-2	19.01.2024	59.2	75.0	58.6	70.0
3	AEL	12.01.2024	67.7	75.0	58.0	70.0

A.K. Pradhan.
Section (I/C)


Manager (Lab)


Sr. Area Manager

...End Report...

Mitra S. K. Private Limited

Address of Laboratory :

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



TC-6950

Doc: MSK/CE-1507



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ULR: TC-695024000001066F

TEST REPORT

Name & Address of Customer :

TATA STEEL LTD.

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

Report No. :

MSKPL/ED/2023-24/610CA7

Date :

24/01/2024

Sample No. :

MSKNB/ED/2023-24/01/FN254C

Date of receipt of sample:

18/01/2024

Date(s) of performance:

18/01/2024 - 24/01/2024

Location of performance of

Permanent Facility

Reference No. & Date :

3000148695/A03, Date : 15/12/2022

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	15/01/2024
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	Chinmaya Biswal
9. Field Equipments Used	MSK/BBSR/FIELD/SLM-03

Report No. : MSKPL/ED/2023-24/610CA7

Sample No. : MSKNB/ED/2023-24/01/FN254C

RESULT

Chemical				
Sl No.	Parameter	UOM	Method	Result
1	Leq dB(A) day	dB(A)	IS 9989	63.3
2	Leq dB(A) night	dB(A)	IS 9989	59.7

Opinion : NA

Statement of Conformity NA

----- END -----

Reviewed By

Signature

Name

Mr. Bangs Jaha

Designation

Executive Chemist

Authorized Signatory

Signature

Name

Mr. Bangs Jaha

Designation

Executive Chemist

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: Shree Caride (5th Floor), 74B, A. J. C. Bose Road, Kolkata - 700015, West Bengal, India
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Email : info@mitrask.com Website : www.mitrask.com

Mitra S. K. Private Limited

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-6050



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ULR: TC-695024000001340F

TEST REPORT

Name & Address of Customer :

TATA STEEL LTD.

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

Report No. :

MSKPL/ED/2023-24/G10FFK

Date :

29/01/2024

Sample No. :

MSKNB/ED/2023-24/01/VWZ7AU

Date of receipt of sample:

20/01/2024

Date(s) of performance:

20/01/2024 - 29/01/2024

Location of performance of

Permanent Facility

Reference No. & Date :

3000148695/A06, Date - 15/12/2022

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	17/01/2024
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	Chinmaya Biswal
9. Field Equipments Used	MSK/BBSR/FIELD/SLM-03

Report No. : MSKPL/ED/2023-24/G10FFK

Sample No. : MSKNB/ED/2023-24/01/VWZ7AU

RESULT

Chemical				
Sl No.	Parameter	UOM	Method	Result
1	Leq dB(A) day	dB(A)	IS 9989	67.3
2	Leq dB(A) night	dB(A)	IS 9989	62.0

Opinion : NA

Statement of Conformity NA

— END —

Reviewed By:

Signature :

Name : Mr. Jyoti Jena

Designation : Executive Chemist

Authorized Signatory:

Signature :

Name : Mr. Jyoti Jena

Designation : Executive Chemist

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: Shreeji 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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West Bengal
Tel. : +91 7044035120
Email: udayanlab@mitrask.com



TC-6950



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TEST REPORT

Name & Address of Customer :

TATA STEEL LTD.

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

Report No. :

MSKPL/ED/2023-24/010FFZ

Date :

29/01/2024

Sample No. :

MSKNB/ED/2023-24/01/9935CA

Date of receipt of sample:

20/01/2024

Date(s) of performance:

20/01/2024 - 29/01/2024

Location of performance of

Permanent Facility

Reference No. & Date :

3000148695/A06, Date - 15/12/2022

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	18/01/2024
5. Place of sampling	Cnagms-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	Chinnaya Biswal
9. Field Equipments Used	MSK/BBSR/FIELD/SLM-03

Report No. : MSKPL/ED/2023-24/010FFZ

Sample No. : MSKNB/ED/2023-24/01/9935CA

RESULT

Chemical				
Sl No.	Parameter	UOM	Method	Result
1	Leq dB(A) day	dB(A)	IS 9989	67.1
2	Leq dB(A) night	dB(A)	IS 9989	66.3

Opinion : NA

Statement of Conformity NA

----- END -----

Reviewed By

Signature

Name : Mr. Biswajit Jana

Designation : Executive Chemist

Authorized Signatory

Signature

Name : Mr. Biswajit Jana

Designation : Executive Chemist

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 7 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 GPCB guideline & (Air) 3 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: Branch Centre (5th Floor), 74B, A. J. C. Bose Road, Kolkata - 700015, West Bengal, India

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

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Mitra S. K. Private Limited

Address of Laboratory :

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3, Pagladanga Road, Kolkata 700015
West Bengal
Tel : +91 7044038120
Email: udayanlab@mitrask.com



TC-6950



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ULR: TC-695024000001372F

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/2023-24/V10FF4

30/01/2024

MSKNB/ED/2023-24/01/ST3C8B

24/01/2024

24/01/2024 - 30/01/2024

Permanent Facility

3000148895/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	22/01/2024
5. Place of sampling	Caagms-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	Chinmaya Biswal
9. Field Equipments Used	MSK/BBSR/FIELD/SLM-03

Report No. : MSKPL/ED/2023-24/V10FF4

Sample No. : MSKNB/ED/2023-24/01/ST3C8B

RESULT

Chemical

Sl No.	Parameter	UOM	Method	Result
1	Leq dB(A) day	dB(A)	IS 9989	70.4
2	Leq dB(A) night	dB(A)	IS 9989	65.0

Opinion : NA

Statement of Conformity NA

----- END -----

Reviewed By

Signature :

Name : Mr. Baral Jana

Designation : Executive Chemist

Authorized Signatory

Signature :

Name : Mr. Baral Jana

Designation : Executive Chemist

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

This Test Report shall not be reproduced 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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Email: udayanlab@midrask.com



TC-6950



Scan for Portal

ULR: TC-695024000001343F

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/2023-24/610FFR

29/01/2024

MSKNB/ED/2023-24/01/P235CA

22/01/2024

22/01/2024 - 29/01/2024

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	19/01/2024
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	Chinmaya Biswal
9. Field Equipments Used	MSK/BBSR/FIELD/SLM-03

Report No. : MSKPL/ED/2023-24/610FFR

Sample No. : MSKNB/ED/2023-24/01/P235CA

RESULT

Chemical

Sl No.	Parameter	UOM	Method	Result
1	Leq dB(A) day	dB(A)	IS 9989	66.1
2	Leq dB(A) night	dB(A)	IS 9989	64.1

Opinion : NA

Statement of Conformity NA

----- END -----

Reviewed By

Signature :

Name : Mr. Nitin Jana

Designation : Executive Chemist

Authorized Signatory:

Signature

Name : Mr. Binay Jana

Designation : Executive Chemist

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

Page 1 of 1

Mitra S. K. Private Limited

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-695024000001344F

TEST REPORT

Name & Address of Customer :

TATA STEEL LTD.

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

Report No. :

MSKPL/ED/2023-24/010FF4

Date :

29/01/2024

Sample No. :

MSKNB/ED/2023-24/01/5F35EU

Date of receipt of sample:

22/01/2024

Date(s) of performance:

22/01/2024 - 29/01/2024

Location of performance of

Permanent Facility

Reference No. & Date :

300014B895/A06, Date - 15/12/2022

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	20/01/2024
5. Place of sampling	Casqma-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	Chinmaya Biswal
9. Field Equipments Used	MSK/BBSR/FIELD/SLM-03

Report No. : MSKPL/ED/2023-24/010FF4

Sample No. : MSKNB/ED/2023-24/01/5F35EU

RESULT

Chemical				
Sl No.	Parameter	UOM	Method	Result
1	Leq dB(A) day	dB(A)	IS 9989	70.3
2	Leq dB(A) night	dB(A)	IS 9989	67.7

Opinion : NA

Statement of Conformity NA

----- END -----

Reviewed By:

Signature

Name : Mr. Ranajit Jana

Designation : Executive Chemist

Authorized Signatory

Signature

Name : Mr. Ranajit Jana

Designation : Executive Chemist

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 3. (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: Strachy Centre (5th Floor), T40, A.J.C. Bose Road, Kolkata - 700015, West Bengal, India
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Email: info@mitrask.com Website: www.mitrask.com

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Environment Laboratory
TATA Steel Meramandali, Odisha

Ref.No. EMD/LAB/2023-24/0150
Dt.06.03.2024

AMBIENT NOISE MONITORING
TATA STEEL Ltd. (Feb' 24)

S.N	Location	Monitoring Date	Noise Level dB(A) Leq (Day time)	Standard dB(A) Leq(Day Time)	Noise Level dB(A) Leq (Night time)	Standard dB(A) Leq(Night Time)
1	Colony	16.02.24	51.2	55.0	43.8	45.0
2	Coke Oven-2	02.02.24	58.0	75.0	56.2	70.0
3	AEL	09.02.24	58.6	75.0	57.6	70.0

A.K. Padhan.
Section (I/C)

[Signature]
Manager (Lab)

[Signature]
Sr.Area Manager

...End Report...

Environment Laboratory

TATA Steel Meramandali, Odisha

64

Ref.No. EMD/LAB/2023-24/0151
Dt.06.03.2024

NOISE MONITORING REPORT
TATA STEEL Ltd. (February 2024)

S.N	Name of the unit	Location	Noise level in dB(A)		
			Min	Max	Leq
1	BF-2 Cast House	Control room	58	65.9	59.8
		Near B F-2 Furnace area	77.9	83	79.9
2	BF-2 Stock House	Control room office	56.3	66.8	57.4
3	Lime Plant	Inside office building	55.6	75.4	59.7
4	BF PP-1 Boiler-03	Near Control room office	63.5	74.4	65.9
5	Gas fired boiler 250 TPH Area	Office and Control Room	64.3	81.2	68.5
6	DRI	KILN NO-1, Near 1& 2 control room office	58	66.2	62.3
		KILN NO-3, Near 3& 4 control room office	54.3	60.2	59.9
		KILN NO-5, Near 5& 6 control room office	51.6	68.6	61.1
		KILN NO-7, Near 7& 8 control room office	49.9	70.8	62.2
		KILN NO-8, Near 9&10 control room office	51.2	70.2	60.4
7	BF-1 Cast House	Near B F-1 Furnace	72.4	79.4	73.6
8	BF-1 Stock House	BF-1 Office	52.9	80.3	59.9
9	CRM	Near CRM Mill Complex Area	64.7	83.6	73
		Near T.L.L	79.7	98.4	88.6
		Near ETP area	78.2	88.9	83
		Near GP-1 Zinc Pot	84.1	91.3	87.2
		Near GP-2 Zinc Pot	86.3	94.3	88.7
		Near GP-3 Zinc Pot	85.9	89.1	87.1
		Colour Coating Line	81.3	90.7	84.9
		Mill-1	83.4	89.5	85.8
		Mill-2	84	96.6	87.1
		Mill-3	85.4	89.2	86.8
		CRM Plant Office	52.4	62.7	58.8
		ECL	86.5	90.1	88.4
		CRCA	SD	SD	SD
		SPM	82.9	88	86.9
		RGM	77.5	89	80.6
10	Sinter Plant-1	9 m office room	56.4	62.8	57.8
		15 m office	55.5	81.2	62.9
		19 m office	72.5	77	74.3
		Store area	75.8	84.3	81.1
		Electrical office	52.8	75	69.2
11	Coke Oven-1	Control room office	55.9	73.6	61.2
		Laboratory	56.8	65.1	58.2
12	Sinter Plant-02	Control Room Area	62.1	72.3	60.3
13	Sinter Plant-03	Control Room Area	51.7	61.3	58.5
14	BOF Shop	BOF office area	50.4	75.1	60.9
		Near Wage bridge area	74.2	87.6	77.6

Environment Laboratory TATA Steel Meramandali, Odisha

65

15	SMS-2-FES-1&2	Booster House (ID Fan)	81.8	86.7	84.5
		Near Control room Area	78.7	83.6	81.4
		Near RHF Office area (Pulpit)	79.5	88	81.8
16	HSM	Near Roll Shop area	78.1	88.5	81
		Near HSM Quality Lab area	54.7	60.3	58.9
		DC pulpit office area	52.9	62.4	60.5
		FM area	86.6	92.6	89.3
		Near DC sampling Station	81.7	84.9	83.7
17	Coke Oven-2	Control Room Office	49.9	62.4	58.9
18	BFPP-2 Boiler-3	Control room	65.7	76.4	69.2
19	Oxygen Plant-02	Control Room Office	57.2	74.9	63.5
20	BB Plant	BB Plant Office	55.1	60	58.9
21	RMPP	Control Room Office	51.5	78.6	59.4
22	Coal washery	Lab & Office area	49.9	73.9	56.2
23	RMHS	RMHS Office	49.7	58.9	57.9
24	IBMD	New Sarpa MRP-II (Operator Cabin)	55.2	67.4	58.8
25		Office & Operator Cabin (Old MRP)	52.7	60.4	57.4

N: B- All employees are provided ear plug / earmuff in noise prone areas.

A.K. Pradhan
Section (I/C)

[Signature]
Manager (Lab)

[Signature]
Sr. Area Manager

...End Report...

Page 2 of 2

Mitra S. K. Private Limited

Address of Laboratory :

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TC-6950



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ULR: TC-695024000003765F

TEST REPORT

Name & Address of Customer :

ATA STEEL LTD.

JH-55, NARENDRAPUR, MERAMANDLI, DHENKANAL
DISHA 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/2023-24/N13C1U

07/03/2024

MSKNB/ED/2023-24/03/GN953H

02/03/2024

02/03/2024 - 07/03/2024

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	29/02/2024
5. Place of sampling	Sinter Plant 1- 9m office room
6. Environmental conditions during sampling & Transport	NA
7. Sampling Plan & Method used	IS 9989:1981
8. Identification of the personnel performing sampling by MSK	Chinmaya Biswal
9. Field Equipments Used	MSK/BBSR/FIELD/SLM-03

Report No. : MSKPL/ED/2023-24/N13C1U

Sample No. : MSKNB/ED/2023-24/03/GN953H

RESULT

Chemical

Sl No.	Parameter	UOM	Method	Result
1	Average dB(A)	dB(A)	IS 9989	76.2

Opinion: NA

Statement of Conformity NA

----- END -----

Reviewed By:

Signature

Name : Mr. Banal Jana

Designation : Executive Chemist

Authorized Signatory:

Signature

Name : Mr. Banal Jana

Designation : Executive Chemist

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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Mitra S. K. Private Limited

Address of Laboratory :

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



TC-6950



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ULR: TC-695024000003765F



TEST REPORT

Name & Address of Customer :

ATA STEEL LTD.

IH-55, NARENDRAPUR, MERAMANDLI, DHENKANAL
INDIA 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/2023-24/K13C1D

07/03/2024

MSKNB/ED/2023-24/03/49L52J

02/03/2024

02/03/2024 - 07/03/2024

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	29/02/2024
5. Place of sampling	IBMD- office & operator (old MRP)
6. Environmental conditions during sampling & Transport	NA
7. Sampling Plan & Method used	IS 9989:1981
8. Identification of the personnel performing sampling by MSK	Chinmaya Biswal
9. Field Equipments Used	MSK/BBSR/FIELD/SLM-03

Report No. : MSKPL/ED/2023-24/K13C1D

Sample No. : MSKNB/ED/2023-24/03/49L52J

RESULT

Chemical

Sl No.	Parameter	UOM	Method	Result
1	Average dB(A)	dB(A)	IS 9989	62.2

Opinion : NA

Statement of Conformity : NA

— END —

Reviewed By:

Signature :

Name : Mr. Banal Jana

Designation : Executive Chemist

Authorized Signatory:

Signature :

Name : Mr. Banal Jana

Designation : Executive Chemist

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.

A 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.

A 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. A 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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Mitra S. K. Private Limited

Address of Laboratory :

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



TC-6950



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ULR: TC-695024000003764F



TEST REPORT

Name & Address of Customer :

ATA STEEL LTD.

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

Report No. :

MSKPL/ED/2023-24/C13C1V

Date :

07/03/2024

Sample No. :

MSKNB/ED/2023-24/03/0NN54F

Date of receipt of sample:

02/03/2024

Date(s) of performance:

02/03/2024 - 07/03/2024

Location of performance of

Permanent Facility

Reference No. & Date :

3000148695/A06, Date - 15/12/2022

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	29/02/2024
5. Place of sampling	IBMD-New sarpa MRP-II (Operator cabin)
6. Environmental conditions during sampling & Transport	NA
7. Sampling Plan & Method used	IS 9989:1981
8. Identification of the personnel performing sampling by MSK	Chinmaya Biswal
9. Field Equipments Used	MSK/BBSR/FIELD/SLM-03

Report No. : MSKPL/ED/2023-24/C13C1V

Sample No. : MSKNB/ED/2023-24/03/0NN54F

RESULT

Chemical

Sl No.	Parameter	UOM	Method	Result
1	Average dB(A)	dB(A)	IS 9989	61.1

Opinion : NA

Statement of Conformity NA

----- END -----

Reviewed By:

Signature

Name : Mr. Banshi Jais

Designation : Executive Chemist

Authorized Signatory:

Signature

Name : Mr. Banshi Jais

Designation : Executive Chemist

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

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

We 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.

We 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. We 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
mail: udayanlab@mitrask.com



TC-6950



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ULR: TC-695024000003763F



TEST REPORT

Name & Address of Customer :

ATA STEEL LTD.

H-55, NARENDRAPUR, MERAMANDLI, DHENKANAL
DISHA India Pin 759129

Report No. :

MSKPL/ED/2023-24/913C18

Date :

07/03/2024

Sample No. :

MSKNB/ED/2023-24/02/PV4D4N

Date of receipt of sample:

02/03/2024

Date(s) of performance:

02/03/2024 - 07/03/2024

Location of performance of

Permanent Facility

Reference No. & Date :

3000148695/A06, Date - 15/12/2022

Discipline:

Chemical

we hereby certify that the following sample submitted by the customer has been analyzed with the following results:

Group	Atmospheric Pollution
Description of sample	Noise
Unique Identification of sample(if any)	NA
Date of sampling	28/02/2024
Place of sampling	Caaqms-7(Material Gate)
Environmental conditions during sampling & Transport	NA
Sampling Plan & Method used	IS 9989:1981
Identification of the personnel performing sampling by MSK	Chinmaya Biswal
Field Equipments Used	MSK/BBSR/FIELD/SLM-03

Report No. : MSKPL/ED/2023-24/913C18

Sample No. : MSKNB/ED/2023-24/02/PV4D4N

RESULT

Sl No.	Parameter	UOM	Method	Result
1	Leq dB(A) day	dB(A)	IS 9989	68.9
2	Leq dB(A) night	dB(A)	IS 9989	66.9

Conclusion : NA

Statement of Conformity : NA

-----END-----

Reviewed By:

Signature

Name : Mr. Banal Jana

Designation : Executive Chemist

Authorized Signatory

Signature

Name : Mr. Banal Jana

Designation : Executive Chemist

Results relate only to the item(s) tested.

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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.

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. 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, Vsk@skp.com, www.mitrask.com

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Address of Laboratory :

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



TC-6950



Scan for Portal

ULR: TC-695024000003574F

TEST REPORT

Name & Address of Customer :

ATA STEEL LTD.

IH-55, NARENDRAPUR, MERAMANDLI, DHENKANAL
JODISHA 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/2023-24/X13C1R

06/03/2024

MSKNB/ED/2023-24/02/NN4CCS

01/03/2024

01/03/2024 - 06/03/2024

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	28/02/2024
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	Chinmaya Biswal
9. Field Equipments Used	MSK/BBSR/FIELD/SLM-03

Report No. : MSKPL/ED/2023-24/X13C1R

Sample No. : MSKNB/ED/2023-24/02/NN4CCS

RESULT

Chemical

Sl No.	Parameter	UOM	Method	Result
1	Leq dB(A) day	dB(A)	IS 9989	68.9
2	Leq dB(A) night	dB(A)	IS 9989	66.9

Opinion : NA

Statement of Conformity NA

----- END -----

Reviewed By:

Signature

Name : Mr. Bansi Jana

Designation : Executive Chemist

Authorized Signatory:

Signature

Name : Mr. Bansi Jana

Designation : Executive Chemist

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 7 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

Mitra S. K. Private Limited

Address of Laboratory :

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



TC-6950



Scan for Portal

ULR: TC-695024000003534F

TEST REPORT

Name & Address of Customer :

ATA STEEL LTD.

H-55, NARENDRAPUR, MERAMANDLI, DHENKANAL
DISHA India Pin 759129

Report No. :

MSKPL/ED/2023-24/U13C1C

Date :

06/03/2024

Sample No. :

MSKNB/ED/2023-24/02/JW490B

Date of receipt of sample:

28/02/2024

Date(s) of performance:

28/02/2024 - 06/03/2024

Location of performance of

Permanent Facility

Reference No. & Date :

3000148695/A06, Date - 15/12/2022

Discipline:

Chemical

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

Group	Atmospheric Pollution
Description of sample	Noise
Unique Identification of sample(if any)	NA
Date of sampling	26/02/2024
Place of sampling	Caaqms-2(AEL)
Environmental conditions during sampling & Transport	NA
Sampling Plan & Method used	IS 9989:1981
Identification of the personnel performing sampling by MSK	Chinmaya Biswal
Field Equipments Used	MSK/BBSR/FIELD/SLM-03

Report No. : MSKPL/ED/2023-24/U13C1C

Sample No. : MSKNB/ED/2023-24/02/JW490B

RESULT

Chemical

Sl No.	Parameter	UOM	Method	Result
1	Leq dB(A) day	dB(A)	IS 9989	65.1
2	Leq dB(A) night	dB(A)	IS 9989	61.6

Opinion : NA

Statement of Conformity NA

-----END-----

Reviewed By:

Signature

Name : Mr. Banaji Jana

Designation : Executive Chemist

Authorized Signatory:

Signature

Name : Mr. Banaji Jana

Designation : Executive Chemist

We results relate only to the item(s) tested

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A 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.

A reserved part of sample(s) for chemical analysis (Soil, Solid & Liquid Waste) shall be retained for 15 days as per CPCB guideline & (Air) 3 months from the date of issue of the Test Report. A 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: udayantab@mitrask.com



TC-6950



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ULR: TC-695024000003165F

TEST REPORT

Name & Address of Customer :

ATA STEEL LTD.

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

Report No. :

MSKPL/ED/2023-24/E1364N

Date :

29/02/2024

Sample No. :

MSKNB/ED/2023-24/02/YC400D

Date of receipt of sample:

24/02/2024

Date(s) of performance:

24/02/2024 - 29/02/2024

Location of performance of

Permanent Facility

Reference No. & Date :

3000148695/A06, Date - 15/12/2022

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	22/02/2024
5. Place of sampling	RMHS - RMHS Office
6. Environmental conditions during sampling & Transport	NA
7. Sampling Plan & Method used	IS 9989:1981
8. Identification of the personnel performing sampling by MSK	Chinmaya Biswal
9. Field Equipments Used	MSK/BBSR/FIELD/SLM-03

Report No. : MSKPL/ED/2023-24/E1364N

Sample No. : MSKNB/ED/2023-24/02/YC400D

RESULT

Chemical

Sl No.	Parameter	UOM	Method	Result
1	Average dB(A)	dB(A)	IS 9989	63.5

Opinion : NA

Statement of Conformity NA

----- END -----

Reviewed By

Signature

Name : Mr. Bansi Jaria

Designation : Executive Chemist

Authorized Signatory:

Signature

Name : Mr. Bansi Jaria

Designation : Executive Chemist

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 (Solid, 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-695024000003164F

TEST REPORT

Name & Address of Customer :

ATA STEEL LTD.

1H-55, NARENDRAPUR, MERAMANDLI, DHENKANAL
JODISHA India Pin 759129

Report No. :

MSKPL/ED/2023-24/Y1363H

Date :

29/02/2024

Sample No. :

MSKNB/ED/2023-24/02/Y73FDD

Date of receipt of sample:

24/02/2024

Date(s) of performance:

24/02/2024 - 29/02/2024

Location of performance of

Permanent Facility

Reference No. & Date :

3000148695/A06, Date - 15/12/2022

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	22/02/2024
5. Place of sampling	110 MW power Plant- Boiler 7
6. Environmental conditions during sampling & Transport	NA
7. Sampling Plan & Method used	IS 9969:1981
8. Identification of the personnel performing sampling by MSK	Chinmaya Biswal
9. Field Equipments Used	MSK/BBSR/FIELD/SLM-03

Report No. : MSKPL/ED/2023-24/Y1363H

Sample No. : MSKNB/ED/2023-24/02/Y73FDD

RESULT

Chemical

Sl No.	Parameter	UOM	Method	Result
1	Average dB(A)	dB(A)	IS 9969	83.9

Conclusion : NA

Statement of Conformity : NA

— END —

Reviewed By:

Signature :

Name : Mr. Barshi Jana

Designation : Executive Chemist

Authorized Signatory:

Signature :

Name : Mr. Barshi Jana

Designation : Executive Chemist

Results relate only to the item(s) tested

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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.

Reserved part of sample(s) for chemical analysis (Sol, 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.

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 7044036120
Email: udayanlab@mitrask.com



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ULR: TC-695024000003163F

TEST REPORT

Name & Address of Customer :

TATA STEEL LTD.

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

Report No. :

MSKPL/ED/2023-24/41363E

Date :

29/02/2024

Sample No. :

MSKNB/ED/2023-24/02/NT3FCB

Date of receipt of sample:

24/02/2024

Date(s) of performance:

24/02/2024 - 29/02/2024

Location of performance of

Permanent Facility

Reference No. & Date :

3000148695/AD6, Date - 15/12/2022

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	22/02/2024
5. Place of sampling	CRM -ECL
6. Environmental conditions during sampling & Transport	NA
7. Sampling Plan & Method used	IS 9989:1981
8. Identification of the personnel performing sampling by MSK	Chinmaya Biswal
9. Field Equipments Used	MSK/BBSR/FIELD/SLM-03

Report No. : MSKPL/ED/2023-24/41363E

Sample No. : MSKNB/ED/2023-24/02/NT3FCB

RESULT

Chemical

Sl No.	Parameter	UOM	Method	Result
1	Average dB(A)	dB(A)	IS 9989	84.1

Opinion : NA

Statement of Conformity NA

----- END -----

Reviewed By

Signature

Name Mr. Bapsi Jana

Designation Executive Chemist

Authorized Signatory

Signature

Name Mr. Bapsi Jana

Designation Executive Chemist

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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ULR: TC-695024000003162F



TEST REPORT

Name & Address of Customer :

ATA STEEL LTD.

4H-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/2023-24/G13632

29/02/2024

MSKNB/ED/2023-24/02/MJ3FB4

24/02/2024

24/02/2024 - 29/02/2024

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	22/02/2024
5. Place of sampling	Coke oven 2 control room office
6. Environmental conditions during sampling & Transport	NA
7. Sampling Plan & Method used	IS 9989:1981
8. Identification of the personnel performing sampling by MSK	Chinmaya Biswal
9. Field Equipments Used	MSK/BBSR/FIELD/SLM-03

Report No. : MSKPL/ED/2023-24/G13632

Sample No. : MSKNB/ED/2023-24/02/MJ3FB4

RESULT

Chemical

Sl No.	Parameter	UOM	Method	Result
1	Average dB(A)	dB(A)	IS 9989	49.8

Opinion : NA

Statement of Conformity NA

----- END -----

Reviewed By:

Signature

Name : Mr. Bapi Jana

Designation : Executive Chemist

Authorized Signatory

Signature

Name : Mr. Bapi Jana

Designation : Executive Chemist

Results relate only to the item(s) tested.

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is 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.

is reserved part of sample(s) for chemical analysis (Soil, Solid & Liquid Waste) shall be retained for 15 days as per GPCB guideline & (Air) 1 month from the date of issue of the Test Report.
is 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: udayanlab@mitrask.com



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ULR: TC-695024000003161F

TEST REPORT

Name & Address of Customer :

ATA STEEL LTD.

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

Report No. :

MSKPL/ED/2023-24/M135F3

Date :

29/02/2024

Sample No. :

MSKNB/ED/2023-24/02/GN3FEB

Date of receipt of sample:

24/02/2024

Date(s) of performance:

24/02/2024 - 29/02/2024

Location of performance of

Permanent Facility

Reference No. & Date :

3000148695/A06, Date - 15/12/2022

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	22/02/2024
5. Place of sampling	Coke oven 1 laboratory
6. Environmental conditions during sampling & Transport	NA
7. Sampling Plan & Method used	IS 9989:1981
8. Identification of the personnel performing sampling by MSK	Chinmaya Biswal
9. Field Equipments Used	MSK/BBSR/FIELD/SLM-03

Report No. : MSKPL/ED/2023-24/M135F3

Sample No. : MSKNB/ED/2023-24/02/GN3FEB

RESULT

Chemical

Sl No.	Parameter	UOM	Method	Result
1	Average dB(A)	dB(A)	IS 9989	58.0

Opinion : NA

Statement of Conformity NA

----- END -----

Reviewed By:

Signature

Name : Mr. Basu Jana

Designation : Executive Chemist

Authorized Signatory:

Signature

Name : Mr. Basu Jana

Designation : Executive Chemist

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
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Email: udayanlab@mitrask.com



TC-6950



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ULR: TC-695024000003160F

TEST REPORT

Name & Address of Customer :

ATA STEEL LTD.

4H-55, NARENDRAPUR, MERAMANDLI, DHENKANAL
ODISHA India Pin 759129

Report No. :

MSKPL/ED/2023-24/A135FU

Date :

29/02/2024

Sample No. :

MSKNB/ED/2023-24/02/4C3FFA

Date of receipt of sample:

24/02/2024

Date(s) of performance:

24/02/2024 - 29/02/2024

Location of performance of

Permanent Facility

Reference No. & Date :

3000148695/A06. Date - 15/12/2022

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	22/02/2024
5. Place of sampling	Coke oven 1 control room office
6. Environmental conditions during sampling & Transport	NA
7. Sampling Plan & Method used	IS 9989:1981
8. Identification of the personnel performing sampling by MSK	Chinmaya Biswal
9. Field Equipments Used	MSK/BBSR/FIELD/SLM-03

Report No. : MSKPL/ED/2023-24/A135FU

Sample No. : MSKNB/ED/2023-24/02/4C3FFA

RESULT

Chemical

Sl No.	Parameter	UOM	Method	Result
1	Average dB(A)	dB(A)	IS 9989	60.0

Opinion : NA

Statement of Conformity NA

— END —

Reviewed By:

Signature

Name

Mr. Rajat Jana

Designation : Executive Chemist

Authorized Signatory

Signature

Name

Mr. Baran Jana

Designation : Executive Chemist

he results relate only to the item(s) tested

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

he 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

he 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

he 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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Doc: MSK/GEN/19/07



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TC-6950



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ULR: TC-695024000002554F

TEST REPORT

Name & Address of Customer :

ATA STEEL LTD.

4-55, NARENDRAPUR, MERAMANDI, DHENKANAL
DISHA India Pin 759129

Report No. :

MSKPL/ED/2023-24/C1249Y

Date :

17/02/2024

Sample No. :

MSKNB/ED/2023-24/02/BF13EC

Date of receipt of sample:

12/02/2024

Date(s) of performance:

12/02/2024 - 17/02/2024

Location of performance of

Permanent Facility

Reference No. & Date :

3000148695/A06, Date : 16/12/2022

Discipline:

Chemical

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

Group	Atmospheric Pollution
Description of sample	Noise
Unique Identification of sample(if any)	NA
Date of sampling	10/02/2024
Place of sampling	BF 1 cast house near BF 1 furnace
Environmental conditions during sampling & Transport	NA
Sampling Plan & Method used	IS 9989:1981
Identification of the personnel performing sampling by MSK	Chinmaya Biswal
Field Equipments Used	MSK/BBSR/FIELD/SLM-03

Report No. : MSKPL/ED/2023-24/C1249Y

Sample No. : MSKNB/ED/2023-24/02/BF13EC

RESULT

Chemical				
Sl No.	Parameter	UOM	Method	Result
1	Average dB(A)	dB(A)	IS 9989	81.4

Conclusion : NA

Statement of Conformity NA

----- END -----

Reviewed By:

Signature

Mr. Baran Jena

Designation : Executive Chemist

Authorized Signatory

Signature

Mr. Baran Jena

Designation : Executive Chemist

Results relate only to the item(s) tested

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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.

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.
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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Doc: MSK/GEN/1907



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Email: udayanlab@mitrask.com



TC-6950



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ULR: TC-695024000002553F

TEST REPORT

Name & Address of Customer :

ATA STEEL LTD.

H-55, NARENDRAPUR, MERAMANDI, DHENKANAL
DISHA India Pin 759129

Report No. :

MSKPL/ED/2023-24/H1249H

Date :

17/02/2024

Sample No. :

MSKNB/ED/2023-24/02/6P140H

Date of receipt of sample:

12/02/2024

Date(s) of performance:

12/02/2024 - 17/02/2024

Location of performance of

Permanent Facility

Reference No. & Date :

3000148695/A06, Date - 15/12/2022

Discipline:

Chemical

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

Group	Atmospheric Pollution
Description of sample	Noise
Unique Identification of sample(if any)	NA
Date of sampling	10/02/2024
Place of sampling	DRI-Near 5&6 control room office
Environmental conditions during sampling & Transport	NA
Sampling Plan & Method used	IS 9989:1981
Identification of the personnel performing sampling by MSK	Chinmaya Biswal
Field Equipments Used	MSK/BBSR/FIELD/SLM-03

Report No. : MSKPL/ED/2023-24/H1249H

Sample No. : MSKNB/ED/2023-24/02/6P140H

RESULT

Chemical				
Sl No.	Parameter	UOM	Method	Result
1	Average dB(A)	dB(A)	IS 9989	56.2

Conclusion : NA

Statement of Conformity NA

----- END -----

Reviewed By:

Signature

Mr. Bansi Jana

Signature Executive Chemist

Authorized Signatory

Signature

Mr. Bansi Jana

Designation Executive Chemist

Results relate only to the item(s) tested

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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.

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.

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

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Email: udayanlab@mitrask.com



TC-6950

Doc. MSK/GEN/19/07



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ULR: TC-695024000002552F

TEST REPORT

Name & Address of Customer :

ATA STEEL LTD.

H-55, NARENDRAPUR, MERAMANDLI, DHENKANAL
DISHA India Pin 759129

Report No. :

MSKPL/ED/2023-24/R1249P

Date :

17/02/2024

Sample No. :

MSKNB/ED/2023-24/02/6G13F7

Date of receipt of sample:

12/02/2024

Date(s) of performance:

12/02/2024 - 17/02/2024

Location of performance of

Permanent Facility

Reference No. & Date :

3000148695/A06, Date - 15/12/2022

Discipline:

Chemical

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

Group	Atmospheric Pollution
Description of sample	Noise
Unique Identification of sample(if any)	NA
Date of sampling	10/02/2024
Place of sampling	DRI-Near 3&4 control room office
Environmental conditions during sampling & Transport	NA
Sampling Plan & Method used	IS 9989:1981
Identification of the personnel performing sampling by MSK	Chinmaya Biswal
Field Equipments Used	MSK/BBSR/FIELD/SLM-03

Report No. : MSKPL/ED/2023-24/R1249P

Sample No. : MSKNB/ED/2023-24/02/6G13F7

RESULT

Sl No.	Parameter	UOM	Method	Result
1	Average dB(A)	dB(A)	IS 9989	52.5

Conclusion : NA

Statement of Conformity NA

----- END -----

viewed By:

Signature

Mr. Binai Jana

Executive Chemist

Authorized Signatory

Signature

Mr. Binai Jana

Executive Chemist

Results relate only to the item(s) tested.

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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.

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.
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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Mitra S. K. Private Limited

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West Bengal
Tel : +91 7044030120
Email: udayanlab@mitrask.com



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ULR: TC-69502400002551F

TEST REPORT

Name & Address of Customer :

ATA STEEL LTD

H-55, NARENDRAPUR, MERAMANDI, DHENKANAL
DISHA India Pin 759129

Report No. :

MSKPL/ED/2023-24/W1249P

Date :

17/02/2024

Sample No. :

MSKNB/ED/2023-24/02/AG13CQ

Date of receipt of sample:

12/02/2024

Date(s) of performance:

12/02/2024 - 17/02/2024

Location of performance of

Permanent Facility

Reference No. & Date :

3000148695/A06, Date - 15/12/2022

Discipline:

Chemical

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

Group	Atmospheric Pollution
Description of sample	Noise
Unique Identification of sample(if any)	NA
Date of sampling	10/02/2024
Place of sampling	DRI-Near 1&2 control room office
Environmental conditions during sampling & Transport	NA
Sampling Plan & Method used	IS 9989:1981
Identification of the personnel performing sampling by MSK	Chinmaya Biswal
Field Equipments Used	MSK/BBSR/FIELD/SLM-03

Report No. : MSKPL/ED/2023-24/W1249P

Sample No. : MSKNB/ED/2023-24/02/AG13CQ

RESULT

Sl No.	Parameter	UOM	Method	Result
1	Average dB(A)	dB(A)	IS 9989	60.6

Conclusion : NA

Statement of Conformity NA

----- END -----

Viewed By :

nature

me Mr. Bansi Jana

signature Executive Chemist

Authorized Signatory

Signature

Name Mr. Bansi Jana

Designation Executive Chemist

Results relate only to the item(s) tested

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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.

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.

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.

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

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Email: udayanlab@mitrask.com



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ULR: TC-695024000002550F

TEST REPORT

Name & Address of Customer :

ATA STEEL LTD.

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

Report No. :

MSKPL/ED/2023-24/Q12494

Date :

17/02/2024

Sample No. :

MSKNB/ED/2023-24/02/2313DC

Date of receipt of sample:

12/02/2024

Date(s) of performance:

12/02/2024 - 17/02/2024

Location of performance of

Permanent Facility

Reference No. & Date :

3000148695/A06, Date - 15/12/2022

Discipline:

Chemical

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

1. Group	Atmospheric Pollution
1. Description of sample	Noise
1. Unique Identification of sample(if any)	NA
1. Date of sampling	10/02/2024
1. Place of sampling	BFPP 1 Boiler -3-near control room office
1. Environmental conditions during sampling & Transport	NA
1. Sampling Plan & Method used	IS 9989:1981
1. Identification of the personnel performing sampling by MSK	Chinmaya Biswal
1. Field Equipments Used	MSK/BBSR/FIELD/SLM-03

Report No. : MSKPL/ED/2023-24/Q12494

Sample No. : MSKNB/ED/2023-24/02/2313DC

RESULT

Chemical

Sl No	Parameter	UOM	Method	Result
1	Average dB(A)	dB(A)	IS 9989	47.6

Opinion: NA

Statement of Conformity NA

----- END -----

Reviewed By:

Signature

Name : Mr. Binai Jana

Designation : Executive Chemist

Authorized Signatory

Signature

Name : Mr. Binai Jana

Designation : Executive Chemist

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

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A 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.

A 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.

A 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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Mitra S. K. Private Limited

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Email: udayanlab@mitrask.com



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ULR: TC-695024000002924F



TEST REPORT

Name & Address of Customer :

ATA STEEL LTD.

1H-55, NARENDRAPUR, MERAMANDLI, DHENKANAL
ODISHA India Pin 759129

Report No. :

MSKPL/ED/2023-24/312C1D

Date :

23/02/2024

Sample No. :

MSKNB/ED/2023-24/02/U2363X

Date of receipt of sample:

19/02/2024

Date(s) of performance:

19/02/2024 - 23/02/2024

Location of performance of

Permanent Facility

Reference No. & Date :

3000148695/A06. Date - 15/12/2022

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	17/02/2024
5. Place of sampling	BB Plant Office
6. Environmental conditions during sampling & Transport	NA
7. Sampling Plan & Method used	IS 9989:1981
8. Identification of the personnel performing sampling by MSK	Chinmaya Biswal
9. Field Equipments Used	MSK/BBSR/FIELD/SLM-03

Report No. : MSKPL/ED/2023-24/312C1D

Sample No. : MSKNB/ED/2023-24/02/U2363X

RESULT

Chemical

Sl No.	Parameter	UOM	Method	Result
1	Average dB(A)	dB(A)	IS 9989	47.7

Opinion : NA

Statement of Conformity : NA

----- END -----

Reviewed By:

Signature :

Name : Mr. Bagesh Jena

Designation : Executive Chemist

Authorized Signatory:

Signature :

Name : Mr. Bagesh Jena

Designation : Executive Chemist

The results relate only to the item(s) tested

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A 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.

A 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.

A 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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TEST REPORT

Name & Address of Customer :

ATA STEEL LTD.

#H-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/2023-24/D12C1T

23/02/2024

MSKNB/ED/2023-24/02/KG3629

19/02/2024

19/02/2024 - 23/02/2024

Permanent Facility

3000148695/AD6, 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	17/02/2024
5. Place of sampling	RMPP Control room office
6. Environmental conditions during sampling & Transport	NA
7. Sampling Plan & Method used	IS 9989:1981
8. Identification of the personnel performing sampling by MSK	Chinmaya Biswal
9. Field Equipments Used	MSK/BBSR/FIELD/SLM-03

Report No. : MSKPL/ED/2023-24/D12C1T

Sample No. : MSKNB/ED/2023-24/02/KG3629

RESULT

Chemical

Sl No.	Parameter	UOM	Method	Result
1	Average dB(A)	dB(A)	IS 9989	64.2

Opinion : NA

Statement of Conformity NA

— END —

Reviewed By

Signature

Name: Mr. Bansi Jana

Designation: Executive Chemist

Authorized Signatory

Signature

Name: Mr. Bansi Jana

Designation: Executive Chemist

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, Basted Water, Sealed food) shall be retained for 15 days from the date of issue of the Test Report.

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TEST REPORT

Name & Address of Customer :

ATA STEEL LTD.

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

Report No. :

MSKPL/ED/2023-24/E12C1F

Date :

23/02/2024

Sample No. :

MSKNB/ED/2023-24/02/JK3613

Date of receipt of sample:

19/02/2024

Date(s) of performance:

19/02/2024 - 23/02/2024

Location of performance of

Permanent Facility

Reference No. & Date :

3000148695/A06, Date - 15/12/2022

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	17/02/2024
5. Place of sampling	Sinter Plant 3-control room area
6. Environmental conditions during sampling & Transport	NA
7. Sampling Plan & Method used	IS 9989:1981
8. Identification of the personnel performing sampling by MSK	Chinmaya Biswal
9. Field Equipments Used	MSK/BBSR/FIELD/SLM-03

Report No. : MSKPL/ED/2023-24/E12C1F

Sample No. : MSKNB/ED/2023-24/02/JK3613

RESULT

Chemical

Sl No.	Parameter	UOM	Method	Result
1	Average dB(A)	dB(A)	IS 9989	47.1

Opinion : NA

Statement of Conformity NA

----- END -----

Reviewed By:

Signature

Name : Mr. Biswajit Jana

Designation : Executive Chemist

Authorized Signatory

Signature

Name : Mr. Biswajit Jana

Designation : Executive Chemist

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: udayanlab@mitrask.com



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TEST REPORT

Name & Address of Customer :

ATA STEEL LTD.

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

Report No. :

MSKPL/ED/2023-24/A12C0K

Date :

23/02/2024

Sample No. :

MSKNB/ED/2023-24/02/9G3602

Date of receipt of sample:

19/02/2024

Date(s) of performance:

19/02/2024 - 23/02/2024

Location of performance of

Permanent Facility

Reference No. & Date :

3000148695/A06, Date - 15/12/2022

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	17/02/2024
5. Place of sampling	DRI near 9&10 control room office
6. Environmental conditions during sampling & Transport	NA
7. Sampling Plan & Method used	IS 9989:1981
8. Identification of the personnel performing sampling by MSK	Chinmaya Biswal
9. Field Equipments Used	MSK/BBSR/FIELD/SLM-03

Report No. : MSKPL/ED/2023-24/A12C0K

Sample No. : MSKNB/ED/2023-24/02/9G3602

RESULT

Chemical

Sl No.	Parameter	UOM	Method	Result
1	Average dB(A)	dB(A)	IS 9989	50.0

Opinion : NA

Statement of Conformity : NA

----- END -----

Reviewed By

Signature

Name : Mr. Baran Jana

Designation : Executive Chemist

Authorized Signatory

Signature

Name : Mr. Baran Jana

Designation : Executive Chemist

These results relate only to the item(s) tested

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A 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.

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West Bengal
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Email: udayanlab@mitrask.com



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ULR: TC-695024000002920F

TEST REPORT

Name & Address of Customer :

ATA STEEL LTD.

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

Report No. :

MSKPL/ED/2023-24/112C08

Date :

23/02/2024

Sample No. :

MSKNB/ED/2023-24/02/0935FQ

Date of receipt of sample:

19/02/2024

Date(s) of performance:

19/02/2024 - 23/02/2024

Location of performance of

Permanent Facility

Reference No. & Date :

3000148695/A06, Date - 15/12/2022

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	17/02/2024
5. Place of sampling	DRI near 7&8 control room office
6. Environmental conditions during sampling & Transport	NA
7. Sampling Plan & Method used	IS 9989:1981
8. Identification of the personnel performing sampling by MSK	Chinmaya Biswal
9. Field Equipments Used	MSK/BBSR/FIELD/SLM-03

Report No. : MSKPL/ED/2023-24/112C08

Sample No. : MSKNB/ED/2023-24/02/0935FQ

RESULT

Chemical

Sl No.	Parameter	UOM	Method	Result
1	Average dB(A)	dB(A)	IS 9989	47.7

Opinion : NA

Statement of Conformity NA

----- END -----

Reviewed By:

Signature

Name: Mr. Banasi Jana

Designation: Executive Chemist

Authorized Signatory

Signature

Name: Mr. Banasi Jana

Designation: Executive Chemist

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65

Environment Laboratory
TATA Steel Meramandali, Odisha

Ref.No. EMD/LAB/2023-24/0155
Dt. 01.04.2024

AMBIENT NOISE MONITORING
TATA STEEL Ltd. (March' 24)

S.N	Location	Monitoring Date	Noise Level dB(A) Leq (Day time)	Standard dB(A) Leq(Day Time)	Noise Level dB(A) Leq (Night time)	Standard dB(A) Leq(Night Time)
1	Colony	01.03.2024	53.3	55.0	44.1	45.0
2	Coke Oven-2	15.03.2024	59.0	75.0	58.3	70.0
3	AEL	23.03.2024	69.1	75.0	68.1	70.0

A.K. Pradhan
Section (I/C)

H. Ch
Manager (Lab)

S. Jena
Sr. Area Manager

...End Report...

page 1 of 1

Environment Laboratory

TATA Steel Meramandali, Odisha

66

Ref.No. EMD/LAB/2023-24/0154
Dt. 01.04.2024

S.N	Name of the unit	Location	Noise level in dB(A)		
			Min	Max	Leq
1	BF-2 Cast House	Control room	54.2	61.4	58.9
		Near B F-2 Furnace area	78.8	81.7	80.0
2	BF-2 Stock House	Control room office	55.1	60.3	59.1
3	Lime Plant	Inside office building	56.2	71.1	60.1
4	BF PP-1 Boiler-03	Near Control room office	54.2	63.0	60.0
5	Gas fired boiler 250 TPH Area	Office and Control Room	57.0	61.2	59.3
6	DRI	KILN NO-1, Near 1& 2 control room office	57.7	68.0	61.8
		KILN NO-3, Near 3& 4 control room office	58.2	75.1	62.2
		KILN NO-5, Near 5& 6 control room office	55.6	70.2	59.8
		KILN NO-7, Near 7& 8 control room office	50.1	72.2	60.4
		KILN NO-8, Near 9&10 control room office	55.9	62.3	61.0
7	BF-1 Cast House	Near B F-1 Furnace	78.9	84.0	81.0
8	BF-1 Stock House	BF-1 Office	49.3	62.4	58.8
9	CRM	Near CRM Mill Complex Area	66.2	80.2	75.1
		Near T.L.L	77.9	92.9	85.4
		Near ETP area	81.7	83.5	82.6
		Near GP-1 Zinc Pot	SD	SD	SD
		Near GP-2 Zinc Pot	SD	SD	SD
		Near GP-3 Zinc Pot	85.7	90.7	87.1
		Colour Coating Line	SD	SD	SD
		Mill-1	83.8	89.6	87.0
		Mill-2	SD	SD	SD
		Mill-3	84.6	87.8	85.1
		CRM Plant Office	53.4	62.8	59.1
		ECL	84.8	94.5	87.2
		CRCA	84.8	87.9	85.8
		SPM	84.2	87.9	85.5
		RCM	76.8	87.8	79.3
10	Sinter Plant-1	9 m office room	56.8	69.4	58.1
		15 m office	57.3	74.3	60.4
		19 m office	70.1	79.1	71.5
		Store area	74.4	84.6	79.2
		Electrical office	58.4	78	68.3
11	Coke Oven-1	Control room office	54.2	61.4	60.0
		Laboratory	53.3	58.5	57.3
12	Sinter Plant-02	Control Room Area	61.3	74.2	62.4
13	Sinter Plant-03	Control Room Area	55.6	72.3	59.9
14	BOF Shop	BOF office area	51.1	74.1	62.5
		Near Wage bridge area	76.1	82.8	78.9

Environment Laboratory TATA Steel Meramandali, Odisha

67

15	SMS-2-FES-1&2	Booster House (ID Fan)	82.3	85.4	84.3
		Near Control room Area	79.1	82.4	80.0
		Near RHF Office area (Pulpit)	80.1	87.2	81.2
		Near Roll Shop area	79.4	86.4	80.6
16	HSM	Near HSM Quality Lab area	57.2	67.1	60.2
		DC pulpil office area	65	76.5	68.3
		FM area	87.2	90.2	88.9
		Near DC sampling Station	82.2	85.9	84.1
17	Coke Oven-2	Control Room Office	54.7	63.0	59.6
18	BFPP-2 Boiler-3	Control room	44.3	60.5	58.8
19	Oxygen Plant-02	Control Room Office	56.9	69.2	62.2
20	BB Plant	BB Plant Office	53.5	79.4	60.6
21	RMPP	Control Room Office	55.4	61.0	59.0
22	Coal washery	Lab & Office area	56.4	61.0	58.7
23	RMHS	RMHS Office	55.3	59.0	58.1
24	IBMD	New Sarpa MRP-II (Operator Cabin)	48.6	60.2	59.1
25		Office & Operator Cabin (Old MRP)	54.7	60.0	58.1

N: B- All employees are provided ear plug / earmuff in noise prone areas.

A.K. Pradhan
Section I/C

M. Das
Manager (Lab)

S. Sanyal
Sr. Area Manager

...End Report...

Page 2 of 2

Mitra S. K. Private Limited

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-695024000004358F



TEST REPORT

Name & Address of Customer :

TATA STEEL LTD.

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

Report No. :

MSKPL/ED/2023-24/0148ED

Date :

15/03/2024

Sample No. :

MSKNB/ED/2023-24/03/WV176T

Date of receipt of sample:

11/03/2024

Date(s) of performance:

11/03/2024 - 15/03/2024

Location of performance of

Permanent Facility

Reference No. & Date :

3000148695/A06, Date - 15/12/2022

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	07/03/2024
5. Place of sampling	Caagms-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	Chinmaya Biswal
9. Field Equipments Used	MSK/BBSR/FIELD/SLM-03

Report No. : MSKPL/ED/2023-24/0148ED

Sample No. : MSKNB/ED/2023-24/03/WV176T

RESULT

Chemical				
Sl No.	Parameter	UOM	Method	Result
1	Leq dB(A) day	dB(A)	IS 9989	69.4
2	Leq dB(A) night	dB(A)	IS 9989	59.3

Opinion : NA

Statement of Conformity NA

----- END -----

Reviewed By

Signature

Name

Mr. Rajal Jena

Designation

Executive Chemist

Authorized Signatory

Signature

Name

Mr. Rajal Jena

Designation

Executive Chemist

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 (Solid, 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: Shree Centre (5th Floor), 74B, A / C, Bore Road, Kolkata - 700018, West Bengal, India.

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

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

Mitra S. K. Private Limited

Address of Laboratory :

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



TC-6950

Doc. MSK/GEN/1207



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ULR: TC-69502400004644F

TEST REPORT

Name & Address of Customer :

TATA STEEL LTD.

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

Report No. :

MSKPL/ED/2023-24/J1517G

Date :

19/03/2024

Sample No. :

MSKNB/ED/2023-24/03/41212G

Date of receipt of sample:

14/03/2024

Date(s) of performance:

14/03/2024 - 19/03/2024

Location of performance of

Permanent Facility

Reference No. & Date :

3000148695/A06, Date - 15/12/2022

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	12/03/2024
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	Chinmaya Biswal
9. Field Equipments Used	MSK/BBSR/FIELD/SLM-03

Report No. : MSKPL/ED/2023-24/J1517G

Sample No. : MSKNB/ED/2023-24/03/41212G

RESULT

Chemical

Sl No.	Parameter	UOM	Method	Result
1	Leq dB(A) day	dB(A)	IS 9989	70.1
2	Leq dB(A) night	dB(A)	IS 9989	63.4

Opinion : NA

Statement of Conformity NA

----- END -----

Reviewed By

Signature

Name

Designation

Mr. Rishi Jana

Executive Chemist

Authorized Signatory

Signature

Name

Designation

Mr. Rishi Jana

Executive Chemist

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 (Solid, Sealed & 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: Shreeji Centre (6th Floor), 74B, A.J.C. Dose Road, Kolkata - 700016, West Bengal, India

Tel : 91 33 40143000 / 22650007 Fax : 91 33 22650038

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

Mitra S. K. Private Limited

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

DSC: MSK/GEN/1907



Scan for Portal

ULR: TC-695024000003826F

TEST REPORT

Name & Address of Customer :

TATA STEEL LTD.

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

Report No. :

MSKPL/ED/2023-24/E1467K

Date :

08/03/2024

Sample No. :

MSKNB/ED/2023-24/03/HK45AF

Date of receipt of sample:

04/03/2024

Date(s) of performance:

04/03/2024 - 08/03/2024

Location of performance of

Permanent Facility

Reference No. & Date :

3000148695/A06, Date - 15/12/2022

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	02/03/2024
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	Chinmaya Biswal
9. Field Equipments Used	MSK/BBSR/FIELD/SLM-03

Report No. : MSKPL/ED/2023-24/E1467K

Sample No. : MSKNB/ED/2023-24/03/HK45AF

RESULT

Chemical				
Sl No.	Parameter	UOM	Method	Result
1	Leq dB(A) day	dB(A)	IS 9989	70.3
2	Leq dB(A) night	dB(A)	IS 9989	61.0

Opinion : NA

Statement of Conformity NA

----- END -----

Reviewed By:

Signature :

Name :

Mr. Bansi Jana

Designation :

Executive Chemist

Authorized Signatory

Signature :

Name :

Mr. Bansi Jana

Designation :

Executive Chemist

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, Sterile 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

Mitra S. K. Private Limited

Address of Laboratory :

Building No. P- 48, Udayan Industrial Estate,
3, Pagladanga Road, Kolkata 700015
West Bengal
Tel. : +91 7044035120
Email: udayanlab@mitrask.com



TC-6950

Doc: MSK/GFN/10/07



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ULR: TC-69502400004359F

TEST REPORT

Name & Address of Customer :

TATA STEEL LTD.

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

Report No. :

MSKPL/ED/2023-24/F 1491W

Date :

15/03/2024

Sample No. :

MSKNB/ED/2023-24/03/45176J

Date of receipt of sample:

12/03/2024

Date(s) of performance:

12/03/2024 - 15/03/2024

Location of performance of

Permanent Facility

Reference No. & Date :

3000148695/A06, Date - 15/12/2022

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	09/03/2024
5. Place of sampling	Cargms-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	Chinmaya Biswal
9. Field Equipments Used	MSK/BBSR/FIELD/SLM-03

Report No. : MSKPL/ED/2023-24/F 1491W

Sample No. : MSKNB/ED/2023-24/03/45176J

RESULT

Chemical				
Sl No.	Parameter	UOM	Method	Result
1	Leq dB(A) day	dB(A)	IS 9989	65.3
2	Leq dB(A) night	dB(A)	IS 9989	60.2

Opinion : NA

Statement of Conformity : NA

----- END -----

Reviewed By:

Signature

Name : Mr. Baral Jena

Designation : Executive Chemist

Authorized Signatory:

Signature

Name : Mr. Baral Jena

Designation : Executive Chemist

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

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The retained 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 retained 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 retained 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 22660008
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Doc: MSK/GEN/18/07



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



TC-6950



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ULR: TC-695024000047C0F

TEST REPORT

Name & Address of Customer :

TATA STEEL LTD

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

Report No. :

MSKPL/ED/2023-24/P15174

Date :

20/03/2024

Sample No. :

MSKNB/ED/2023-24/03/KK24BR

Date of receipt of sample:

15/03/2024

Date(s) of performance:

15/03/2024 - 20/03/2024

Location of performance of

Permanent Facility

Reference No. & Date :

3000148695/A06, Date - 15/12/2022

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	13/03/2024
5. Place of sampling	Ceacms-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	Chinmaya Biswal
9. Field Equipments Used	MSK/BBSR/FIELD/SLM-03

Report No. : MSKPL/ED/2023-24/P15174

Sample No. : MSKNB/ED/2023-24/03/KK24BR

RESULT

Chemical				
Sl No.	Parameter	UOM	Method	Result
1	Leq dB(A) day	dB(A)	IS 9989	64.2
2	Leq dB(A) night	dB(A)	IS 9989	60.2

Opinion : NA

Statement of Conformity NA

----- END -----

Reviewed By:

Signature :

Name : Mr. Binai Jais

Designation : Executive Chemist

Authorized Signatory:

Signature :

Name : Mr. Binai Jais

Designation : Executive Chemist

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 CPCRI 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: Effracts Centre (5th Floor), 74B, A. J. C. Bose Road, Kolkata - 700016, West Bengal, India.
Tel. : 91 33 40143000 / 22650007 Fax : 91 33 22650308
Email : info@mitrask.com Website : www.mitrask.com



TSM/SPCB/BS-07/2023-07/351

June 19, 2023

The Member Secretary

State Pollution Control Board, Odisha

A/118, Paribesh Bhawan

Nilakanthanagar, Unit-VIII

Bhubaneswar -751012

Sub: Submission of hazardous waste annual return (Form-4) for the period April 2022 to March 2023.

Ref: Authorization no. IND-IV-HW-622/4619 dated 24.03.2023

Dear Sir,

In reference to the captioned subject and letter cited above. As per the provision of Hazardous and Other Wastes (Management & Transboundary Movement) Rules, 2016; we are submitting hereby annual returns (Form-4) of said rules for the period April 1, 2022 to March 31, 2023 for our TATA Steel Ltd. Meramandali integrated steel plant attached as **Annexure-I**.

Hope, the information furnished is in line with the requirement.

Thanking you,

Yours faithfully,

For Tata Steel Limited

Anoop Srivastava

Chief Environment, Tata Steel Meramandali

Enclosure: As above

- Copy to:** 1. The PCCF (C) MoEF&CC, Eastern Zone, Bhubaneswar
2. The Divisional Head, CPCB, Eastern Region, Kolkata
3. The Regional Officer, State Pollution Control Board, Odisha, Angul

TATA STEEL LIMITED

Narendrapur Kusupanga Meramandali Dhenkanal 759 121 Odisha India Tel 91 6762 352000

Registered Office Bombay House 24 Homi Mody Street Fort Mumbai 400 001 India Tel 91 22 66658282 Fax 91 22 66657724

Corporate Identity Number L27100MH1907PLC000260 Website www.tatasteel.com

12
FORM 4
[See rules 6(5), 13(8), 16(6) and 20 (2)]
FORM FOR FILING ANNUAL RETURNS

[To be submitted to State Pollution Control Board by 30th day of June of every year for the preceding period April to March]

1. Name and address of facility:

Tata Steel Limited Meramandali
At-Narendrapur, PO- Kusupanga
Via- Meramandali, Dist-Dhenkanal
PIN-759121, Odisha (India)
Tel: 91-6762-300000

2. Authorisation no. and date of issue: Authorization no. IND-IV-HW-622/4619 dated 24.03.2023

3. Name of the authorised person and full address with telephone, fax and e-mail:

Anoop Srivastava
Chief-Environment
At-Narendrapur, Po- Kusupanga
Via- Meramandali, Dist-Dhenkanal
PIN-759121, Odisha (India)
Tel: 91-6762-300000
e-mail- officeofchiefemd.tsm@tatasteel.com

4. Production during the year:

Total Production (Crude Steel) during 2022-23: 4.95 MTPA

Part A. To be filled by hazardous waste generators

1. Total quantity of waste generated category wise:

SL	Waste Description	Schedule and Waste Stream/Class	Quantity (in Tonnes/KL)
1	Used /Spent Oil	Schedule -I Stream -5.1	256.0 T
2	Waste/Residue Containing Oil	Schedule -I Stream -5.2	36.7 T
3	Oil and grease skimming (Oily Sludge)	Schedule -II Class-C	122.0 T
4	Residue from Coke Oven by-product plant (BOD Plant Sludge)	Schedule- I Stream-13.6	2457.0 T

5	Decanter tank sludge and tar sludge tank residue	Schedule- I Stream-13.4 & 13.5	1498.9 T
6	Acidic & Alkali Residues/Spent Acid and Alkali	Schedule- I Stream-12.1 & 12.2	12.1 T
7	ETP Sludge of CRM/Chemical Sludge from wastewater Treatment Plant	Schedule- I Stream-35.3	780.0 T
8	Spent Ion Exchange Resin containing toxic metals.	Schedule- I Stream-35.2	-
9	Process wastes, Residues and sludges/ Spent Solvent (Waste Thinner-Oily Waste)	Schedule -I Stream -21.1 & 21.2	3.95 T
10	Insulation Materials generated from various units	Schedule -II Class-C	85.0 T
11	Empty Barrels/Containers/Liners contaminated with Hazardous chemicals/wastes	Schedule -I Stream -33.1	5957 Nos & 20.18 T
12	Exhaust Air or Gas Cleaning Residue /LD Sludge (BF, SMS and APC Dust)	Schedule -I Stream -35.1 & Schedule -II Stream -C2	188566 T
13	Zinc Dross/Ash/Skimmings/Residues	Schedule -IV Stream – (11 to 15)	510.0 T

2. Quantity dispatched

(i) to disposal facility:

SL	Waste Description	Quantity (in Tonnes/KL)	Name of the Disposal Facilities
1	Oil and grease skimming (Oily Sludge)	84.46 T	M/s Re-Sustainability Ltd. Jajpur, Odisha
2	Insulation material (Glass wool)	120.9 T	
3	Acidic & Alkali Residues/Spent Acid and Alkali	5.36 T	
4	ETP Sludge of CRM/Chemical Sludge from wastewater Treatment Plant	607.92 T	

(i) to recycler or co-processors or pre-processor:

SL	Waste Description	Quantity (in Tonnes/KL)	Name of the Reprocessing Facilities
1	Used /Spent Oil	267.9 T	M/s Bristol Petroleum Pvt. Ltd. At- 26/5/D E, A.M. Ghosh Road, Budge, 24 Parganas (S), WB
2	Empty Barrels/Containers/Liners contaminated with Hazardous chemicals/wastes	5957 Nos. & 20.1 T	M/s A.K. Enterprises M/s TAJ Traders M/s VISHAKHA STEEL TRADERS M/s Hindustan Tin Supply M/s ARNAV TRADERS M/s BHOLANATH WORKSHOP M/s AMMA BHAGWAN STEEL TRADERS
3	Zinc Dross/Ash/Skimmings/ Residues	436 T	M/s Neelam Metal Products M/s Cosmo Agromet Industries M/s East Coast Bio-Tech Project M/s M/s Alfa Pigment & Chemicals (P) Ltd.
4	LD Sludge (BOF)	61017 T	M/s Ardent Steel Limited, Phulljhar, Kendujhar, Odisha

(ii) Others: Not Applicable

3. Quantity utilised in-house, if any:

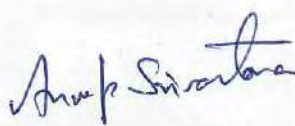
SL	Waste Description	Quantity (in Tonnes/KL)	Mode of utilization
1	Residue from Coke Oven by- product plant (BOD Plant Sludge)	2457 T	Internally reused in coke oven
2	Decanter tank sludge and tar sludge tank residue	1498.9 T	Internally reused in coke oven
3	Exhaust Air or Gas Cleaning Residue (BF-I & 2) /APC Dust (FES Dust from SMS-II & Bag filter from SMS-III)	94009 T	Reused in sinter plant

4. Quantity in storage at the end of the year –

SL	Waste Description	Quantity (in Tonnes/KL)
1	Spent Ion Exchange Resin containing toxic metals.	3 T
2	Process wastes, Residues and sludges/ Spent Solvent (Waste Thinner–Oily Waste)	3.95 T
3	Waste/Residue Containing Oil	36.72 T

Date: 19.06.2023

Place: TSL Meramandali


f Signature of the Occupier or
Operator of the disposal facility



Annexure-XIII

Summary of Plantation

(Both for TSM & AEL)

Period : From October 2023 to March 2024

S.N.	Month	Plantation in number		Cumulative FY24
		Inside	Outside	
1	October 2023	3775	0	3775
2	November 2023	0	0	3775
3	December 2023	124	0	3899
4	January 2024	1570	0	5469
5	February 2024	0	0	5469
6	March 2024	539	0	6008

TATA STEEL LIMITED

Narendrapur Kusupanga Meramandali Dhenkanal 759 121 Odisha India Tel 91 6762 352000
Registered Office Bombay House 24 Homi Mody Street Fort Mumbai 400 001 India Tel 91 22 66654282 Fax 91 22 66657724
Corporate Identity Number L27100MH1907PLC000260 Website www.tatasteel.com

CORPORATE RESPONSIBILITY FOR ENVIRONMENT PROTECTION COMPLIANCE**1. Coke Oven Plants**

Action Points (I) : To meet the parameters PLD (% leaking doors), PLL (% leaking lids), PLO (% leaking off take), of the notified standards under EPA within three years (by December 2005). Industry will submit time bound action plan and PERT Chart along with the Bank Guarantee for the implementation of the same.

Compliance: PLD (% leaking doors), PLL (% leaking lids), PLO (% leaking off take) are being monitored on monthly basis and reports are within the notified standards. Summary report for Oct 2023 to March 2024 is enclosed.

No. of Batteries	No. of Observations	Number of times standard exceeded	Parameters							
			PLD (%)		PLL (%)		PLO (%)		Charging Emission (Sec.)	
			Max	Min	Max	Min	Max	Min	Max	Min
Coke Oven-1 Battery# 1	18	Nil	1.69	0	0.56	0	3.39	0	71	36
Coke Oven-1 Battery# 2	18	Nil	3.33	0	0	0	4.96	0	73	44
Coke Oven-2 Battery# 1	18	Nil	6.97	2.17	1.45	0.36	2.9	1.45	70.5	33

Action Points (II) : To rebuild at least 40% of the coke oven batteries* in next 10 years (by December 2012).

Compliance: Not applicable as the batteries at coke ovens #1& 2 are new.

2. Steel Melting Shop

Action Points (I) : Fugitive emissions - To reduce 30% by March 2004 and 100% by March 2008 (including installation of secondary de-dusting facilities).

Compliance : Primary and secondary dust extraction system have been installed to reduce Fugitive dust emission from SMS. Summary report for the period from Oct 2023 to March 2024 is enclosed.

Sl. No.	Name of the Unit	PM ₁₀ Concentration in µg/m ³	Standard in µg/m ³
1.	SMS-II furnace area	545	4000
2.	SMS-III BOF furnace area	283	3000

3. Blast Furnace

Action Points (I) Direct inject of reducing agents -- by June 2013

Compliance : The blast furnace has been commissioned with direct injection of PCI up to 200 Kg/Ton of Hot metal. Summary report for the period from Oct 2023 to March 2024 is enclosed.

Sl. No.	Name of the Unit	PCI in Kg/Ton (Avg)
1.	BF-I	177
2.	BF-II	181

4. Solid Waste/ Hazardous Waste Management

Action Points (I) Utilization of Steel Melting Shop (SMS) / Blast Furnace (BF) Slag as per the following schedule: By 2004 - 70%, By 2006 - 80% and By 2007 - 100%.

Compliance :

- Most of the industrial solid wastes are reused internally in different units. Like Flue dust, GCP sludge, Bag filter dust of SMS & BF, coal dust, mill scale, lime fines are used in sinter making. DRI Char is being used along with coal in Power plant.
- The entire quantity of blast furnace slag is dispatched to cement manufacturers based on long term MoU with the cement manufacturer.
- Summary report of BF slag and LD slag generation and utilization report for the period from Oct 2023 to March 2024 is enclosed.
- Fly ash is also being supplied to
 - nearby fly ash brick manufacturing units, free of cost, for maximum utilization of ash.
 - Cement plants through bulker.
 - Construction of national highway (NH-55).
 - Balance if any is being utilized in reclamation of low lying areas & abandoned stone quarries as per guidelines of CPCB/ OSPCB after grant of necessary consents.
- The SMS slag (LD slag) is processed in material recovery plant (MRP) for separation of metallic from the non-magnetic part and sized for various applications. Some of the key applications of LD slag product are as below:
 - recovered metallics used in steel making process as a scrap,
 - recovered fines used in sinter making process for replacement of lime,
 - non-mag utilization in cement manufacturing, road making, and hard sand applications.

Solid waste utilization percentage is given below.

Sl. No.	Name of the Unit	Generation in MT	Utilization in MT
1.	BF Slag	938934	938934
2.	LD Slag	509287	1669492

NB. 1160205MT of legacy LD Slag has been utilized during this period.

Fly ash : 100%

BF slag : 100%

SMS Slag: 100%

5. Hazardous Wastes

Action Points (I) : Charge of tar sludge / ETP sludge to Coke Oven by June 2003.

Compliance : The tar sludge/ETP sludge is being reused in coke oven along with coal for energy recovery.

Action Points (II): Inventorization of the Hazardous Waste as per Hazardous waste (M&H) Rules, 1989 as amended in 2000 and implementation of the Rules by Dec.2003. (tar sludge, acid sludge, waste lubricating oil and type fuel falls in the category of Hazardous Waste)

- **Compliance:** Inventorization of the Hazardous Waste has been done as per the Hazardous & Other Waste (Management and Transboundary Movement) Rules,2016. Accordingly, Hazardous Waste Authorisation has been taken from State Pollution Control Board Odisha, which is valid till 31.03.2025. Summary report of tar sludge / BOD plant sludge generation and utilization report for the period from Oct 2023 to March 2024 is enclosed.

Sl. No.	Name of the Unit	Tar sludge Generation in MT	Tar sludge Utilization in MT	BOD sludge Generation in MT	BOD sludge Utilization in MT
1.	Coke Oven-I & II	1498.9	1498.9	2457	2457

6. Water Conservation/ Water Pollution

Action Points (I) To reduce specific water consumption to 5 m³/t for long products and 8 m³/t for flat products by December 2005.

Compliance: The following initiative have been undertaken to reduce the specific water consumption.

Reduction of freshwater consumption in closed circuit by increasing the Cycle of Concentration (COC) up to 8. Reuse of treated wastewater back in the process

- **Industrial wastewater treatment:** Installed state- of-art technologies 3 nos. ETPs at CRM & Coke Ovens and 3 nos. of thickener at Blast Furnaces 1&2 and Steel Making Shops.
- **Surface runoff Treatment:** 02 nos. of common effluent treatment plants have been installed to treat surface runoff from DRI, Power Plant and RHMS. 27 Nos. of settling pits have been constructed to remove the suspended solids.
- **Domestic wastewater treatment:** Installed 5 nos. STPs with Fluidized aerobic bed (FAB). Reuse of treated water for cooling tower make up, coal washery make up, dust suppression, slag quenching, slurry making and gardening purposes. SOP has been framed and implemented for operation & maintenance of all ETPs and STPs.
- **Coke Ovens** are equipped with Coke Dry Quenching Unit. WHRB of capacity 94.5 TPH at Coke Oven – II & 64 TPH at Coke Oven - I have been commissioned.

A rainwater harvesting (RWH): High-Density Polyethylene ('HDPE') lined pond of capacity 50,000 m³ had been constructed for harvesting of rainwater and reuse in different applications.

The specific water consumption of the of last three years is given below :

FY 22 : 3.42 m³/tcs.

FY 23 : 3.55 m³/tcs

FY 24 : 3.19 m³/tcs

Action Points (II): To operate the CO-BP effluent treatment plant efficiently to achieve the notified effluent discharge standards. - by July 2003.

Compliance : The Phenolic effluents of both the Coke Ovens are being treated in BOD plant. The treated effluent is within the stipulated and reused in Coke & slag quenching and dust suppression.

Action Points (III) : Installation of Continuous stacks monitoring system & its calibration in major stacks and setting up of the online ambient air quality monitoring stations by June 2005.

Compliance : 39 Nos. Continuous online stack monitoring system for PM (Continuous Emission Monitoring System - CEMS) and 20 Nos. Continuous online stack monitoring system for Gaseous parameter (SO₂ & NO_x) (Continuous Emission Monitoring System - CEMS). 7 Nos. Ambient Air Quality Monitoring system (CAAQMS) has also been commissioned. Real time data is being transferred to OSPCB server through RTDMS (IOT device). All analyzers are being calibrated half yearly.

Action Points (IV) : To operate the existing pollution control equipment efficiently and to keep proper record of run hours, failure time and efficiency with immediate effect. Compliance report in this regard is submitted to CPCB / SPCB every three months.

Compliance : All the pollution control facilities are being operated efficiently and record is being maintained. Details of energy meter readings of ESPs/Bag filters are being furnished to OSPCB on monthly basis.

7. Sponge Iron Plants

Action Points (I) : Inventorisation of sponge iron plants to be completed by SPCBs/CPCB by June 2003 and units will be asked to install proper air pollution control equipments by December 2003 to control primary and secondary emissions.

- **Compliance :** The following air Pollution Control Equipment's have been installed to control primary and secondary emissions.
 - 5 Nos. of ESPs have installed at product handling area.
 - 3 Nos. bag filters have installed at junction house and transfer building to control fugitive dust emission.
 - 2 Nos. Wheel Washing System also is in operation.
 - 10 Nos. Pug mill have installed at Cold ESP and Char Silos.
 - Seal plates installed across all conveyors to prevent material fall at ground.
 - Belt sway switches are installed to prevent the one-sided movement of conveyors and to stop the conveyor movement immediately in case of material spillage.
 - Suitably designed nozzles installed at unloading point to prevent dust fall.
 - Increased the frequency of road sweeping machine operation and strict monitoring.

**Compliance to the commitment made during Public Hearing
on 28.10.2010 at 11.00 am for proposed expansion of steel plant from 3.1 to 5.6 MTPA**

1. Points raised: Measures taken for air pollution and fugitive dust control

Commitment made: For air pollution control ESP, bag filters, dry fog collection systems and fugitive dust water sprinklers, mobile tankers are provided. The air pollution control equipments are operative. There is improvement in the DRI areas with regard to dust/fugitive emissions.

Compliance:

- 5 Nos. of ESPs have installed at product handling area, 5 Nos. bag filters have installed at junction house and transfer building to control fugitive dust emission. 1 Nos. Wheel Washing System also is in operation. 10 Nos. Pug mill have installed at WHRB ash unloading point. 5 Nos. of pug mill have been installed at Cold ESP and Char Silos. Pneumatic conveying of raw material / ash to reduce fugitive emission from solid/ dust handling.
- Encapsulation of conveying system & Installation of Telescopic chute to minimize dust emission during unloading of bottom ash.
- Provisions of high efficiency dust collection systems like Electrostatic precipitators (27 nos.), Bag filters (58 nos.), Scrubbers (9 nos.) etc.
- Installation of dust suppression system (DFS- 242 nozzles) at coal circuit, iron ore circuit and at Ash transfer points. Installation of gun sprinklers (128 Nos) at raw material yard to reduce fugitive emission.
- Technological improvements like Power supply of ESP (Electrostatic precipitator) using High frequency transformer rectifier/Micro pulse-based rectifier.
- Spillage reduction in conveyor junction houses by installation of new technology sealing using double skirt rubber and commissioning of new dust extraction system in junction houses helped to reduce fugitive emission significantly.
- Periodic maintenance of pollution control equipment & proper housekeeping is being done by a professional expert team.
- Five Nos. Wheel Washing System have been installed at BFPP-I , BFPP-II, RMHS & DRI-WHRB to minimize carry over of mud/dust with the trucks and consequently deposition on road which in turn contribute to ambient air quality. Washing water is being recycled.
- 6 no. of Portable PM₁₀ Analyzer have been installed at strategic location of different unit to assess Ground Level Concentration of PM₁₀.
- IVC (Industrial Vacuum Cleaner) has been installed for mechanical cleaning of dust to reduce fugitive emission during manual cleaning.
- Dust suppression system has been installed in Wagon Tippler to reduce fugitive dust emission during Wagon tipping.

- Successful commissioning of Portable dedusting machine at the conveyor junction house to reduce fugitive emission.
- 10 Nos. of Mechanized Road sweepers have been deployed for dry sweeping of internal roads and shop floors with dust suction facility.
- Vehicles carrying raw materials are being covered with tarpaulin to proact during transportation.

2. Points raised: Wastewater Management

Commitment made: The discharge of waste water/runoff from plant to outside is minimized and facilities are on progress for retaining all treated wastewater and will be reused in captive plantation and dust suppression etc.

Compliance:

- All effluents are being treated in primary treatment plants (19 nos.) in steel plant attached with respective units and Effluent Treatment Plants (3 nos.) centrally.
- Treated water is being reused for dust suppression, ash handling, make up for DRI & cooling towers and for green area development.
- Process effluent after treatment is being reused. During the period Oct'23 to Mar'24, 2944515 m³ of water has been recycled. However, we are further improving the efficiency of the water management system by technology intervention to increase the utilization.
- The sanitary sewage is being treated in 4 Sewage Treatment Plants and used for green belt development and low-end application in plant.
- Rainwater harvesting of capacity 50000m³ with HDPE liner has been constructed to store & reuse rainwater.
- Zero Effluent Discharge (ZED) project will be implemented in FY 25.

3. Solid waste management

Commitment made:

The bottom ash slurry is being disposed off in two ash ponds already constructed. The entire ash will be made semi solid and will be dispatched in HDSD system to MCL mine cavities already acquired. At present ash is dumped inside vacant areas of the plant premises.

Compliance :

- Solid waste handling, storage, utilization and disposal are being done scientifically. The toxic metal content and compositional analysis of solid waste are being carried out regularly.
- The SMS slag (LD slag) is processed in material recovery plant (MRP) for separation of metallic from the non-magnetic part and sized for various applications. Some of the key applications of LD slag product are:

- recovered metalics used in steel making process as a scrap,
- recovered fines used in sinter making process for replacement of lime,
- non-mag utilization in cement manufacturing, road making, and hard sand applications.
- Fly ash is also being supplied to nearby fly ash brick manufacturing units, free of cost, for maximum utilization of ash.
- Fly ash is also being supplied to cement plants through rake & bulker.
- Fly ash is being used in the construction of national highway (NH-55).
- Ash is also being used in filling low lying areas & abandoned stone quarries as per guidelines of CPCB/ OSPCB after grant of necessary consents. Presently no fly ash is being disposed in MCL mine void.

4. Obtaining clearance for coal washery

Commitment made:

The industry has already obtained consent to operate of the Board as stated.

- Compliance : Consent to Operate has been obtained from SPCB vide letter no 4463/IND-I-CON-5440, dated. 23.03.2023 and is valid up to 31.03.2025.

5. Employment opportunities

Commitment made:

By setting up the unit lots of scopes will be generated with regard to employment for the local people, indirect employment, generation of small business etc. This will enhance the quality of life in the project affected areas.

Compliance:

All displaced persons (40 Nos) from the village Raghunathpur have been given permanent employment. Moreover, for project affected persons (indirectly about 22332 Nos) of all adjacent seven villages have been given indirect job.

6. Plantation in 33% of the acquired area

They have not planted in 33% of the total area. However, plantation work is in progress in outside areas as well as inside plant premises.

Compliance:

Green belt development is under progress in and around the plant complex by planting indigenous species as per CPCB guidelines. Till Mar'24, 33% of area (This includes Plant,

R&R and CSR) 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.

7. Regarding water supply to the affected villages

They have supplied drinking water facilities to villages (Sarpa, Raghunathpur, Narendrapur, and Sibpur in Dhenkanal and Ghantigadia & Talbahal in Angul districts). Besides, they have supplied 8" pipes of 1500 meters under RWSS water supply scheme for supply of water to village Kusunpanga, Mangalpur, Manpur and Kurunti.

However, supplying of drinking water to the periphery villages will be expedited and in summer water shall be provided in tankers wherever it is required.

Compliance:

Various CSR activities have been undertaken since the inception of the plant by providing facilities of sanitation, drinking water, education, health care, road, communication etc. Further, CSR activities and its related expenditure has been substantially increased after acquisition of the industry by Tata Steel Limited.

Drinking water through pipeline is being supplied to seven nearby adjacent villages such as Ghantigadhia, Raghunathpur, Sarpa, Nuagaon, Shibapur, Talbahal and Narendrapur.

8. Regarding water supply to the affected villages Other peripheral development

Lots of activities so far done by the project proponent in all the affected villages like water supply, electrification etc. This expansion will definitely help in performing these activities in future. The unit assured villagers to do medical camp and eradication of blindness campaign for peripheral and affected villages.

The industry will take up following peripheral development and will also do as per directions of the concerned authorities:

1. Extensive plantation in outside areas will be carried out.
2. Scope for local persons for ITI training.
3. Health check up camps will be made in the affected areas.
4. Supply of drinking water to the project affected persons.
5. Village roads will be constructed as per the requirements.
6. Aid will be provided to village schools.

Compliance :

- Extensive plantation in outside areas have been carried out in nearby villages.
- We are organizing the health check up camps in the adjacent villages on regular basis.
- Drinking water through pipeline is being supplied to seven nearby adjacent villages such as Ghantigadhia, Raghunathpur, Sarpa, Nuagaon, Shibapur, Talbahal and Narendrapur.
- Village roads are being constructed and repaired on need basis.

- Schools in adjacent villages are being supported by us in terms of infrastructure like school buildings, boundary walls, drinking water, study material and remunerations to teachers.

9. Change of place of public consultation

The venue, time and date were decided by the district administration.

(9)

Stage - II

Annexure-XVI

F. No. 8-84/2005-FC
Government of India
Ministry of Environment & Forests
(FC Division)

Paryavaran Bhawan
CGO Complex, Lodhi Road
New Delhi-110 003

Dated : 13th November 2006

To

The Secretary (Forests),
Government of Orissa,
Bhubaneswar.

Sub: Diversion of 61.48 ha of Revenue Forest/DPF in Dhenkanal and Angul Districts of Orissa for setting up of an Integrated Steel Plant by M/s Bhusan Steel and Strips Limited.

Sir,

I am directed to refer to your letter No. 10F(Cons)52/2005/6686/F&E, Bhubaneswar dated 22.09.2005 whereunder the above mentioned proposal was submitted seeking prior approval of the Central Government in accordance with Section-2 of the Forest (Conservation) Act, 1980 and to say that the above proposal was examined by the Forest Advisory Committee (FAC) constituted under Section-3 of the Act.

2. After careful consideration of the proposal of the State Government and on the basis of recommendations of the above mentioned Advisory Committee, the Central Government granted in-principle approval vide letter dated 25.11.2005 subject to certain conditions. The compliance of these conditions was submitted vide your letter No. 10F(Cons)52/2005/17702/F&E dated 28.10.2006. After consideration of the proposal and compliance of various conditions by the State Government, the Central Government hereby conveys its approval under Section-2 of the Forest (Conservation) Act, 1980 for diversion of 61.48 ha of Revenue Forest/DPF in Dhenkanal and Angul Districts of Orissa for setting up of an Integrated Steel Plant by M/s Bhusan Steel and Strips Limited, subject to the fulfilment of following conditions :-

- (i) Legal status of the forest shall remain unchanged.
- (ii) Compensatory Afforestation shall be raised and maintained over non-forest land equal in extent to the forest land being diverted, at the project cost.
- (iii) The non-forest land identified for Compensatory Afforestation shall be declared as Reserved/Protected Forests. The Nodal Officer shall report compliance within three months.
- (iv) RCC pillars of 4 feet height shall be erected and maintained to demarcate the area by the user agency at the project cost and will be marked with forward and back bearings.
- (v) An undertaking from the user agency may also be obtained stating that in case the rates of Net Present Value (NPV) are revised upwards, the additional/differential amount shall be paid by the user agency.
- (vi) The State Government shall deposit Net Present Value and all other funds with the Ad-hoc Body of Compensatory Afforestation Fund Management and Planning Authority (CAMPA), in Account No. CA 1585 of Corporation Bank (A Government of India Enterprises), Block-11, Ground Floor, C.G.O. Complex, Phase-1, Lodhi Road, New Delhi-

110003, as per the instructions communicated vide letter No. 5-2/2006-FC dated 20.05.2006.

- (vii) : The Conservation Plan, as submitted by the State Government shall be implemented at the project cost under supervision of Chief Wild Life Warden of the State.
- (viii) All efforts should be made for improvement of wildlife habitat around leasehold area in consultation with the Chief Wild Life Warden of the State Forest Department, as per the Wildlife Management Plan and at the project cost.
- (ix) The rehabilitation of displaced persons should not be done on forest land. The Rehabilitation and Resettlement Plan shall be implemented for settlement of displaced persons, at the project cost.
- (x) Trees shall be felled only when it becomes necessary and that too under strict supervision of State Forest Department, and at the cost of the project.
- (xi) No labour camps shall be established on the forest land.
- (xii) All necessary measures should be taken by the user agency to protect the environment.
- (xiii) Sufficient firewood shall be provided by the user agency to the labourers at the project cost after purchase from the State Forest Department/Forest Development Corporation.
- (xiv) The user agency shall ensure that there should be no damage to the available wildlife.
- (xv) The forest land shall not be used for any purpose other than that specified in the proposal.
- (xvi) The forest land thus diverted shall be non-transferable. Whenever and whatever extent of forest land is not required by the user agency, it shall be surrendered to the State Forest Department under intimation to this Ministry.

The State Government shall ensure compliance of all the above conditions.

Yours faithfully,

(Pankaj Asthana)
Assistant Inspector General of Forests

Copy to :-

1. The Principal Chief Conservator of Forests, Government of Orissa, Bhubaneswar.
2. The Nodal Officer, Forest Department, Government of Orissa, Bhubaneswar.
3. The Chief Conservator of Forests (Central), Regional Office, Bhubaneswar.
4. User Agency.
5. Guard File.
6. Monitoring Cell of FC Section.

(Pankaj Asthana)
Assistant Inspector General of Forests