



Ref. No.: FAMD/FAPJ/289/FY25

By: E-mail and Parivesh  
Date: 21.11.2024

To,

**The Additional Director,  
Ministry of Environment and Forest & Climate Change,  
Eastern Region Office,  
A/3, Chandrasekharpur,  
Bhubaneswar-751023**

**Subject:** Submission of half-yearly compliance report on the stipulated environmental clearance terms and conditions in respect of Ferro Alloys Plant, Joda of M/s TATA Steel Ltd., for the period from April'2024 to September'2024.

**Reference:**

- 1) MoEF File No: J-11011/03/2012-IA II (I) DATED 5<sup>th</sup> Nov 2015.
- 2) MoEF&CC's notification vide S.O-5845 (E), dt. 28<sup>th</sup> Nov 2018.

**Respected Sir,**

We are herewith submitting the six-monthly compliance report on the status of the implementation of the conditions stipulated in environmental clearance awarded to us vide MoEF File No: **J-11011/03/2012-IA II (I) DATED 5<sup>th</sup> Nov 2015** in respect of Ferro Alloys Plant, Joda of M/s TATA Steel Ltd. for the period from April'2024 to September'2024 for your kind perusal.

This is in reference to the MoEF&CC's notification vide S.O-5845, dt. 28<sup>th</sup> Nov 2018, the six-monthly compliance report is being submitted only in soft copy mode, shared with your good office at e-mail @ [roez.bsr-mef@nic.in](mailto:roez.bsr-mef@nic.in).

We believe the above submission is in order.

Thanking you,

Yours faithfully,  
F: TATA STEEL LTD.

Head  
Ferro Alloys Plant, Joda

Encl: As above.

Copy To:

- 1) The Member Secretary, State Pollution Control Board, A/118, Nilakantha Nagar, Bhubaneswar, Odisha-751012
- 2) The Regional Officer, State Pollution Control Board, Baniapat, DD College Road, Keonjhar, Odisha-758001.

**TATA STEEL LTD.**

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# **Half -Yearly Compliance Report**

**On**

## **Environmental Clearance Conditions**

**(MoEF File No. J-11011/03/2012-IA. II (I) Dated 5<sup>th</sup> November 2015)**

**Period: April'2024 – September'2024**

**Submitted By:**

**Ferro Alloys Plant,  
M/s TATA STEEL LIMITED**

**At/Po – Joda, District – Keonjhar,  
Odisha – 758034**

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**Six Monthly Compliance Report to the Terms of Conditions of Environmental Clearance granted in favor of Ferro Alloys Plant,  
Joda, M/s Tata Steel Limited for April'24 to September'2024**

**A. SPECIFIC CONDITION:**

Sl. No.	Specific Condition	Compliance Status (April'2024 to September'2024)
I	The project proponent should install 24x7 air monitoring devices to monitor air emission, as provided by CPCB and submit report to Ministry and its Regional Office.	<p align="center"><b><u>Complied.</u></b></p> <p>Presently four nos. ambient air monitoring stations have been developed for the monitoring of Ambient Air Quality Parameters as per National Ambient Air Quality Standard 2009.</p> <p>Monitoring and analysis is carried out by engaging an MoEF&amp;CC as well as NABL Accredited laboratory. Reports are submitted to State Pollution Control Board Odisha on monthly basis.</p> <p>Photographs of Monitoring Station as well as Abstract of monitoring results for the past six months are enclosed as <b>Annexure-1.</b></p> <p>Detailed Monitoring Reports for the period from April'2024 to September'2024 is enclosed as <b>Annexure-2.</b></p>
II	Stack of adequate height & diameter with continuous stack monitoring facilities for all the stacks shall be provided and sufficient air pollution control devices viz, Electrostatic precipitator (ESP), bag house, bag filters etc. shall be provided to keep the emission levels below 100 mg/Nm <sup>3</sup> and installing energy efficient technology.	<p align="center"><b><u>Complied.</u></b></p> <p>Presently, the plant is operated with two semi closed electric arc furnaces, each provided with two Gas Cleaning Plants (one in working and one as standby) comprising wet scrubbing arrangements.</p> <p>Thus, Total 04 Nos of Gas Cleaning Plants have been installed. Each Gas Cleaning Plant (GCP) has one stack of height around 36.57 mtr above ground level with internal diameter of 0.4 mtr.</p> <p>The pollution control measures such as Gas Cleaning plant with venturi scrubbers are also provided with online Continuous Emission Monitoring System (CEMS) having SPECTROLYSERS for real time surveillance of Emission parameters such as Particulate Matter (PM), Carbon Monoxide (CO), Oxides of Sulphur (SO<sub>x</sub>), Oxides of Nitrogen (NO<sub>x</sub>). The Emission monitoring system has been integrated with the online server of Odisha Pollution Control Board (OSPCB).</p> <p>The results for emission parameters in the flue gas are observed to be well within the OSPCB prescribe limits.</p> <p>The stack emission parameter testing is also carried out by engaging an NABL Accredited laboratory on monthly basis. The report indicates that the emission parameters conform to the applicable permissible standards.</p> <p><b>Photographs of Pollution Control Measures (GCP) and Continuous Emission Monitoring System enclosed as Annexure-3.</b></p> <p><b>Abstract of Stack Emission Monitoring Results (Detailed Reports) are enclosed as Annexure-4.</b></p>

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Sl. No.	Specific Condition	Compliance Status (April'2024 to September'2024)
III	The National Ambient Air Quality Emission Standards issued by the Ministry vide G.S.R. No. 826(E) dated 16th November 2009 shall be followed.	<p align="center"><b><u>Complied.</u></b></p> <p>Presently, ambient Air Quality Standard notified vide G.S.R. No. 826(E) dated 16th November 2009 is followed. For this purpose, four (04) nos. of ambient air monitoring stations have been developed for the monitoring of Ambient Air Quality Parameters as per NAAQS-2009 with a frequency of twice per week.</p> <p align="center"><b>Pl. Refer to Annexure-1 &amp; Annexure-2.</b></p>
IV	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 should be followed. New standards for the sponge iron plant issued by the Ministry vide G.S.R. 414 (E) dated 30 <sup>th</sup> May, 2008 should be followed.	<p align="center"><b><u>Complied.</u></b></p> <p>Following the standards notified by the Ministry vide G.S.R. 414 (E) dated 30<sup>th</sup> May 2008, fugitive dust emission is monitored at strategic locations such as Slag Crusher Area, Raw Material Storage Yard, Feed hopper on half yearly basis for Particulate Matter. Sampling and Analysis is carried out by an MoEF&amp;CC recognised laboratory.</p> <p>The results confirm that fugitive dust emission is well within the permissible limit of 2000 µg/m<sup>3</sup>. Monitoring Results of past two quarters is enclosed as <b>Annexure-5.</b></p>
V	Water sprinkling arrangements as well as dry fog system to control fugitive emission shall be undertaken.	<p align="center"><b><u>Complied.</u></b></p> <p>For containing fugitive dust generation from the internal roads within plant premises are bitumen or RCC.</p> <p>Apart from this, One Mobile mist canon is in operation round the clock to arrest fugitive emission. Fixed Sprinkling arrangement has also been installed to take care of fugitive emission for the haul roads (internal) over a stretch of 500mtrs.</p> <p>A mobile tanker mounted with mist canon and with road sprinkling provision also available round the clock.</p> <p><b>Photographs of RCC roads and Fixed Sprinkling arrangements are enclosed as Annexure-6.</b></p>
VI	Tap hole emissions shall be taken to GCP system by providing proper hood and suction system.	<p align="center"><b><u>Complied.</u></b></p> <p>Dedicated fume extraction system has been installed with bag filters for tap hole emission. <b>Photographs enclosed Annexure 7.</b></p>
VII	Efforts should further be made to use maximum water from the rainwater harvesting sources. If needed, capacity of the reservoir shall be enhanced to meet the maximum water requirement. Only balance water requirement shall be met from other sources. Use of air-cooled condensers shall be explored, and closed-circuit cooling system should be provided to reduce water consumption and water requirement shall be modified accordingly.	<p align="center"><b><u>Complied.</u></b></p> <p>Presently, a fully functional roof top rainwater harvesting cum recharging project at the administrative office with potential of rainwater harvesting is around <b>1500 cu.m/year.</b></p> <p>New rainwater harvesting recharge pit made near furnace building.</p> <p>A surface impoundment at the back side of the plant premises has been developed over around 1Acre area for harvesting of rainwater. This project has been dedicated to the community</p>

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Sl. No.	Specific Condition	Compliance Status (April'2024 to September'2024)
		<p>in vicinity. The harvesting potential of the same is around <b>1200 cum/year.</b></p> <p>To reduce water consumption, close circuit cooling system is in operation.</p> <p>Photographs of Rainwater Harvesting Project is enclosed as <b>Annexure-8.</b></p>
VIII	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 the soak pit.	<p align="center"><b><u>Complied.</u></b></p> <p>There are neither any potential sources for generation of ash nor any activity as such handling ash inside plant premises. The plant is maintained with "Zero Discharge Standard". The plant has two operational aspects with water usage demand i.e., Furnace Cooling system and Gas Cleaning plant. For furnace cooling system complete close circuit-based recirculation system has been provided however makeup water is required to cater to the same. Whereas the effluents generated from the cleaning of GCP plant is passed through Solid-Liquid Separation system and the underflow is recirculated via thickener. There is no wastewater getting generated from the processes.</p> <p>The plant has an operational STP of 10KLD to take care of the domestic effluent generated from the office premises, canteen areas and others, etc.</p> <p>The plant has an operational 720 KLD ETP Effluent samples from the STP are getting analysed on monthly basis.</p> <p><b>Photographs and Monitoring Reports are enclosed as Annexure-9.</b></p>
IX	Regular monitoring of surface, sub-surface and ground water should be ensured, and treated wastewater should meet the norms prescribed by the State Pollution Control Board or described under the E(P) Act 1986 whichever are more 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, SPEB and CPCB.	<p align="center"><b><u>Complied.</u></b></p> <p>Monitoring of surface water (from Kundra nala/Sona River) is carried out on monthly basis.</p> <p>Similarly, ground water samples are also collected from the borewells.</p> <p>Sampling and analysis are carried out by an NABL Accredited laboratory. The analysis reports are also submitted to the Odisha State Pollution Control Board on monthly basis. Abstract of water Quality (wastewater, ground water and surface water) for the period of Apr'24 to Sep'24 is enclosed as <b>Annexure-10.</b></p>
X	Slag produced in Ferro Manganese (Fe-Mn) production should be used in manufacture of Silico Manganese (Si-Mn). All the other Ferro alloy slag should be used in the preparation of building materials.	<p align="center"><b><u>Complied.</u></b></p> <p>Slag produced from existing Fe-Mn plant are, partly used in the process as a raw material for Fe-Mn production and rest are sold to the Ferro Alloys Industry for making Si-Mn.</p> <p>During FY 2024-25, (Apr-Sep) the total, slag generated 17148 MT approx. and 18095 MT (including previous slag stock) sold to industries for making Silico Manganese. Rest kept inhouse.</p>

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Sl. No.	Specific Condition	Compliance Status (April'2024 to September'2024)
XI	Risk and Disaster Management Plan along with the mitigation measures should be prepared and a copy submitted to the Ministry's Regional Office at Bhubaneswar, SPCB and CPCB within 3 months of issue of environment clearance letter.	<p align="center"><b><u>Complied.</u></b></p> <p>Risk and disaster management plan along with the mitigation measures was submitted. Reference to our communication in this regard are as follows:</p> <ul style="list-style-type: none"> <li>a. Letter no. FAPJ/4249/2016, dated. 01.02.2016 for Central Pollution Control Board, New Delhi,</li> <li>b. Letter no. FAP(J)/4250/2016, dated. 01.02.2016, for the erstwhile Ministry of Environment &amp; Forest, Eastern Regional Office, Bhubaneswar</li> <li>c. Letter no. FAP(J)/4251/2016, dated. 01.02.2016 to State Pollution Control Board, Bhubaneswar.</li> </ul> <p><b>[Copy of the letters is enclosed as Annexure-11]</b></p>
XII	Green belt shall be developed in 33% of plant area. Selection of plant species shall be as per the CPCB guidelines in consultation with the DFO.	<p align="center"><b><u>Complied.</u></b></p> <p>The plant is established over an area of 47.135 Acre, out of which the existing project work (Fe-Mn Plant with Two Furnace units) is established over 33.4 Acres and 13. 735 Acres has been earmarked for the proposed expansion project (Si-Mn Plant &amp; Sinter Plant) in respect of which the EC has been granted.</p> <p>Accordingly, we are required to develop our greenbelt over 15.55 Acres (33% of 47.135Acres). Presently, greenbelt has been developed over an area of around 15 Acres with self-sustained plantation of around 17010 Nos.</p> <p><b>Photographs of greenbelt developed inside plant premises is enclosed as Annexure- 12.</b></p>
XIII	All the recommendations made in the Charter on Corporate Responsibility for Environment Protection (CREP) for the Steel Plants shall be implemented.	<p align="center"><b><u>Complied.</u></b></p> <p>All the applicable recommendations of CREP have been implemented.</p>
XIV	At least 5% of the total cost of the project shall be earmarked towards the Enterprise Social Commitment (ESC) based on locals need and item-wise details along with time bound action plan shall be prepared and submitted to the Ministry's Regional Office at Chennai. Implementation of such program shall be ensured accordingly in a time bound manner.	<p align="center"><b><u>Complied.</u></b></p> <p>All the CSR measures are carried out by the CSR wing of the company under the banner of Tata Steel Foundation. During FY 24-25 the company has spent around Rs. 6.13 Crore on the strengthening of social welfare infrastructure of the Joda valley region.</p> <p><b>Details of expenditure is provided as Annexure- 13.</b></p>
XV	Provisions shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking mobile toilets, mobile STP, Safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project	<p align="center"><b><u>Complied.</u></b></p> <p>There are no labour camps within the Site. However, workers are provided with all necessary infrastructure and facilities such as toilets, STP, Safe drinking water, medical, crèche, rest shelter etc.</p>

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**B. General Conditions**

<b>Sl. No.</b>	<b>General Condition</b>	<b>Compliance Status (April'2024 to September'2024)</b>
I	The project authorities must strictly adhere to the stipulations made by the Odisha Pollution Control Board and the State Government.	<b>Complied.</b> All the stipulations made by the Odisha Pollution Control Board and the State Government are strictly followed for existing facility.
II	No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment, Forests and Climate Change (MoEF&CC).	<b><u>Noted.</u></b>
III	At least four ambient air quality monitoring stations should be established in the downward direction as well as where maximum ground level concentration of PM10, PM2.5, 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.	<b>Complied.</b> Presently four nos. ambient air monitoring stations have been installed for the monitoring of Ambient Air Quality Parameters as per National Ambient Air Quality Standard 2009.  Monitoring and analysis is carried out by engaging an MoEF&CC as well as NABL Accredited laboratory. Reports are submitted to State Pollution Control Board Odisha on monthly basis.
IV	Industrial wastewater shall be properly collected, treated so as to conform to the standard 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.	<b>Complied.</b> It has been followed. Treated wastewater is utilised for plantation/gardening and road water sprinkling purpose.
V	Overall noise levels in and around the plant area shall be kept well within the standards (85 dBA) by providing noise control measures including acoustic hoods, silencers, enclosures etc. on all sources of noise generation. The ambient noise levels should conform to the standards prescribed under EPA Rules, 1989 viz 75 dBA (daytime) and 70 dBA (night-time).	<b><u>Complied.</u></b> All the Noise generating sources have been provided with requisite acoustic enclosures. Ambient Noise level is also monitored at several places inside plant premises.  <b>Abstract of the Ambient Noise level Monitoring Result is enclosed as Annexure-14.</b>
VI	Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act	<b>Complied.</b> Periodic medical check-ups were conducted yearly. Last medical check-up was done in November 2024 where 824 nos. of employees were examined including contractual employees. Records were maintained as per Orissa factory rule. Reports awaited. <b>[PME record sample of 2023 is enclosed as Annexure 15]</b>

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Sl. No.	General Condition	Compliance Status (April'2024 to September'2024)
VII	The company shall develop rainwater harvesting structures to harvest the rainwater for utilization in the lean season besides recharging the ground water table.	<p align="center"><b><u>Complied.</u></b></p> <p>Presently, a fully functional roof top rainwater harvesting cum recharging project at the administrative office with potential of rainwater harvesting is around <b>1500 cu.m/year</b>.</p> <p>New rainwater harvesting recharge pit made near furnace building.</p> <p>A surface impoundment at the back side of the plant premises has been developed over around 1Acre area for harvesting of rainwater. This project has been dedicated to the community in vicinity. The harvesting potential of the same is around <b>1200 cum/year</b>.</p> <p>To reduce water consumption, close circuit cooling system is in operation.</p> <p>Photographs of Rainwater Harvesting Project is enclosed as <b>Annexure-8</b>.</p>
VIII	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 social- economic development activities in the surrounding villages like community development programmes, educational programmes, drinking water supply and health care etc.	<p align="center"><b><u>Complied.</u></b></p> <p>Necessary Environmental Protection Measures are implemented in line with the provision of EIA/EMP report. During FY 2024-25, the company kept a budget of Rs. 108 lakhs (recurring expenses) for the Environmental Protection Measures.</p> <p><b>Details of Environmental Expenditure for FY 2024-25 is enclosed as Annexure-16.</b></p> <p>All the CSR measures are carried out by the CSR wing of the company under the banner of Tata Steel Foundation. During FY 24-25, the company has spent around <b>Rs. 30.44</b> crore on the strengthening of social welfare infrastructure of the Joda valley region.</p> <p><b>Details of expenditure is provided as Annexure- 13.</b></p>
IX	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, Forest and Climate Change (MoEFCC) 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.	<p align="center"><b><u>Complied.</u></b></p> <p>During FY 2024-25, the company kept a budget of Rs. 108 lakhs (recurring expenses) for the Environmental Protection Measures</p> <p><b>Details of Environmental Expenditure for FY 2024-25 is enclosed as Annexure-16.</b></p>
X	A copy of clearance letter shall be sent by the proponent to concern Panchayat, Zila	<p align="center"><b><u>Complied.</u></b></p> <p>Already Complied. Intimation of obtaining Environmental</p>

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Sl. No.	General Condition	Compliance Status (April'2024 to September'2024)
	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 is given to Zila Parishad vide letter No. FAPJ/4136/2015. <b>Copy of Letter is given in Annexure-17</b>
XI	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 MoEFCC at Bhubaneswar. The respective Zonal Office of CPCB and the SPCB. The criteria pollutant levels namely, PM10, SO2, NOx (ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the projects shall be monitored and displayed at a convenient location near the main gate of the company in the public domain.	<b><u>Complied.</u></b> The six-monthly compliance reports along with the monitoring results are uploaded in Tata Steel's website <a href="http://www.tatasteel.com">www.tatasteel.com</a> for public view and updated periodically.  <b>Photograph is given in the Annexure - 18</b>
XII	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 MoEFCC, the respective Zonal Office of CPCB and the SPCB. The Regional Office of the Ministry at Bhubaneswar/CPCB/SPVCB shall monitor the stipulated conditions.	<b><u>Complied.</u></b>  Six monthly compliance reports are being submitted regularly to the MoEF, its Regional Office Bhubaneswar, Central Pollution Control Board Kolkata and State Pollution Control Board. Last six-monthly compliance report was sent vide letter No FAMD/FAPJ/170/FY25 dt. 22.05.2024 for the period from October-2023 to March-2024.
XIII	The environmental statement for each financial year ending 31st 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 MoEFCC) at Bhubaneswar by e-mail.	<b><u>Complied.</u></b>  The Environment statement in Form V was submitted for the year 2023-24 on 26th Sep 2024 vide letter no.- Ref. No. FAMD/FAPJ/ 249 /FY24 to SPCB, Bhubaneswar and Regional office, Keonjhar and the compliance of environmental conditions is uploaded on the website.  <b>[Copy of Letter is given in Annexure-19]</b>
XIV	The project proponent shall inform the public that the project has been accorded environmental clearance by the Ministry and copies of the clearances letter are available with SPCB and may also be seen at website of the Ministry of Environment, Forests and	<b><u>Complied.</u></b>  Information regarding Environmental clearance issued is published on Sambad oriya newspaper on 12 <sup>th</sup> November issue and on the statesman English Newspaper of 12 <sup>th</sup> November issue.

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Sl. No.	General Condition	Compliance Status (April'2024 to September'2024)
	Climate Change (MoEFCC) at <a href="https://envfor.nic.in">https://envfor.nic.in</a> . This shall be advertised within seven days from the date of issue of the clearance letter, at least in two local newspaper that are widely circulated in the region of which one shall be in the vernacular language of the locality concerned and a copy of the same should be forwarded to the Regional Office at Bhubaneswar.	[Details of publication are given in Annexure -20
XV	Project authorities shall inform the Regional Office as well as ministry. The date of financial closure and final approval of the project by the concerned authorities and the date of commencing the land development work	<b>Being Followed with.</b>  It is being strictly followed.



**Head,  
Ferro Alloys Plant, Joda  
Tata Steel Ltd.**

**ANNEXURE-1**

**ENVIRONMENTAL MONITORING RESULTS (APRIL '24 to SEPTEMBER '24)**

Location	Main gate						
Parameters	NAAQ Standard	Apr-24	May-24	June-24	July-24	Aug-24	Sep-24
PM10	100( $\mu\text{g}/\text{m}^3$ )	67.5	66.6	60.5	58.7	59.1	56.4
PM2.5	60 ( $\mu\text{g}/\text{m}^3$ )	29.6	26.9	23.2	19.7	21	22.3
SO2	80 ( $\mu\text{g}/\text{m}^3$ )	13.1	14.1	13.2	12.5	13.4	13.4
NO2	80( $\mu\text{g}/\text{m}^3$ )	24.6	23.6	21.4	20.5	21.5	20.8
Location	General Office						
Parameters	NAAQ Standard	Apr-24	May-24	June-24	July-24	Aug-24	Sep-24
PM10	100( $\mu\text{g}/\text{m}^3$ )	56.6	59.3	55.3	51.7	49.7	51.8
PM2.5	60 ( $\mu\text{g}/\text{m}^3$ )	21	21.6	18.8	18.5	18	18.6
SO2	80 ( $\mu\text{g}/\text{m}^3$ )	10.3	11.3	10.7	11.3	11.2	10.7
NO2	80( $\mu\text{g}/\text{m}^3$ )	19.9	19.3	18.6	18.8	18.5	20.8
Location	Near ETP						
Parameters	NAAQ Standard	Apr-24	May-24	June-24	July-24	Aug-24	Sep-24
PM10	100( $\mu\text{g}/\text{m}^3$ )	60	56.9	52.6	50.9	50.2	49.5
PM2.5	60 ( $\mu\text{g}/\text{m}^3$ )	21.3	24.4	19.7	20.6	20.1	18.7
SO2	80 ( $\mu\text{g}/\text{m}^3$ )	10.7	11.6	10.2	10.6	9.8	10.7
NO2	80( $\mu\text{g}/\text{m}^3$ )	19.1	20.1	19.8	19	19.7	19.5
Location	Back gate						
Parameters	NAAQ Standard	Apr-24	May-24	June-24	July-24	Aug-24	Sep-24
PM10	100( $\mu\text{g}/\text{m}^3$ )	64.8	61.5	59.2	54.4	54.4	53.3
PM2.5	60 ( $\mu\text{g}/\text{m}^3$ )	24.7	27.6	22.2	21	21.1	21.3
SO2	80 ( $\mu\text{g}/\text{m}^3$ )	11.5	11.9	10.5	9.9	11.3	10.6
NO2	80( $\mu\text{g}/\text{m}^3$ )	22.7	21.8	20.4	19	21.5	19.8

Six Monthly Compliance Report to the Terms of Conditions of Environmental Clearance granted in favor of Ferro Alloys Plant, Joda, M/s Tata Steel Limited  
for April'24 to September'2024

**Annexure - 2**

**Ambient Air quality Report Samples From 01.04.2024 To 30-09-2024**



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**Ambient Air Quality-April-2024**

Report No.: AN/AAQ/TSL-F/2024/1-1		Date: 30/04/2024	
Name and Address of Industry:-	TATA STEEL LIMITED FAP JODA, Keonjhar, FAMD, ODISHA-758034 (India)	W. O. No.	3000144107/056
		W. O. date:	19/04/2022
Sample Description/ Type	Ambient Air Quality (Core Zone)	Sample Ref. No.:-	ALPL/18042024/ ENV-90-TSLFAP-CZ/AAQMS-1,2
Sample Drawn By:-	Anacon Representative	Sample Inward Date:-	8,15,22,29 April-2024
Test Started On:-	8,15,22,29 April-2024	Test Completed On:-	10,16,23,30 April-2024
Sampling Procedure	ANtd/7.2/Mon-01		

Sr. No.	LOCATION	Date of sampling	PM <sub>10</sub> µg/m <sup>3</sup> IS 5182 (Part 23)	PM <sub>2.5</sub> µg/m <sup>3</sup> USEPA-40 (Part 50)	SO <sub>2</sub> µg/m <sup>3</sup> IS-5182 (Part-2)	NO <sub>x</sub> µg/m <sup>3</sup> IS-5182 (Part-6)	CO mg/m <sup>3</sup> IS-5182 (Part-10)
Method Reference							
AAQMS-1	Near Main Gate	01/04/2024	76.2	32.8	17.3	31.9	BDL (DL - 0.5)
		04/04/2024	67.3	26.4	14.7	28.1	BDL (DL - 0.5)
		08/04/2024	71.9	31.6	13.8	26.7	BDL (DL - 0.5)
		12/04/2024	64.3	28.1	11.4	21.8	BDL (DL - 0.5)
		15/04/2024	58.1	26.3	9.2	18.4	BDL (DL - 0.5)
		18/04/2024	63.9	27.6	11.6	23.1	BDL (DL - 0.5)
		22/04/2024	67.3	31.9	13.7	24.6	BDL (DL - 0.5)
		25/04/2024	71.2	32.4	12.9	21.8	BDL (DL - 0.5)
		Monthly Average Value	67.5	29.6	13.1	24.6	BDL (DL - 0.5)
AAQMS-2	General Office	01/04/2024	53.7	16.4	9.1	18.2	BDL (DL - 0.5)
		04/04/2024	56.2	21.6	11.4	23.9	BDL (DL - 0.5)
		08/04/2024	47.1	16.2	8.7	17.3	BDL (DL - 0.5)
		12/04/2024	57.8	23.4	12.6	21.7	BDL (DL - 0.5)
		15/04/2024	61.7	28.1	11.3	19.2	BDL (DL - 0.5)
		18/04/2024	56.3	19.3	9.1	18.4	BDL (DL - 0.5)
		22/04/2024	61.8	23.6	11.7	23.9	BDL (DL - 0.5)
		25/04/2024	58.2	19.7	8.4	16.3	BDL (DL - 0.5)
		Monthly Average Value	56.6	21.0	10.3	19.9	BDL (DL - 0.5)

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**Remark:** - All Results are within Limit as per CPCB Standards.

Verified by

Snehal Raut  
Deputy Technical Manager

Authorized Signatory

Dr. (Mrs.) S. D. Garway  
Quality Manager

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



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**Ambient Air Quality-April-2024**

Report No.: AN/AAQ/TSL-F/2024/1-2		Date: 30/04/2024	
Name and Address of Industry:-	TATA STEEL LIMITED FAP JODA, Keonjhar, FAMD, ODISHA-758034 (India)	W. O. No.	3000144107/056
		W. O. date:	19/04/2022
Sample Description/ Type	Ambient Air Quality (Core Zone)	Sample Ref. No.:-	ALPL/18042024/ ENV-90-TSLFAP-CZ/AAQMS-3,4
Sample Drawn By:-	Anacon Representative	Sample Inward Date:-	8,15,22,29 April-2024
Test Started On:-	8,15,22,29 April-2024	Test Completed On:-	10,16,23,30 April-2024
Sampling Procedure	ANtd/7.2/Mon-01		

Sr. No.	LOCATION	Date of sampling	PM <sub>10</sub> µg/m <sup>3</sup> IS 5182 (Part 23)	PM <sub>2.5</sub> µg/m <sup>3</sup> USEPA-40 (Part 50)	SO <sub>2</sub> µg/m <sup>3</sup> IS-5182 (Part-2)	NO <sub>x</sub> µg/m <sup>3</sup> IS-5182 (Part-6)	CO mg/m <sup>3</sup> IS-5182 (Part-10)
Method Reference							
AAQMS-3	Near Well Zone	01/04/2024	53.7	16.9	11.6	17.4	BDL (DL - 0.5)
		04/04/2024	58.3	23.6	9.2	16.7	BDL (DL - 0.5)
		08/04/2024	62.4	24.7	12.1	21.9	BDL (DL - 0.5)
		12/04/2024	57.2	19.2	8.4	18.3	BDL (DL - 0.5)
		15/04/2024	61.7	21.6	11.3	19.2	BDL (DL - 0.5)
		18/04/2024	64.6	23.8	12.1	21.7	BDL (DL - 0.5)
		22/04/2024	59.3	19.2	9.4	18.6	BDL (DL - 0.5)
		25/04/2024	62.8	21.6	11.3	19.2	BDL (DL - 0.5)
		Monthly Average Value	60.0	21.3	10.7	19.1	BDL (DL - 0.5)
AAQMS-4	Near Back Gate	01/04/2024	68.3	27.6	13.8	24.9	BDL (DL - 0.5)
		04/04/2024	71.8	31.7	14.9	26.8	BDL (DL - 0.5)
		08/04/2024	64.2	26.1	9.3	21.4	BDL (DL - 0.5)
		12/04/2024	68.3	27.9	11.6	23.7	BDL (DL - 0.5)
		15/04/2024	57.6	19.2	8.7	19.6	BDL (DL - 0.5)
		18/04/2024	61.3	21.7	12.4	21.3	BDL (DL - 0.5)
		22/04/2024	67.9	23.8	11.6	24.7	BDL (DL - 0.5)
		25/04/2024	59.2	19.2	9.4	19.2	BDL (DL - 0.5)
		Monthly Average Value	64.8	24.7	11.5	22.7	BDL (DL - 0.5)

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Verified by

Snehal Raut  
Deputy Technical Manager

Authorized Signatory

Dr. (Mrs.) S. D. Garway  
Quality Manager

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



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# Six Monthly Compliance Report to the Terms of Conditions of Environmental Clearance granted in favor of Ferro Alloys Plant, Joda, M/s Tata Steel Limited for April'24 to September'2024



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## Ambient Air Quality-May-2024

Report No.: AN/AAQ/TSL-F/2024/1-1		Date: 31/05/2024	
Name and Address of Industry:-	TATA STEEL LIMITED FAP JODA, Keonjhar, FAMD, ODISHA-758034 (India)	W. O. No.	3000144107/056
		W. O. date:	19/04/2022
Sample Description/ Type	Ambient Air Quality (Core Zone)	Sample Ref. No.:-	ALPL/17052024/ ENV-130-TSLFAP-CZ/AAQMS-1,2
Sample Drawn By:-	Anacon Representative	Sample Inward Date:-	6,13,20,30 May-2024
Test Started On:-	6, 13, 20, 30 May-2024	Test Completed On:-	7,14,21,31 May-2024
Sampling Procedure	ANtd/7.2/Mon-01		

Sr. No.	LOCATION	Date of sampling	PM <sub>10</sub> µg/m <sup>3</sup>	PM <sub>2.5</sub> µg/m <sup>3</sup>	SO <sub>2</sub> µg/m <sup>3</sup>	NO <sub>2</sub> µg/m <sup>3</sup>	CO mg/m <sup>3</sup>
Method Reference			IS:5182 (Part 23)	USEPA-40 (Part 50)	IS:5182 (Part-2)	IS:5182 (Part-6)	IS:5182 (Part-10)
AAQMS-1	Near Main Gate	02/05/2024	71.6	31.4	18.2	27.8	BDL (DL - 0.5)
		06/05/2024	68.3	28.1	16.9	24.7	BDL (DL - 0.5)
		09/05/2024	62.8	21.6	13.8	21.3	BDL (DL - 0.5)
		13/05/2024	57.2	19.7	9.3	18.6	BDL (DL - 0.5)
		16/05/2024	64.7	23.4	12.7	23.9	BDL (DL - 0.5)
		20/05/2024	67.3	26.1	13.9	24.6	BDL (DL - 0.5)
		23/05/2024	72.8	32.6	14.7	26.1	BDL (DL - 0.5)
		27/05/2024	68.2	31.9	13.4	21.8	BDL (DL - 0.5)
Monthly Average Value			66.6	26.9	14.1	23.6	BDL (DL - 0.5)
AAQMS-2	General Office	02/05/2024	54.6	18.3	11.4	17.9	BDL (DL - 0.5)
		06/05/2024	62.8	21.6	12.8	18.1	BDL (DL - 0.5)
		09/05/2024	53.9	19.1	9.2	16.7	BDL (DL - 0.5)
		13/05/2024	57.3	23.8	11.9	21.4	BDL (DL - 0.5)
		16/05/2024	62.1	24.6	12.1	23.9	BDL (DL - 0.5)
		20/05/2024	58.6	19.7	8.4	16.3	BDL (DL - 0.5)
		23/05/2024	61.9	23.4	11.6	21.7	BDL (DL - 0.5)
		27/05/2024	62.8	21.9	12.7	18.2	BDL (DL - 0.5)
Monthly Average Value			59.3	21.6	11.3	19.3	BDL (DL - 0.5)

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Verified by  
  
 Snehal Raut  
 Deputy Technical Manager

Authorized Signatory  
  
 Dr. (Mrs.) S. D. Garway  
 Quality Manager

---End of Report---



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## Ambient Air Quality-May-2024

Report No.: AN/AAQ/TSL-F/2024/1-2		Date: 31/05/2024	
Name and Address of Industry:-	TATA STEEL LIMITED FAP JODA, Keonjhar, FAMD, ODISHA-758034 (India)	W. O. No.	3000144107/056
		W. O. date:	19/04/2022
Sample Description/ Type	Ambient Air Quality (Core Zone)	Sample Ref. No.:-	ALPL/17052024/ ENV-130-TSLFAP-CZ/AAQMS-3,4
Sample Drawn By:-	Anacon Representative	Sample Inward Date:-	6,13,20,30 May-2024
Test Started On:-	6, 13, 20, 30 May-2024	Test Completed On:-	7,14,21,31 May-2024
Sampling Procedure	ANtd/7.2/Mon-01		

Sr. No.	LOCATION	Date of sampling	PM <sub>10</sub> µg/m <sup>3</sup>	PM <sub>2.5</sub> µg/m <sup>3</sup>	SO <sub>2</sub> µg/m <sup>3</sup>	NO <sub>2</sub> µg/m <sup>3</sup>	CO mg/m <sup>3</sup>
Method Reference			IS 5182 (Part 23)	USEPA-40 (Part 50)	IS:5182 (Part-2)	IS:5182 (Part-6)	IS:5182 (Part-10)
AAQMS-3	Near Well Zone	02/05/2024	51.6	18.3	12.4	19.6	BDL (DL - 0.5)
		06/05/2024	47.3	16.1	9.7	18.3	BDL (DL - 0.5)
		09/05/2024	54.8	23.8	12.9	21.7	BDL (DL - 0.5)
		13/05/2024	56.1	24.7	11.6	19.8	BDL (DL - 0.5)
		16/05/2024	62.7	31.4	12.8	23.1	BDL (DL - 0.5)
		20/05/2024	58.3	28.1	9.3	17.6	BDL (DL - 0.5)
		23/05/2024	61.8	27.6	11.4	19.3	BDL (DL - 0.5)
		27/05/2024	62.7	24.8	12.9	21.7	BDL (DL - 0.5)
Monthly Average Value			56.9	24.4	11.6	20.1	BDL (DL - 0.5)
AAQMS-4	Near Back Gate	02/05/2024	62.9	28.1	12.4	21.7	BDL (DL - 0.5)
		06/05/2024	56.2	24.9	11.8	18.3	BDL (DL - 0.5)
		09/05/2024	64.7	31.6	13.1	24.6	BDL (DL - 0.5)
		13/05/2024	67.3	32.1	14.6	28.1	BDL (DL - 0.5)
		16/05/2024	59.7	26.4	9.3	17.8	BDL (DL - 0.5)
		20/05/2024	61.3	27.6	11.4	23.9	BDL (DL - 0.5)
		23/05/2024	62.8	28.1	12.7	21.4	BDL (DL - 0.5)
		27/05/2024	57.2	21.7	9.6	18.3	BDL (DL - 0.5)
Monthly Average Value			61.5	27.6	11.9	21.8	BDL (DL - 0.5)

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Verified by  
  
 Snehal Raut  
 Deputy Technical Manager

Authorized Signatory  
  
 Dr. (Mrs.) S. D. Garway  
 Quality Manager

---End of Report---



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**Ambient Air Quality-June-2024**

Report No.: AN/AAQ/TSL-F/2024/1-1		Date: 29/06/2024	
Name and Address of Industry:-	TATA STEEL LIMITED FAP JODA, Keonjhar, FAMD, ODISHA-758034 (India)	W. O. No.	3000144107/056
		W. O. date:	19/04/2022
Sample Description/ Type	Ambient Air Quality (Core Zone)	Sample Ref. No.:-	ALPL/21062024/ ENV-159-TSLFAP-CZ/AAQMS-1,2
Sample Drawn By:-	Anacon Representative	Sample Inward Date:-	10,17,24,29 June-2024
Test Started On:-	10,17,29 June-2024	Test Completed On:-	11, 18, 29 June-2024
Sampling Procedure	ANtd/7.2/Mon-01		

Sr. No.	LOCATION	Date of sampling	PM <sub>10</sub> µg/m <sup>3</sup>	PM <sub>2.5</sub> µg/m <sup>3</sup>	SO <sub>2</sub> µg/m <sup>3</sup>	NO <sub>2</sub> µg/m <sup>3</sup>	CO mg/m <sup>3</sup>
Method Reference			IS 5182 (Part 23)	USEPA-40 (Part 50)	IS:5182 (Part-2)	IS:5182 (Part-6)	IS:5182 (Part-10)
AAQMS-1	Near Main Gate	03/06/2024	62.9	28.4	16.3	24.7	BDL (DL – 0.5)
		06/06/2024	67.1	31.6	18.4	28.9	BDL (DL – 0.5)
		10/06/2024	59.2	21.7	13.6	17.2	BDL (DL – 0.5)
		14/06/2024	63.1	23.8	14.6	26.1	BDL (DL – 0.5)
		17/06/2024	57.3	18.2	9.3	18.3	BDL (DL – 0.5)
		20/06/2024	54.7	19.6	11.4	17.6	BDL (DL – 0.5)
		24/06/2024	61.4	23.8	12.9	21.7	BDL (DL – 0.5)
		27/06/2024	58.3	18.2	9.1	16.4	BDL (DL – 0.5)
Monthly Average Value			60.5	23.2	13.2	21.4	BDL (DL – 0.5)
AAQMS-2	General Office	03/06/2024	56.2	17.6	12.6	18.3	BDL (DL – 0.5)
		06/06/2024	52.8	16.9	9.2	17.4	BDL (DL – 0.5)
		10/06/2024	47.3	16.2	8.7	16.7	BDL (DL – 0.5)
		14/06/2024	54.7	18.3	11.9	21.1	BDL (DL – 0.5)
		17/06/2024	56.2	21.6	12.4	18.3	BDL (DL – 0.5)
		20/06/2024	54.9	17.2	9.3	17.6	BDL (DL – 0.5)
		24/06/2024	61.7	23.8	11.9	21.4	BDL (DL – 0.5)
		27/06/2024	58.3	19.1	9.7	18.3	BDL (DL – 0.5)
Monthly Average Value			55.3	18.8	10.7	18.6	BDL (DL – 0.5)

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Verified by  
  
Snehal Raut  
Technical Manager

Authorized Signatory  
  
Dr. (Mrs.) S. D. Garway  
Quality Manager

---End of Report---



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**Ambient Air Quality-June-2024**

Report No.: AN/AAQ/TSL-F/2024/1-2		Date: 29/06/2024	
Name and Address of Industry:-	TATA STEEL LIMITED FAP JODA, Keonjhar, FAMD, ODISHA-758034 (India)	W. O. No.	3000144107/056
		W. O. date:	19/04/2022
Sample Description/ Type	Ambient Air Quality (Core Zone)	Sample Ref. No.:-	ALPL/21062024/ ENV-159-TSLFAP-CZ/AAQMS-3,4
Sample Drawn By:-	Anacon Representative	Sample Inward Date:-	10,17,24,29 June-2024
Test Started On:-	10,17,29 June-2024	Test Completed On:-	11, 18, 29 June-2024
Sampling Procedure	ANtd/7.2/Mon-01		

Sr. No.	LOCATION	Date of sampling	PM <sub>10</sub> µg/m <sup>3</sup>	PM <sub>2.5</sub> µg/m <sup>3</sup>	SO <sub>2</sub> µg/m <sup>3</sup>	NO <sub>2</sub> µg/m <sup>3</sup>	CO mg/m <sup>3</sup>
Method Reference			IS 5182 (Part 23)	USEPA-40 (Part 50)	IS:5182 (Part-2)	IS:5182 (Part-6)	IS:5182 (Part-10)
AAQMS-3	Near Well Zone	03/06/2024	53.7	16.9	11.3	18.1	BDL (DL = 0.5)
		06/06/2024	56.2	21.7	12.4	23.8	BDL (DL = 0.5)
		10/06/2024	48.1	17.2	9.1	16.4	BDL (DL = 0.5)
		14/06/2024	52.8	19.1	11.8	21.6	BDL (DL = 0.5)
		17/06/2024	51.4	17.9	8.7	18.3	BDL (DL = 0.5)
		20/06/2024	47.2	19.2	7.6	17.1	BDL (DL = 0.5)
		24/06/2024	56.7	23.8	11.4	24.9	BDL (DL = 0.5)
		27/06/2024	54.6	21.6	9.2	18.3	BDL (DL = 0.5)
Monthly Average Value			52.6	19.7	10.2	19.8	BDL (DL = 0.5)
AAQMS-4	Near Back Gate	03/06/2024	58.2	23.6	11.7	21.8	BDL (DL = 0.5)
		06/06/2024	62.7	24.9	12.6	23.7	BDL (DL = 0.5)
		10/06/2024	54.6	18.3	9.2	17.6	BDL (DL = 0.5)
		14/06/2024	58.3	21.4	11.8	19.2	BDL (DL = 0.5)
		17/06/2024	61.7	23.8	9.7	21.4	BDL (DL = 0.5)
		20/06/2024	57.3	19.2	8.4	18.1	BDL (DL = 0.5)
		24/06/2024	62.8	24.6	11.3	23.9	BDL (DL = 0.5)
		27/06/2024	58.1	21.7	9.1	17.3	BDL (DL = 0.5)
Monthly Average Value			59.2	22.2	10.5	20.4	BDL (DL = 0.5)

NOTES: • Please see watermark "Original Test Report" to confirm the authenticity of this report. • Results shall be referred to tested sample(s) and applicable to tested parameters only. • Test report shall not be reproduced except in full without prior written approval of Anacon Labs.

**Remark:** - All Results are within Limit as per CPCB Standards.

Verified by  
  
Snehal Raut  
Technical Manager


Authorized Signatory  
  
Dr. (Mrs.) S. D. Garway  
Quality Manager

---End of Report---



Thank you for instilling your trust and faith in our services. We cherish our relationship with you, and we put in a lot of hard work in making sure that you get a seamless experience at every stage of your interaction with us. In our constant endeavor towards ensuring that your next experience will be significantly better than the current one, we welcome your feedback on [feedback@anacon.in](mailto:feedback@anacon.in).

# Six Monthly Compliance Report to the Terms of Conditions of Environmental Clearance granted in favor of Ferro Alloys Plant, Joda, M/s Tata Steel Limited for April'24 to September'2024



**Sky Lab**  
ANALYTICAL LABORATORY

Accredited by NABL as per ISO/IEC 17025:2017  
Certified by ISO 9001:2015, ISO 14001:2015 & ISO 45001:2018  
Recognized by Ministry of Environment, Forest & Climate Change (MoEFCC), Govt. of India, New Delhi

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Page 1 of 1

**Ambient Air Quality-July-2024**


Report No.: SAL/AAQ/TSL-F/2024/1-1		Date: 30/07/2024	
Name and Address of Industry:-	TATA STEEL LIMITED FAP JODA, Keonjhar, FAMD, ODISHA-758034 (India)		W. O. No. 3000144107/056 W. O. date: 19/04/2022
Sample Description/ Type	Ambient Air Quality (Core Zone)	Sample Ref. No.:-	SAL/22072024/ ENV-175-TSLFAP-CZ/AAQMS-1,2
Sample Drawn By:-	SkyLab Representative	Sample Inward Date:-	8,15,22,29 July-2024
Test Started On:-	8,15,22,29 July-2024	Test Completed On:-	9,16,23,30 July-2024
Sampling Procedure	As per Reference Method		

Sr. No.	LOCATION	Date of sampling	PM <sub>10</sub> µg/m <sup>3</sup>	PM <sub>2.5</sub> µg/m <sup>3</sup>	SO <sub>2</sub> µg/m <sup>3</sup>	NO <sub>2</sub> µg/m <sup>3</sup>	CO mg/m <sup>3</sup>
Method Reference			IS 5182 (Part 23)	USEPA-40 (Part 50)	IS:5182 (Part-2)	IS:5182 (Part-6)	IS:5182 (Part-10)
AAQMS-1	Near Main Gate	02/07/2024	61.7	23.9	17.1	26.4	BDL (DL - 0.5)
		05/07/2024	58.3	18.3	16.9	24.1	BDL (DL - 0.5)
		08/07/2024	56.1	17.6	13.8	19.3	BDL (DL - 0.5)
		10/07/2024	61.8	21.4	14.2	21.9	BDL (DL - 0.5)
		15/07/2024	56.3	17.9	9.4	18.2	BDL (DL - 0.5)
		18/07/2024	62.6	23.6	12.1	21.7	BDL (DL - 0.5)
		22/07/2024	58.1	18.3	8.7	16.4	BDL (DL - 0.5)
		25/07/2024	54.9	16.9	7.6	16.2	BDL (DL - 0.5)
Monthly Average Value			58.7	19.7	12.5	20.5	BDL (DL - 0.5)
AAQMS-2	General Office	03/07/2024	52.8	16.2	11.4	17.1	BDL (DL - 0.5)
		05/07/2024	48.6	15.9	9.1	16.7	BDL (DL - 0.5)
		09/07/2024	54.3	16.7	12.6	18.4	BDL (DL - 0.5)
		11/07/2024	56.1	21.4	13.9	21.8	BDL (DL - 0.5)
		15/07/2024	47.3	18.3	9.7	17.6	BDL (DL - 0.5)
		18/07/2024	52.8	19.1	11.3	18.4	BDL (DL - 0.5)
		22/07/2024	53.1	21.9	12.6	23.1	BDL (DL - 0.5)
		25/07/2024	48.2	18.7	9.4	16.9	BDL (DL - 0.5)
Monthly Average Value			51.7	18.5	11.3	18.8	BDL (DL - 0.5)

NOTES: • Results shall be referred to tested sample(s) and applicable to tested parameters only. • Test report shall not be reproduced except in full without prior written approval of SkyLab.


Remarks: - All Results are within Limit as per CPCB Standards.

Verified By



Sr. Analyst

For SKYLAB ANALYTICAL LABORATORY




Authorized Signatory

---End of Report---

SAL/NAC/242309/19894

202, CFC-3, Asmeeta Texpa, Addl.Kalyan-Bhiwandi Industrial Area, MIDC, Village Kon, Tal. Bhiwandi, Dist., Thane, Maharashtra, INDIA. Pincode-421311.  
Mob.: 9867577309-312 / 8422929165. Email: mails@skylabenviro.com. Website: www.skylabenviro.com  
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Page 1 of 1

**Ambient Air Quality-July-2024**


Report No.: SAL/AAQ/TSL-F/2024/1-2		Date: 30/07/2024	
Name and Address of Industry:-	TATA STEEL LIMITED FAP JODA, Keonjhar, FAMD, ODISHA-758034 (India)		W. O. No. 3000144107/056 W. O. date: 19/04/2022
Sample Description/ Type	Ambient Air Quality (Core Zone)	Sample Ref. No.:-	SAL/21062024/ ENV-159-TSLFAP-CZ/AAQMS-3,4
Sample Drawn By:-	SkyLab Representative	Sample Inward Date:-	8,15,22,29 July-2024
Test Started On:-	8,15,22,29 July-2024	Test Completed On:-	9,16,23,30 July-2024
Sampling Procedure	As per Reference Method		

Sr. No.	LOCATION	Date of sampling	PM <sub>10</sub> µg/m <sup>3</sup>	PM <sub>2.5</sub> µg/m <sup>3</sup>	SO <sub>2</sub> µg/m <sup>3</sup>	NO <sub>2</sub> µg/m <sup>3</sup>	CO mg/m <sup>3</sup>
Method Reference			IS 5182 (Part 23)	USEPA-40 (Part 50)	IS:5182 (Part-2)	IS:5182 (Part-6)	IS:5182 (Part-10)
AAQMS-3	Near ETP	03/07/2024	56.1	23.8	12.4	19.6	BDL (DL - 0.5)
		05/07/2024	54.7	21.3	11.6	18.1	BDL (DL - 0.5)
		09/07/2024	47.2	18.1	9.3	16.8	BDL (DL - 0.5)
		11/07/2024	52.6	19.6	11.4	21.1	BDL (DL - 0.5)
		16/07/2024	48.3	21.9	9.7	18.3	BDL (DL - 0.5)
		18/07/2024	51.7	23.8	12.4	23.9	BDL (DL - 0.5)
		23/07/2024	49.2	18.2	8.7	16.8	BDL (DL - 0.5)
		25/07/2024	47.6	17.9	9.3	17.2	BDL (DL - 0.5)
Monthly Average Value			50.9	20.6	10.6	19.0	BDL (DL - 0.5)
AAQMS-4	Near Back Gate	02/07/2024	56.4	23.8	12.9	21.6	BDL (DL - 0.5)
		05/07/2024	54.1	19.7	9.3	18.3	BDL (DL - 0.5)
		08/07/2024	61.4	24.3	11.6	19.1	BDL (DL - 0.5)
		10/07/2024	58.3	21.8	8.7	16.9	BDL (DL - 0.5)
		15/07/2024	52.6	19.4	7.6	16.2	BDL (DL - 0.5)
		19/07/2024	49.3	18.3	8.4	17.6	BDL (DL - 0.5)
		22/07/2024	54.9	21.6	11.3	23.7	BDL (DL - 0.5)
		26/07/2024	48.2	19.1	9.1	18.4	BDL (DL - 0.5)
Monthly Average Value			54.4	21.0	9.9	19.0	BDL (DL - 0.5)

NOTES: • Results shall be referred to tested sample(s) and applicable to tested parameters only. • Test report shall not be reproduced except in full without prior written approval of SkyLab.


Remarks: - All Results are within Limit as per CPCB Standards.

Verified By



Sr. Analyst

For SKYLAB ANALYTICAL LABORATORY



Authorized Signatory

---End of Report---

SAL/NAC/242309/19895

202, CFC-3, Asmeeta Texpa, Addl.Kalyan-Bhiwandi Industrial Area, MIDC, Village Kon, Tal. Bhiwandi, Dist., Thane, Maharashtra, INDIA. Pincode-421311.  
Mob.: 9867577309-312 / 8422929165. Email: mails@skylabenviro.com. Website: www.skylabenviro.com  
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# Six Monthly Compliance Report to the Terms of Conditions of Environmental Clearance granted in favor of Ferro Alloys Plant, Joda, M/s Tata Steel Limited for April'24 to September'2024



**Anacon  
Laboratories**

*Test Report*



TC-12998

ULR No.- TC129982400001127F

Test Report No.: ALPL/31082024/1-1

Dated: 31/08/2024

Page 1 of 1

Name and Address of Industry:-	TATA STEEL LIMITED FAP JODA, Keonjhar, FAMD, ODISHA-758034 (India)		W. O. No.	3000144107/056
			W. O. date:	19/04/2022
Sample Description/ Type	Ambient Air Quality (Core Zone)	Sample Ref. No.:-	ALPL/19082024/ MON--26-1/26-AAQ-1 & AAQ-2 & ALPL/28082024/ MON--14-1/14-AAQ-1 & AAQ-2	
Sample Drawn By:-	Mr. Rasel Khan	Sample Inward Date:-	5, 12, 19, 28 August-2024	
Test Started On:-	5, 12, 19, 29 August-2024	Test Completed On:-	6, 13, 20, 31 August-2024	
Sampling Procedure	ANtd/7.2/Mon-01	Weather Condition	Satisfactory & Clear	

Sr. No.	LOCATION	Date of sampling	PM <sub>10</sub> µg/m <sup>3</sup>	PM <sub>2.5</sub> µg/m <sup>3</sup>	SO <sub>2</sub> µg/m <sup>3</sup>	NO <sub>2</sub> µg/m <sup>3</sup>	CO mg/m <sup>3</sup>
I	Discipline: Chemical		Group: Atmospheric Pollution			Sample Subgroup : Ambient Air	
Test Method			IS 5182 (Part 23):2006	USEPA-40 (Part 50):2011	IS:5182 (Part-2):2001	IS:5182 (Part-6):2006	IS:5182 (Part-10):1992
AAQ-1	Near Main Gate	01/08/2024	62.8	24.1	18.6	27.1	BLQ (LOQ-0.5)
		05/08/2024	56.3	19.3	16.2	21.8	BLQ (LOQ-0.5)
		08/08/2024	54.7	18.6	14.3	19.3	BLQ (LOQ-0.5)
		12/08/2024	62.1	23.7	14.9	23.6	BLQ (LOQ-0.5)
		16/08/2024	54.7	16.2	9.7	17.2	BLQ (LOQ-0.5)
		19/08/2024	58.3	21.8	12.4	19.7	BLQ (LOQ-0.5)
		22/08/2024	61.8	23.1	11.6	24.9	BLQ (LOQ-0.5)
		26/08/2024	62.1	21.4	9.8	18.3	BLQ (LOQ-0.5)
AAQ-2	General Office	01/08/2024	47.2	15.8	12.9	16.7	BLQ (LOQ-0.5)
		05/08/2024	51.3	16.4	13.8	18.3	BLQ (LOQ-0.5)
		08/08/2024	49.7	16.2	12.4	19.2	BLQ (LOQ-0.5)
		12/08/2024	54.8	21.6	14.3	23.6	BLQ (LOQ-0.5)
		16/08/2024	48.2	18.3	9.2	17.2	BLQ (LOQ-0.5)
		19/08/2024	47.6	16.9	11.6	19.3	BLQ (LOQ-0.5)
		22/08/2024	52.7	21.8	8.4	16.7	BLQ (LOQ-0.5)
		26/08/2024	46.2	17.3	7.2	17.1	BLQ (LOQ-0.5)
NAAQMS Standards			100 (24 hrs)	60 (24 hrs)	80 (24 hrs)	80 (24 hrs)	2.0 (8 hrs)

NOTES: ● Please see watermark "Original Test Report" to confirm the authenticity of this report. ● Results shall be referred to tested sample(s) and applicable to tested parameters only. ● Test report shall not be reproduced except in full without prior written approval of Anacon Labs. ● BLQ= below limit of quantification, LOQ= limit of quantification.

Remark: - All Results are within Limit as per NAAQMS Standards.

Verified by  
For  
Snehal Raut  
Technical Manager

Authorized Signatory  
Chinmay Garway  
Deputy Quality Manager

---End of Report---

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**Anacon Laboratories Pvt. Ltd. Nagpur Lab**

FP-34, 35, Food Park, Five Star Industrial Estate, MIDC Butibori, Nagpur, Maharashtra, India - 441 122

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**Anacon  
Laboratories**

*Test Report*



TC-12998

ULR No.- TC129982400001128F

Test Report No.: ALPL/31082024/1-2

Dated: 31/08/2024

Page 1 of 1

Name and Address of Industry:-	TATA STEEL LIMITED FAP JODA, Keonjhar, FAMD, ODISHA-758034 (India)		W. O. No.	3000144107/056
			W. O. date:	19/04/2022
Sample Description/ Type	Ambient Air Quality (Core Zone)	Sample Ref. No.:-	ALPL/19082024/ MON--26-1/26-AAQ-3 & AAQ-4 & ALPL/28082024/ MON--14-1/14-AAQ-3 & AAQ-4	
Sample Drawn By:-	Mr. Rasel Khan	Sample Inward Date:-	5, 12, 19, 28 August-2024	
Test Started On:-	5, 12, 19, 29 August-2024	Test Completed On:-	6, 13, 20, 31 August-2024	
Sampling Procedure	ANtd/7.2/Mon-01	Weather Condition	Satisfactory & Clear	

Sr. No.	LOCATION	Date of sampling	PM <sub>10</sub> µg/m³	PM <sub>2.5</sub> µg/m³	SO <sub>2</sub> µg/m³	NO <sub>2</sub> µg/m³	CO mg/m³
I	Discipline: Chemical	Group: Atmospheric Pollution				Sample Subgroup : Ambient Air	
Test Method			IS 5182 (Part 23):2006	USEPA-40 (Part 50):2011	IS-5182 (Part-2):2001	IS-5182 (Part-6):2006	IS-5182 (Part-10):1992
AAQ-3	Near ETP	01/08/2024	54.7	21.6	9.3	18.4	BLQ (LOQ-0.5)
		05/08/2024	48.3	18.2	8.1	17.3	BLQ (LOQ-0.5)
		08/08/2024	47.6	19.7	11.4	21.9	BLQ (LOQ-0.5)
		12/08/2024	52.1	23.6	12.9	24.7	BLQ (LOQ-0.5)
		16/08/2024	46.3	16.1	8.7	18.2	BLQ (LOQ-0.5)
		19/08/2024	51.9	21.7	11.4	21.6	BLQ (LOQ-0.5)
		22/08/2024	53.1	23.6	9.1	17.3	BLQ (LOQ-0.5)
		26/08/2024	47.2	16.1	7.6	17.8	BLQ (LOQ-0.5)
AAQ-4	Near Back Gate	01/08/2024	58.2	21.9	13.6	24.7	BLQ (LOQ-0.5)
		05/08/2024	61.7	23.4	14.1	26.3	BLQ (LOQ-0.5)
		08/08/2024	54.8	19.3	9.3	18.6	BLQ (LOQ-0.5)
		12/08/2024	58.2	21.6	12.4	21.9	BLQ (LOQ-0.5)
		16/08/2024	47.6	18.2	8.1	16.4	BLQ (LOQ-0.5)
		19/08/2024	52.8	23.9	11.6	21.3	BLQ (LOQ-0.5)
		22/08/2024	48.3	19.1	9.2	18.7	BLQ (LOQ-0.5)
		26/08/2024	53.7	21.6	12.4	23.9	BLQ (LOQ-0.5)
NAAQMS Standards			100 (24 hrs)	60 (24 hrs)	80 (24 hrs)	80 (24 hrs)	2.0 (8 hrs)

NOTES: ● Please see watermark "Original Test Report" to confirm the authenticity of this report. ● Results shall be referred to tested sample(s) and applicable to tested parameters only. ● Test report shall not be reproduced except in full without prior written approval of Anacon Labs. ● BLQ= below limit of quantification, LOQ= limit of quantification.

Remark: - All Results are within Limit as per NAAQMS Standards.

Verified by  
For  
Snehal Raut  
Technical Manager

Authorized Signatory  
Chinmay Garway  
Deputy Quality Manager

---End of Report---

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# Six Monthly Compliance Report to the Terms of Conditions of Environmental Clearance granted in favor of Ferro Alloys Plant, Joda, M/s Tata Steel Limited for April'24 to September'2024



**Anacon Laboratories**

TC-12998

*Test Report*

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ULR No.- TC129982400001634F  
 Test Report No.: ALPL/30092024/1-1 Dated: 30/09/2024 Page 1 of 1


Name and Address of Industry:-	<b>TATA STEEL LIMITED</b> FAP JODA, Keonjhar, FAMD, ODISHA-758034 (India)		W. O. No.	3000144107/056
			W. O. date:	19/04/2022
Sample Description/ Type	Ambient Air Quality (Core Zone)	Inward Number:-	ALPL/23092024/ MON--41-1/32-1 & 2	
Sample Drawn By:-	Mr. Rasel Khan	Sample Inward Date:-	9,16,23,30 Sept-2024	
Test Started On:-	9,16,23,30 Sept-2024	Test Completed On:-	10,17,24,30 Sept-2024	
Sampling Procedure	ANtd/7.2/Mon-01	Weather Condition	Satisfactory & Clear	

Sr. No.	LOCATION	Date of sampling	PM <sub>10</sub> µg/m <sup>3</sup>	PM <sub>2.5</sub> µg/m <sup>3</sup>	SO <sub>2</sub> µg/m <sup>3</sup>	NO <sub>2</sub> µg/m <sup>3</sup>	CO mg/m <sup>3</sup>
I	Discipline: Chemical	Group: Atmospheric Pollution		Material or Product tested : Ambient Air			
	Test Method	IS 5182 (Part 23)	USEPA-40 (Part 50)	IS-5182 (Part-2)	IS-5182 (Part-6)	IS-5182 (Part-10)	
AAQ-1	Near Main Gate	02/09/2024	63.8	26.3	17.4	24.9	BLQ (LOQ-0.5)
		05/09/2024	58.2	24.7	16.1	18.3	BLQ (LOQ-0.5)
		09/09/2024	47.6	16.9	12.8	21.6	BLQ (LOQ-0.5)
		12/09/2024	52.8	21.6	13.4	19.2	BLQ (LOQ-0.5)
		16/09/2024	56.2	23.8	12.9	21.6	BLQ (LOQ-0.5)
		19/09/2024	61.7	24.1	13.8	22.4	BLQ (LOQ-0.5)
		23/09/2024	54.9	19.3	9.3	18.7	BLQ (LOQ-0.5)
		26/09/2024	56.2	21.6	11.4	19.3	BLQ (LOQ-0.5)
AAQ-2	General Office	02/09/2024	51.6	16.3	11.4	17.2	BLQ (LOQ-0.5)
		05/09/2024	56.2	18.9	13.6	21.4	BLQ (LOQ-0.5)
		09/09/2024	47.6	15.7	9.3	18.1	BLQ (LOQ-0.5)
		12/09/2024	54.7	19.3	11.7	23.8	BLQ (LOQ-0.5)
		16/09/2024	56.2	24.1	12.9	26.3	BLQ (LOQ-0.5)
		19/09/2024	49.1	18.7	9.3	19.2	BLQ (LOQ-0.5)
		23/09/2024	47.6	16.4	8.4	18.7	BLQ (LOQ-0.5)
		26/09/2024	51.7	19.3	9.1	21.6	BLQ (LOQ-0.5)
NAAQMS Standards		100 (24 hrs)	60 (24 hrs)	80 (24 hrs)	80 (24 hrs)	2.0 (8 hrs)	

NOTES: ● Please see watermark "Original Test Report" to confirm the authenticity of this report. ● Results shall be referred to tested sample(s) and applicable to tested parameters only. ● Test report shall not be reproduced except in full without prior written approval of Anacon Labs. ● BLQ= below limit of quantification, LOQ= limit of quantification. ● Environmental condition - Satisfactory. ● Statement of conformity issued on the basis of decision rule as per quality procedure (QP/7.8/05).

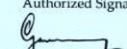
Remark: - All Results are within Limit as per NAAQMS Standards.

Verified by



Snehal Raut  
Technical Manager

Authorized Signatory





Chinmay Garway  
Deputy Quality Manager

----End of Report----



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**Anacon Laboratories**

TC-12998

*Test Report*

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ULR No.- TC129982400001635F  
 Test Report No.: ALPL/30092024/1-2 Dated: 30/09/2024 Page 1 of 1


Name and Address of Industry:-	<b>TATA STEEL LIMITED</b> FAP JODA, Keonjhar, FAMD, ODISHA-758034 (India)		W. O. No.	3000144107/056
			W. O. date:	19/04/2022
Sample Description/ Type	Ambient Air Quality (Core Zone)	Inward Number:-	ALPL/23092024/ MON--41-1/32-3 & 4	
Sample Drawn By:-	Mr. Rasel Khan	Sample Inward Date:-	9,16,23,30 Sept-2024	
Test Started On:-	9,16,23,30 Sept-2024	Test Completed On:-	10,17,24,30 Sept-2024	
Sampling Procedure	ANtd/7.2/Mon-01	Weather Condition	Satisfactory & Clear	

Sr. No.	LOCATION	Date of sampling	PM <sub>10</sub> µg/m <sup>3</sup>	PM <sub>2.5</sub> µg/m <sup>3</sup>	SO <sub>2</sub> µg/m <sup>3</sup>	NO <sub>2</sub> µg/m <sup>3</sup>	CO mg/m <sup>3</sup>
I	Discipline: Chemical	Group: Atmospheric Pollution		Sample Subgroup : Ambient Air			
	Test Method	IS 5182 (Part 23)	USEPA-40 (Part 50)	IS-5182 (Part-2)	IS-5182 (Part-6)	IS-5182 (Part-10)	
AAQ-3	Near ETP	02/09/2024	53.7	18.3	11.6	17.9	BLQ (LOQ-0.5)
		05/09/2024	46.2	16.1	9.3	16.8	BLQ (LOQ-0.5)
		09/09/2024	42.8	15.9	7.6	16.2	BLQ (LOQ-0.5)
		12/09/2024	52.7	21.6	12.4	23.6	BLQ (LOQ-0.5)
		16/09/2024	48.3	18.2	11.3	21.4	BLQ (LOQ-0.5)
		19/09/2024	51.6	19.7	9.2	18.7	BLQ (LOQ-0.5)
		23/09/2024	53.1	21.4	11.6	21.9	BLQ (LOQ-0.5)
		26/09/2024	47.3	18.3	12.4	19.2	BLQ (LOQ-0.5)
AAQ-4	Near Back Gate	02/09/2024	56.3	23.8	12.4	21.9	BLQ (LOQ-0.5)
		05/09/2024	62.7	24.6	13.9	26.1	BLQ (LOQ-0.5)
		09/09/2024	52.8	16.9	9.3	17.6	BLQ (LOQ-0.5)
		12/09/2024	54.3	21.7	11.4	19.3	BLQ (LOQ-0.5)
		16/09/2024	48.1	18.3	8.2	16.8	BLQ (LOQ-0.5)
		19/09/2024	51.7	23.8	11.6	21.9	BLQ (LOQ-0.5)
		23/09/2024	53.1	21.7	9.3	18.4	BLQ (LOQ-0.5)
		26/09/2024	47.3	19.2	8.4	16.2	BLQ (LOQ-0.5)
NAAQMS Standards		100 (24 hrs)	60 (24 hrs)	80 (24 hrs)	80 (24 hrs)	2.0 (8 hrs)	

NOTES: ● Please see watermark "Original Test Report" to confirm the authenticity of this report. ● Results shall be referred to tested sample(s) and applicable to tested parameters only. ● Test report shall not be reproduced except in full without prior written approval of Anacon Labs. ● BLQ= below limit of quantification, LOQ= limit of quantification. ● Environmental condition - Satisfactory. ● Statement of conformity issued on the basis of decision rule as per quality procedure (QP/7.8/05).

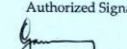
Remark: - All Results are within Limit as per NAAQMS Standards.

Verified by



Snehal Raut  
Technical Manager

Authorized Signatory




Chinmay Garway  
Deputy Quality Manager

----End of Report----

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### Annexure -3



#### Continious Emission Monitoring System

#### STACK EMISSION MONITORING RESULTS (APRIL '24 to SEPTEMBER'24)

Location	ARC FURNACE-1	Limit as per CTO						
Parameters	UNIT		Apr-24	May-24	June-24	July-24	Aug-24	Sep-24
PM	(mg/Nm3)	100	47.6	43.9	38.2	32.7	28.6	47.6
SOX	(mg/Nm3)	-	294	287	271	258	241	294
NOX	(mg/Nm3)	-	182	164	168	141	137	182

Location	ARC FURNACE-2	Limit as per CTO						
Parameters	NAAQ Standard		Apr-24	May-24	June-24	July-24	Aug-24	Sep-24
PM	(mg/Nm3)	100	48.7	41.8	42.1	36.7	32.7	48.7
SOX	(mg/Nm3)	-	304	317	341	264	291	304
NOX	(mg/Nm3)	-	197	251	168	153	148	197

Six Monthly Compliance Report to the Terms of Conditions of Environmental Clearance granted in favor of Ferro Alloys Plant, Joda, M/s Tata Steel Limited for April'24 to September'2024

**Annexure - 4**  
**Stack Monitoring Report**



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*Test Report*

**Stack Emission Report**

Report No.: ALPL/30042024/1-4		Date: 30/04/2024	
Issued to	TATA STEEL LIMITED FAP JODA, Keonjhar, FAMD, ODISHA-758034 (India)		P. O. No. 3000144107/056-19.04.2022
Sample Description/Type	Stack Emission	Sample Collected by	Anacon Laboratory
Sampling Location	Stack-II	Sample Quantity/Packing	Thimble: 1 X 1 No. SO <sub>2</sub> : 30 mL X 1 No. PVC Bottle NO <sub>x</sub> : 30 mL X 1 No. PVC Bottle
Sample Ref. No.:	ALPL/30042024/ENV-91-S1	Date of Sampling	29/04/2024
Sampling Procedure	ANtd/7.2/Mon-01	Date of Receipt of Sample	30/04/2024
Date of Start of Analysis	30/04/2024	Date of Completion of Analysis	30/04/2024

TECHNICAL DATA			
Stack Name		Furnace	
Ambient Temperature	37	°C	
Ambient Relative Humidity	53	%	
Stack height above ground level	10	Meter	
Stack diameter	0.35	Meter	
Type of Fuel	Coal	---	
Flue gas temperature	143	°C	
Flue gas velocity	8.97	m/s	
Total gas quantity at STP	3108.57	m <sup>3</sup> /h	
Total gas quantity at NTP	2210.74	Nm <sup>3</sup> /h	
Parameter	Unit	Results	Method Reference
Particulate Matter (PM)	mg/Nm <sup>3</sup>	47.6	IS:11255 (Part 1)
Sulphur Dioxide (SO <sub>2</sub> )	mg/Nm <sup>3</sup>	294	IS 11255 (Part 2)
Oxide of Nitrogen (NO <sub>x</sub> )	mg/Nm <sup>3</sup>	182	IS 11255 (Part 2)

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Verified by  
  
Snehal Raut  
Deputy Technical Manager

Authorized Signatory  
  
Dr. (Mrs.) S. D. Garway  
Quality Manager

----End of Report----



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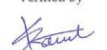
*Test Report*

**Stack Emission Report**

Report No.: ALPL/30042024/1-5		Date: 30/04/2024	
Issued to	TATA STEEL LIMITED FAP JODA, Keonjhar, FAMD, ODISHA-758034 (India)		P. O. No. 3000144107/056-19.04.2022
Sample Description/Type	Stack Emission	Sample Collected by	Anacon Laboratory
Sampling Location	Stack-IV	Sample Quantity/Packing	Thimble: 1 X 1 No. SO <sub>2</sub> : 30 mL X 1 No. PVC Bottle NO <sub>x</sub> : 30 mL X 1 No. PVC Bottle
Sample Ref. No.:	ALPL/30042024/ENV-91-S2	Date of Sampling	29/04/2024
Sampling Procedure	ANtd/7.2/Mon-01	Date of Receipt of Sample	30/04/2024
Date of Start of Analysis	30/04/2024	Date of Completion of Analysis	30/04/2024


TECHNICAL DATA			
Stack Name		Furnace	
Ambient Temperature	37	°C	
Ambient Relative Humidity	53	%	
Stack height above ground level	10	Meter	
Stack diameter	0.35	Meter	
Type of Fuel	Coal	---	
Flue gas temperature	136	°C	
Flue gas velocity	8.29	m/s	
Total gas quantity at STP	2872.40	m <sup>3</sup> /h	
Total gas quantity at NTP	2079.08	Nm <sup>3</sup> /h	
Parameter	Unit	Results	Method Reference
Particulate Matter (PM)	mg/Nm <sup>3</sup>	48.7	IS:11255 (Part 1)
Sulphur Dioxide (SO <sub>2</sub> )	mg/Nm <sup>3</sup>	304	IS 11255 (Part 2)
Oxide of Nitrogen (NO <sub>x</sub> )	mg/Nm <sup>3</sup>	197	IS 11255 (Part 2)

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Verified by  
  
Snehal Raut  
Deputy Technical Manager

Authorized Signatory  
  
Dr. (Mrs.) S. D. Garway  
Quality Manager

----End of Report----



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*Test Report*

## Stack Emission Report

Report No.: ALPL/31052024/1-5		Date: 31/05/2024	
Issued to	TATA STEEL LIMITED FAP JODA, Keonjhar, FAMD, ODISHA-758034 (India)	P. O. No.	
		3000144107/056-19.04.2022	
Sample Description/Type	Stack Emission	Sample Collected by	Anacon Laboratory
Sampling Location	Stack-II	Sample Quantity/Packing	Thimble: 1 X 1 No. SO <sub>2</sub> : 30 mL X 1 No. PVC Bottle NO <sub>x</sub> : 30 mL X 1 No. PVC Bottle
Sample Ref. No.:	ALPL/30052024/ENV-127-S2	Date of Sampling	30/05/2024
Sampling Procedure	ANtd/7.2/Mon-01	Date of Receipt of Sample	31/05/2024
Date of Start of Analysis	31/05/2024	Date of Completion of Analysis	31/05/2024

### TECHNICAL DATA

Stack Name	Furnace	
Ambient Temperature	38	°C
Ambient Relative Humidity	46	%
Stack height above ground level	10	Meter
Stack diameter	0.35	Meter
Type of Fuel	Coal	---
Flue gas temperature	136	°C
Flue gas velocity	8.24	m/s
Total gas quantity at STP	2855.42	m <sup>3</sup> /h
Total gas quantity at NTP	2039.41	Nm <sup>3</sup> /h

Parameter	Unit	Results	Method Reference
Particulate Matter (PM)	mg/Nm <sup>3</sup>	41.8	IS:11255 (Part 1)
Sulphur Dioxide (SO <sub>2</sub> )	mg/Nm <sup>3</sup>	317	IS 11255 (Part 2)
Oxide of Nitrogen (NO <sub>x</sub> )	mg/Nm <sup>3</sup>	194	IS 11255 (Part 7)
Carbon Monoxide (CO)	mg/Nm <sup>3</sup>	46.2	Gas analyser

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 Snehal Raut  
 Deputy Technical Manager

Authorized Signatory

Dr. (Mrs.) S. D. Garway  
 Quality Manager

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*Test Report*

## Stack Emission Report

Report No.: ALPL/31052024/1-4		Date: 31/05/2024	
Issued to	TATA STEEL LIMITED FAP JODA, Keonjhar, FAMD, ODISHA-758034 (India)	P. O. No.	
		3000144107/056-19.04.2022	
Sample Description/Type	Stack Emission	Sample Collected by	Anacon Laboratory
Sampling Location	Stack-I	Sample Quantity/Packing	Thimble: 1 X 1 No. SO <sub>2</sub> : 30 mL X 1 No. PVC Bottle NO <sub>x</sub> : 30 mL X 1 No. PVC Bottle
Sample Ref. No.:	ALPL/30052024/ENV-127-S1	Date of Sampling	30/05/2024
Sampling Procedure	ANtd/7.2/Mon-01	Date of Receipt of Sample	31/05/2024
Date of Start of Analysis	31/05/2024	Date of Completion of Analysis	31/05/2024

### TECHNICAL DATA

Stack Name	Furnace	
Ambient Temperature	38	°C
Ambient Relative Humidity	46	%
Stack height above ground level	10	Meter
Stack diameter	0.35	Meter
Type of Fuel	Coal	---
Flue gas temperature	147	°C
Flue gas velocity	8.67	m/s
Total gas quantity at STP	3002.79	m <sup>3</sup> /h
Total gas quantity at NTP	2088.50	Nm <sup>3</sup> /h

Sr. No.	Parameter	Unit	Results	Method Reference
1.	Particulate Matter (PM)	mg/Nm <sup>3</sup>	43.9	IS:11255 (Part 1)
2.	Sulphur Dioxide (SO <sub>2</sub> )	mg/Nm <sup>3</sup>	287	IS 11255 (Part 2)
3.	Oxide of Nitrogen (NO <sub>x</sub> )	mg/Nm <sup>3</sup>	164	IS 11255 (Part 7)
4.	Carbon Monoxide (CO)	mg/Nm <sup>3</sup>	42.7	Gas analyser

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https://www.anaconlaboratories.com

*Test Report*

**Stack Emission Report**

Report No.: ALPL/29062024/1-4		Date: 29/06/2024	
Issued to	TATA STEEL LIMITED FAP JODA, Keonjhar, FAMD, ODISHA-758034 (India)	P. O. No.	
		3000144107/056-19.04.2022	
Sample Description/Type	Stack Emission	Sample Collected by	Anacon Laboratory
Sampling Location	Stack-II	Sample Quantity/Packing	Thimble: 1 X 1 No. SO <sub>2</sub> : 30 mL X 1 No. PVC Bottle NO <sub>x</sub> : 30 mL X 1 No. PVC Bottle
Sample Ref. No.:	ALPL/17062024/ENV-151-S1	Date of Sampling	13/06/2024
Sampling Procedure	ANtd/7.2/Mon-01	Date of Receipt of Sample	17/06/2024
Date of Start of Analysis	18/06/2024	Date of Completion of Analysis	19/06/2024

**TECHNICAL DATA**

Stack Name	Furnace	
Ambient Temperature	32	°C
Ambient Relative Humidity	53	%
Stack height above ground level	10	Meter
Stack diameter	0.35	Meter
Type of Fuel	Coal	---
Flue gas temperature	136	°C
Flue gas velocity	7.97	m/s
Total gas quantity at STP	2762.60	m <sup>3</sup> /h
Total gas quantity at NTP	1999.61	Nm <sup>3</sup> /h

Sr. No.	Parameter	Unit	Results	Method Reference
1.	Particulate Matter (PM)	mg/Nm <sup>3</sup>	38.2	IS:11255 (Part 1)
2.	Sulphur Dioxide (SO <sub>2</sub> )	mg/Nm <sup>3</sup>	271	IS 11255 (Part 2)
3.	Oxide of Nitrogen (NO <sub>x</sub> )	mg/Nm <sup>3</sup>	168	IS 11255 (Part 7)
4.	Carbon Monoxide (CO)	mg/Nm <sup>3</sup>	47	Gas analyser

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Verified by

Snehal Raut  
Technical Manager

Authorized Signatory

Dr. (Mrs.) S. D. Garway  
Quality Manager

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*Test Report*

**Stack Emission Report**

Report No.: ALPL/29062024/1-5		Date: 29/06/2024	
Issued to	TATA STEEL LIMITED FAP JODA, Keonjhar, FAMD, ODISHA-758034 (India)	P. O. No.	
		3000144107/056-19.04.2022	
Sample Description/Type	Stack Emission	Sample Collected by	Anacon Laboratory
Sampling Location	Stack-IV	Sample Quantity/Packing	Thimble: 1 X 1 No. SO <sub>2</sub> : 30 mL X 1 No. PVC Bottle NO <sub>x</sub> : 30 mL X 1 No. PVC Bottle
Sample Ref. No.:	ALPL/17062024/ENV-151-S2	Date of Sampling	13/06/2024
Sampling Procedure	ANtd/7.2/Mon-01	Date of Receipt of Sample	17/06/2024
Date of Start of Analysis	18/06/2024	Date of Completion of Analysis	19/06/2024

**TECHNICAL DATA**

Stack Name	Furnace	
Ambient Temperature	32	°C
Ambient Relative Humidity	53	%
Stack height above ground level	10	Meter
Stack diameter	0.35	Meter
Type of Fuel	Coal	---
Flue gas temperature	116	°C
Flue gas velocity	8.19	m/s
Total gas quantity at STP	2836.10	m <sup>3</sup> /h
Total gas quantity at NTP	2158.35	Nm <sup>3</sup> /h

Parameter	Unit	Results	Method Reference
Particulate Matter (PM)	mg/Nm <sup>3</sup>	42.6	IS:11255 (Part 1)
Sulphur Dioxide (SO <sub>2</sub> )	mg/Nm <sup>3</sup>	341	IS 11255 (Part 2)
Oxide of Nitrogen (NO <sub>x</sub> )	mg/Nm <sup>3</sup>	168	IS 11255 (Part 7)
Carbon Monoxide (CO)	mg/Nm <sup>3</sup>	53	Gas analyser

NOTES: ● Please see watermark "Original Test Report" to confirm the authenticity of this report. ● Results shall be referred to tested sample(s) and applicable to tested parameters only. ● Test report shall not be reproduced except in full without prior written approval of Anacon Labs.

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Technical Manager

Authorized Signatory

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Quality Manager

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## Sky Lab ANALYTICAL LABORATORY

Accredited by NABL as per ISO/IEC 17025:2017 as per TC 5150  
Certified by ISO 9001:2015, ISO 14001:2015 & ISO 45001:2018

Recognized by Ministry of Environment, Forest & Climate Change (MoEFCC), Govt. of India, New Delhi

• ENVIRONMENT • FOOD • TEXTILE

### Stack Emission Report

Report No.: SAL/31072024/1-4		Date: 31/07/2024	
Issued to	TATA STEEL LIMITED FAP JODA, Keonjhar, FAMD, ODISHA-758034 (India)	P. O. No.	
		3000144107/056-19.04.2022	
Sample Description/Type	Stack Emission	Sample Collected by	SkyLab Laboratory
Sampling Location	Stack-I	Sample Quantity/Packing	Thimble: 1 X 1 No. SO <sub>2</sub> : 30 mL X 1 No. PVC Bottle NO <sub>x</sub> : 30 mL X 1 No. PVC Bottle
Sample Ref. No.:	SAL/31072024/ENV-178-S1	Date of Sampling	31/07/2024
Sampling Procedure	As per Reference Method	Date of Receipt of Sample	31/07/2024
Date of Start of Analysis	31/07/2024	Date of Completion of Analysis	31/07/2024

#### TECHNICAL DATA

Stack Name	Furnace	
Ambient Temperature	28	°C
Ambient Relative Humidity	72	%
Stack height above ground level	10	Meter
Stack diameter	0.35	Meter
Type of Fuel	Coal	---
Flue gas temperature	128	°C
Flue gas velocity	7.68	m/s
Total gas quantity at STP	2660.35	m <sup>3</sup> /h
Total gas quantity at NTP	1964.01	Nm <sup>3</sup> /h

Sr. No.	Parameter	Unit	Results	Method Reference
1.	Particulate Matter (PM)	mg/Nm <sup>3</sup>	32.7	IS:11255 (Part 1)
2.	Sulphur Dioxide (SO <sub>2</sub> )	mg/Nm <sup>3</sup>	258	IS 11255 (Part 2)
3.	Oxide of Nitrogen (NO <sub>x</sub> )	mg/Nm <sup>3</sup>	141	IS 11255 (Part 7)
4.	Carbon Monoxide (CO)	mg/Nm <sup>3</sup>	43	Gas analyser

NOTES: • Results shall be referred to tested sample(s) and applicable to tested parameters only. • Test report shall not be reproduced except in full without prior written approval of SkyLab.

Verified By

Sr. Analyst

For SKYLAB ANALYTICAL LABORATORY

Authorized Signatory

----End of Report----

202, CFC-3, Asmeeta Texpa, Addl. Kalyan-Bhiwandi Industrial Area, MIDC, Village Kon, Tal. Bhiwandi, Dist., Thane, Maharashtra, INDIA. Pincode-421311.

Mob. : 9867577309-312 / 8422929165. Email : mails@skylabenviro.com, Website : www.skylabenviro.com

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## Sky Lab ANALYTICAL LABORATORY

Accredited by NABL as per ISO/IEC 17025:2017 as per TC 5150  
Certified by ISO 9001:2015, ISO 14001:2015 & ISO 45001:2018

Recognized by Ministry of Environment, Forest & Climate Change (MoEFCC), Govt. of India, New Delhi

• ENVIRONMENT • FOOD • TEXTILE

### Stack Emission Report

Report No.: SAL/31072024/1-5		Date: 31/07/2024	
Issued to	TATA STEEL LIMITED FAP JODA, Keonjhar, FAMD, ODISHA-758034 (India)	P. O. No.	
		3000144107/056-19.04.2022	
Sample Description/Type	Stack Emission	Sample Collected by	SkyLab Laboratory
Sampling Location	Stack-II	Sample Quantity/Packing	Thimble: 1 X 1 No. SO <sub>2</sub> : 30 mL X 1 No. PVC Bottle NO <sub>x</sub> : 30 mL X 1 No. PVC Bottle
Sample Ref. No.:	SAL/31072024/ENV-178-S2	Date of Sampling	31/07/2024
Sampling Procedure	As Per Reference Method	Date of Receipt of Sample	31/07/2024
Date of Start of Analysis	31/07/2024	Date of Completion of Analysis	31/07/2024

#### TECHNICAL DATA

Stack Name	Furnace	
Ambient Temperature	28	°C
Ambient Relative Humidity	72	%
Stack height above ground level	10	Meter
Stack diameter	0.35	Meter
Type of Fuel	Coal	---
Flue gas temperature	112	°C
Flue gas velocity	8.04	m/s
Total gas quantity at STP	2787.0	m <sup>3</sup> /h
Total gas quantity at NTP	2143.02	Nm <sup>3</sup> /h

Parameter	Unit	Results	Method Reference
Particulate Matter (PM)	mg/Nm <sup>3</sup>	36.7	IS:11255 (Part 1)
Sulphur Dioxide (SO <sub>2</sub> )	mg/Nm <sup>3</sup>	264	IS 11255 (Part 2)
Oxide of Nitrogen (NO <sub>x</sub> )	mg/Nm <sup>3</sup>	153	IS 11255 (Part 7)
Carbon Monoxide (CO)	mg/Nm <sup>3</sup>	48	Gas analyser

NOTES: • Results shall be referred to tested sample(s) and applicable to tested parameters only. • Test report shall not be reproduced except in full without prior written approval of SkyLab.

Verified By

Sr. Analyst

For SKYLAB ANALYTICAL LABORATORY

Authorized Signatory

----End of Report----

202, CFC-3, Asmeeta Texpa, Addl. Kalyan-Bhiwandi Industrial Area, MIDC, Village Kon, Tal. Bhiwandi, Dist., Thane, Maharashtra, INDIA. Pincode-421311.

Mob. : 9867577309-312 / 8422929165. Email : mails@skylabenviro.com, Website : www.skylabenviro.com

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Six Monthly Compliance Report to the Terms of Conditions of Environmental Clearance granted in favor of Ferro Alloys Plant, Joda, M/s Tata Steel Limited for April'24 to September'2024



Anacon  
Laboratories



TC-12998

Test Report

ULR No.- TC129982400001133F

Report No.: ALPL/31082024/1-3A

Date: 31/08/2024

Page 1 of 1

Issued to	TATA STEEL LIMITED FAP JODA, Keonjhar, FAMD, ODISHA-758034 (India)		P. O. No.
			3000144107/056-19.04.2022
Sample Description/Type	Stack Emission	Sample Collected by	Anacon Laboratory
Sampling Location	Stack-III	Sample Quantity/Packing	Thimble: 1 X 1 No. SO <sub>2</sub> : 30 mL X 1 No. PVC Bottle NO <sub>x</sub> : 30 mL X 1 No. PVC Bottle
Sample Ref. No.:	ALPL/28082024/ MON--14-ST-1	Date of Sampling	20/08/2024
Sampling Procedure	ANtd/7.2/Mon-01	Date of Receipt of Sample	28/08/2024
Date of Start of Analysis	28/08/2024	Date of Completion of Analysis	31/08/2024

TECHNICAL DATA

Stack Name	Furnace	
Ambient Temperature	24	°C
Ambient Relative Humidity	81	%
Stack height above ground level	10	Meter
Stack diameter	0.35	Meter
Type of Fuel	Coal	---
Flue gas temperature	117	°C
Flue gas velocity	7.51	m/s
Total gas quantity at STP	2603.29	m <sup>3</sup> /h
Total gas quantity at NTP	1949.92	Nm <sup>3</sup> /h

Sr. No.	Parameter	Unit	Results	Test Method
1.	Particulate Matter	mg/Nm <sup>3</sup>	28.6	IS:11255 (Part 1):1985
2.	Sulphur Dioxide	mg/Nm <sup>3</sup>	241	IS 11255 (Part 2):1985
3.	Oxide of Nitrogen	mg/Nm <sup>3</sup>	137	IS 11255 (Part 7):2005

NOTES: • Please see watermark "Original Test Report" to confirm the authenticity of this report. • Results shall be referred to tested sample(s) and applicable to tested parameters only. • Test report shall not be reproduced except in full without prior written approval of Anacon Labs.

Verified by  
  
Snehal Raut  
Technical Manager

Authorized Signatory  
  
Chinmay Garway  
Deputy Quality Manager

----End of Report----

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Test Report

Report No.: ALPL/31082024/1-3B

Date: 31/08/2024

Page 1 of 1

Issued to	TATA STEEL LIMITED FAP JODA, Keonjhar, FAMD, ODISHA-758034 (India)		P. O. No.
			3000144107/056-19.04.2022
Sample Description/Type	Stack Emission	Sample Collected by	Anacon Laboratory
Sampling Location	Stack-III	Sample Quantity/Packing	Thimble: 1 X 1 No. SO <sub>2</sub> : 30 mL X 1 No. PVC Bottle NO <sub>x</sub> : 30 mL X 1 No. PVC Bottle
Sample Ref. No.:	ALPL/28082024/ MON--14-ST-1	Date of Sampling	20/08/2024
Sampling Procedure	ANtd/7.2/Mon-01	Date of Receipt of Sample	28/08/2024
Date of Start of Analysis	28/08/2024	Date of Completion of Analysis	31/08/2024

TECHNICAL DATA

Stack Name	Furnace	
Ambient Temperature	24	°C
Ambient Relative Humidity	81	%
Stack height above ground level	10	Meter
Stack diameter	0.35	Meter
Type of Fuel	Coal	---
Flue gas temperature	117	°C
Flue gas velocity	7.51	m/s
Total gas quantity at STP	2603.29	m <sup>3</sup> /h
Total gas quantity at NTP	1949.92	Nm <sup>3</sup> /h

Sr. No.	Parameter	Unit	Results	Test Method
1.	Carbon Monoxide (CO)	mg/Nm <sup>3</sup>	46	Gas analyser

NOTES: • Please see watermark "Original Test Report" to confirm the authenticity of this report. • Results shall be referred to tested sample(s) and applicable to tested parameters only. • Test report shall not be reproduced except in full without prior written approval of Anacon Labs.

Verified by  
  
Snehal Raut  
Technical Manager

Authorized Signatory  
  
Chinmay Garway  
Deputy Quality Manager

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# Six Monthly Compliance Report to the Terms of Conditions of Environmental Clearance granted in favor of Ferro Alloys Plant, Joda, M/s Tata Steel Limited for April'24 to September'2024



**Anacon Laboratories**



TC-12998

Test Report

ULR No.- TC129982400001640F

Report No.: ALPL/30092024/1-3A

Date: 30/09/2024

Page 1 of 1

Issued to	TATA STEEL LIMITED FAP JODA, Keonjhar, FAMD, ODISHA-758034 (India)		P. O. No. 3000144107/056-19.04.2022
Sample Description/Type	Stack Emission	Sampling done by	Mr. Rasel Khan
Sampling Location	Stack-III	Sample Quantity/Packing	Thimble: 1 X 1 No. SO <sub>2</sub> : 30 mL X 1No. PVC Bottle NO <sub>x</sub> : 30 mL X 1No. PVC Bottle
Sample Ref. No.:	ALPL/23092024/ MON-41-ST-1/2-1	Date of Sampling	19/09/2024
Sampling Procedure	ANtd/7.2/Mon-01	Date of Receipt of Sample	23/09/2024
Date of Start of Analysis	23/09/2024	Date of Completion of Analysis	24/09/2024

## TECHNICAL DATA

Stack Name	Furnace	
Ambient Temperature	23	°C
Ambient Relative Humidity	87	%
Stack height above ground level	10	Meter
Stack diameter	0.35	Meter
Type of Fuel	Coal	---
Flue gas temperature	116	°C
Flue gas velocity	7.83	m/s
Total gas quantity at STP	2712.11	m <sup>3</sup> /h
Total gas quantity at NTP	2036.65	Nm <sup>3</sup> /h

Sr. No.	Parameter	Unit	Results	Test Method
I	Discipline: Chemical	Group: Atmospheric Pollution	Material or Product tested : Stack Emission Monitoring	
1.	Particulate Matter	mg/Nm <sup>3</sup>	24.7	IS:11255 (Part 1)
2.	Sulphur Dioxide	mg/Nm <sup>3</sup>	216	IS 11255 (Part 2)
3.	Oxide of Nitrogen	mg/Nm <sup>3</sup>	119	IS 11255 (Part 7)

NOTES: • Please see watermark "Original Test Report" to confirm the authenticity of this report. • Results shall be referred to tested sample(s) and applicable to tested parameters only. • Test report shall not be reproduced except in full without prior written approval of Anacon Labs. • Environmental condition - Satisfactory. • Statement of conformity issued on the basis of decision rule as per quality procedure (QP/7.8/05).

Verified by

*Snehal Raut*  
Snehal Raut  
Technical Manager

Authorized Signatory

*Chinmay Garway*  
Chinmay Garway  
Deputy Quality Manager

End of Report

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Test Report

Report No.: ALPL/30092024/1-3B

Date: 30/09/2024

Page 1 of 1

Issued to	TATA STEEL LIMITED FAP JODA, Keonjhar, FAMD, ODISHA-758034 (India)		P. O. No. 3000144107/056-19.04.2022
Sample Description/Type	Stack Emission	Sampling done by	Mr. Rasel Khan
Sampling Location	Stack-III	Sample Quantity/Packing	Thimble: 1 X 1 No. SO <sub>2</sub> : 30 mL X 1No. PVC Bottle NO <sub>x</sub> : 30 mL X 1No. PVC Bottle
Sample Ref. No.:	ALPL/23092024/ MON-41-ST-1/2-1	Date of Sampling	19/09/2024
Sampling Procedure	ANtd/7.2/Mon-01	Date of Receipt of Sample	23/09/2024
Date of Start of Analysis	23/09/2024	Date of Completion of Analysis	24/09/2024

## TECHNICAL DATA

Stack Name	Furnace	
Ambient Temperature	23	°C
Ambient Relative Humidity	87	%
Stack height above ground level	10	Meter
Stack diameter	0.35	Meter
Type of Fuel	Coal	---
Flue gas temperature	116	°C
Flue gas velocity	7.83	m/s
Total gas quantity at STP	2712.11	m <sup>3</sup> /h
Total gas quantity at NTP	2036.65	Nm <sup>3</sup> /h

Sr. No.	Parameter	Unit	Results	Test Method
I	Discipline: Chemical	Group: Atmospheric Pollution	Material or Product tested : Stack Emission Monitoring	
1.	Carbon Monoxide	mg/Nm <sup>3</sup>	52	Gas analyser

NOTES: • Please see watermark "Original Test Report" to confirm the authenticity of this report. • Results shall be referred to tested sample(s) and applicable to tested parameters only. • Test report shall not be reproduced except in full without prior written approval of Anacon Labs. • Environmental condition - Satisfactory. • Statement of conformity issued on the basis of decision rule as per quality procedure (QP/7.8/05).

Verified by

*Snehal Raut*  
Snehal Raut  
Technical Manager

Authorized Signatory

*Chinmay Garway*  
Chinmay Garway  
Deputy Quality Manager

End of Report

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**Annexure - 5**

**Fugitive dust emission monitoring Report**



**Anacon Laboratories**

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Test Report

**Fugitive Emission Report-September-2024**

Test Report No.: ALPL/30092024/1-1		Date: 30/09/2024	
Name and Address of Industry:-	TATA STEEL LIMITED FAP JODA, Keonjhar, FAMD, ODISHA-758034 (India)	P. O. No.	
		3000144107/056-19.04.2022	
Sample Description/Type	Fugitive Emission	Sample Ref. No.:-	ALPL/23092024/ MON-41- FE-1 to 4
Sampled by:-	Anacon Representative Mr. Rasel Khan	Sample Inward Date:-	23/09/2024
Test Started On:-	23/09/2024	Test Completed On:-	24/09/2024
FE-1(Lat: 22.018018° Long: 85.428064°)	FE-2(Lat: 22.018139° Long: 85.427976°)	FE-3(Lat: 22.019838° Long: 85.427306°)	FE-4(Lat: 22.020758° Long: 85.426719°)
Sampling Procedure	ANtd/7.2/Mon-01		

Sl. No.	Location Name	Date of sampling	TSPM (µg/m³)
Method Reference			IS 5182 (Part 23)
FE-1	Raw Material Yard	18/09/2024	672
FE-2	Slag Crusher	18/09/2024	716
FE-3	Feed Hopper	19/09/2024	694
FE-4	ACS	19/09/2024	587
MoEF & CC Norms:			1200 µg/m³

NOTES: • Please see watermark "Original Test Report" to confirm the authenticity of this report. • Results shall be referred to tested sample(s) and applicable to tested parameters only. • Test report shall not be reproduced except in full without prior written approval of Anacon Labs.

**Remark:** - All Results are within Limit as per MoEF & CC Norms.

Verified by

Snehal Raut  
Technical Manager

Authorized Signatory

Pooja Khatke  
Technical Manager

----End of Report----



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Test Report

**Fugitive Emission Report-March-2024**

Report No.: AN/FE/TS-FAPJ/2024/1		Date: 30/03/2024	
Name and Address of Industry:-	TATA STEEL LIMITED FAP JODA, Keonjhar, FAMD, ODISHA-758034 (India)	P. O. No.	
		3000144107/056-19.04.2022	
Sample Description/Type	Fugitive Emission	Sample Ref. No.:-	ALPL/26032024/ Mon-1/37- FE-1 to 4
Sample Drawn By:-	Anacon Representative	Sample Inward Date:-	26/03/2024
Test Started On:-	26/03/2024	Test Completed On:-	27/03/2024
FE-1(Lat: 22.018018° Long: 85.428064°)	FE-2(Lat: 22.018139° Long: 85.427976°)	FE-3(Lat: 22.019838° Long: 85.427306°)	FE-4(Lat: 22.020758° Long: 85.426719°)
Sampling Procedure	ANtd/7.2/Mon-01		

Sl. No.	Location Name	Date of sampling	TSPM (µg/m³)
Method Reference			IS 5182 (Part 23)
FE-1	Raw Material Yard	18/03/2024	862
FE-2	Slag Crusher	18/03/2024	739
FE-3	Feed Hopper	21/03/2024	594
FE-4	ACS	21/03/2024	712
MoEF & CC Norms:			1200 µg/m³

NOTES: • Please see watermark "Original Test Report" to confirm the authenticity of this report. • Results shall be referred to tested sample(s) and applicable to tested parameters only. • Test report shall not be reproduced except in full without prior written approval of Anacon Labs.

**Remark:** - All Results are within Limit as per MoEF & CC Norms.

Verified by

Snehal Raut  
Deputy Technical Manager

Authorized Signatory

Mrs. S. D. Garway  
Quality Manager

----End of Report----



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## **Annexure-6**

### **Photographs of RCC roads and Fixed Sprinkling arrangements**



Mobile High Velocity Water Sprinkler cum Mist Canon



Dry Fogging System for Fugitive dust suppression



RCC roads and water sprinklers



Constructed RCC roads.



Fixed Water Sprinkling on Internal Roads

### Annexure-7



Fume extraction system with bag filter for Tap Hole Emission

## **Annexure-8**

### **RAINWATER HARVESTING**



## **Annexure- 9**

### **INSTALLATION OF 10 KLD SEWAGE TREATMENT PLANT (STP)**



Latitude: 22.020627  
Longitude: 85.429076  
Elevation: 480.57±4 m  
Accuracy: 87.6 m  
Time: 21-05-2024 12:39  
Note: ETP,Tata steel, Joda

### **EFFLUENT TREATMENT PLANT (ETP)- 720 KLD CAPACITY**

Six Monthly Compliance Report to the Terms of Conditions of Environmental Clearance granted in favor of Ferro Alloys Plant,  
Joda, M/s Tata Steel Limited for April'24 to September'2024

## TREATED EFFLUENT QUALITY REPORT

 **Visiontek Consultancy Services Pvt. Ltd.**  
(Committed For Better Environment)  
Certified for: ISO 9001:2015, ISO 14001:2015, ISO 45001:2018  
Accredited by: NABET-A Grade, MOEF & CC/CPCB & SPCB-A Grade

**Laboratory Services**  
Environment Lab  
Food Lab  
Material Lab  
Soil Lab  
Mineral Lab  
&  
Microbiology Lab

- Infrastructure Engineering
- Water Resource Management
- Environmental & Social Study
- Surface & Sub-Surface Investigation
- Quality Control & Project Management
- Renewable Energy
- Agricultural Development
- Information Technology
- Public Health Engineering
- Mine Planning & Design
- Mineral/Sub-Soil Exploration
- Waste Management Services

Report No: Envlab/23-24/TR-01844 Date:06.05.2024

### WASTE WATER QUALITY ANALYSIS REPORT FOR APRIL-2024

Name & Address of the Client : FAP, JODA (M/s TATA Steel Limited)  
Dist. Jajpur, Odisha

Sample Type : Waste Water

Sampling Location : WW1- ETP Inlet  
: WW2- ETP Outlet

Date of Sampling : 08.04.2024

Date of Analysis : 09.04.2024 to 16.04.2024

Sampling done by : VISIONTEK CONSULTANCY SERVICES PVT.LTD

Sl. No.	Parameters	Unit of Measurement	Method of Testing	Standard as per Schedule-VI of E.P. Act (Discharge to Inland Surface Water)	Results	
					WW-1	WW-2
1	pH at 25°C	-	APHA 4500-H <sup>+</sup> B	5.5-9.0	8.56	7.34
2	Colour	Hazen	APHA 2120 B	5	<15	<5
3	Odour	--	IS 3025, Part 5	Agreeable	Agreeable	Agreeable
4	Temperature	°C	IS:3025, Part 9	Shall not exceed 5°C above the receiving water	26.8	27.9
5	Suspended Solids	mg/l	APHA 2540 D	100	164	44.3
6	Total Residual Chlorine	mg/l	IS 3025, Part 26	1.0	0.94	0.89
7	Oil & Grease	mg/l	IS 3025 (Part 39)	10.0	4.25	<1
8	Biochemical Oxygen Demand as BOD at 27°C For 3 days	mg/l	IS 3025 (P-44)	30.0	27.9	3.2
9	Chemical Oxygen Demand as COD	mg/l	APHA 5220 B	250.0	82.4	8.5
10	Amm. Nitrogen (as N)	mg/l	APHA 4500-NH <sub>3</sub> F	50.0	5.51	0.74
11	Total Kjeldahl Nitrogen	mg/l	APHA 4500-N <sub>tot</sub> B	100.0	7.58	1.24
12	Free Ammonia	mg/l	Calculation	5.0	0.57	0.25
13	Nitrate as NO <sub>3</sub>	mg/l	APHA 4500-NO <sub>3</sub> -B	10.0	5.1	6.2
14	Diss. Phosphate (as P)	mg/l	APHA 4500-P D	5.0	0.83	<0.05
15	Fluoride	mg/l	APHA 4500 F	2.0	0.64	<0.1
16	Sulphide	mg/l	APHA 4500-S <sub>F</sub> -F	2.0	2.27	BDL
17	Phenolic Compound	mg/l	APHA 5530D	1.0	<0.05	<0.05
18	Cyanide (as CN)	mg/l	APHA SM 4500-CN C, E	0.2	<0.01	<0.01
19	Hexavalent Chromium as Cr <sup>++</sup>	mg/l	APHA SM 3500 Cr B	0.1	0.34	<0.01
20	Mercury (as Hg)	mg/l	APHA 3112 B	0.01	<0.004	<0.004
21	Arsenic	mg/l	APHA 3500 As B	0.2	<0.004	<0.004
22	Lead (as Pb)	mg/l	APHA 3111 B	0.1	<0.02	<0.02
23	Cadmium (as Cd)	mg/l	APHA 3111 B	2.0	<0.01	<0.01
24	Total Chromium (as Cr)	mg/l	APHA 3111 B	2.0	0.65	<0.05
25	Copper (as Cu)	mg/l	APHA 3111 B	3.0	<0.02	<0.02
26	Zinc (as Zn)	mg/l	APHA 3111 B	5.0	<0.03	<0.03
27	Selenium (as Se)	mg/l	APHA 3500 Se C	0.05	<0.001	<0.001
28	Nickel (as Ni)	mg/l	APHA 3111 B	3.0	<0.1	<0.1
29	Manganese (as Mn)	mg/l	APHA 3500 Mn B	2.0	<0.025	<0.025
30	Iron (as Fe)	mg/l	APHA 3111 B	3.0	0.69	0.35
31	Vanadium (as V)	mg/l	APHA 3500 V	0.2	<0.2	<0.2
32	Bio-assay Test	%	IS:6582, Part 2	90% survival of fish after 96 hours in 100% effluent	74%	65%
33	Particle Size of Suspended Solids	-	APHA : 2560D	Shall pass 850 micron IS Sieve	FAIL	PASS
34	Pesticide	mg/l	APHA 6630 B	--	Absent	Absent

BDL Value: 0.004 mg/l, Lead- 0.02 mg/l, Cr<sup>++</sup> 0.01 mg/l, Copper - 0.02 mg/l, Selenium- 0.001 mg/l, Manganese- 0.025 mg/l, Mercury- 0.004 mg/l, Cadmium - 0.01 mg/l, Arsenic- 0.004 mg/l, Boron - 0.1 mg/l, Cyanide- 0.01 mg/l, Phenolic Compound- 0.05 mg/l.



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- Waste Management Services

Report No: Envlab/23-24/TR-01845

Date: 06.05.2024

### WASTE WATER QUALITY ANALYSIS REPORT FOR APRIL-2024

Name & Address of the Client : FAP, JODA (M/s TATA Steel Limited),  
Dist. Jajpur, Odisha

Sample Type : Waste Water

Sampling Location : WW-3: STP Inlet  
: WW-4: STP Outlet

Date of Sampling : 08.04.2024

Date of Analysis : 09.04.2024 to 16.04.2024

Sampling done by : VISIONTEK CONSULTANCY SERVICES PVT.LTD

Sl. No.	Parameters	Unit of Measurement	Method of Testing	Standard	Results	
					WW-3	WW-4
1	pH at 25°C	-	APHA SM 4500-H <sup>+</sup> B	6.5-9.0	8.64	6.54
2	Suspended Solids	mg/l	APHA SM 2540 D	20	17.6	2.3
3	Oil & Grease	mg/l	IS 3025 (Part 39)	10	5.3	BDL
4	Biochemical Oxygen Demand as BOD at 27°C For 3 days	mg/l	IS 3025 (Part 44)	10	11.2	1.45
5	Chemical Oxygen Demand as COD	mg/l	APHA SM 5220 B	50	32.8	5.87
6	Hexavalent Chromium as Cr <sup>++</sup>	mg/l	APHA SM 3500 Cr B	0.1	2.76	<0.01
7	Total Chromium (as Cr)	mg/l	APHA 3111 B	2.0	0.74	<0.1
8	Fecal Coli form	MPN/100 ml	APHA 9221 B	MPN/100ml	184	<1.8



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Mineral Lab  
&  
Microbiology Lab

Report No: Envlab/24-25/TR-04203

Date: 04.06.2024

### WASTE WATER QUALITY ANALYSIS REPORT FOR MAY-2024

Name & Address of the Client : FAP, JODA (M/s TATA Steel Limited)  
Dist. Jajpur, Odisha

Sample Type : Waste Water

Sampling Location : WW1-ETP Inlet  
: WW2-ETP Outlet

Date of Sampling : 06.05.2024

Date of Analysis : 07.05.2024 to 13.05.2024

Sampling done by : VISIONTEK CONSULTANCY SERVICES PVT.LTD

Sl. No.	Parameters	Unit of Measurement	Method of Testing	Standard as per Schedule-VI of EP Act (Discharge to Inland Surface Water)	Results	
					WW-1	WW-2
1	pH at 25°C	-	APHA 4500-H <sup>+</sup> B	5.5-9.0	7.91	7.56
2	Colour	Hazen	APHA 2120 B	5	<15	<5
3	Odour	--	IS 3025, Part 5	Agreeable	Agreeable	Agreeable
4	Temperature	°C	IS:3025, Part 9	Shall not exceed 5°C above the receiving water	29.4	27.3
5	Suspended Solids	mg/l	APHA 2540 D	100	158	46.1
6	Total Residual Chlorine	mg/l	IS 3025, Part 26	1.0	1.2	0.81
7	Oil & Grease	mg/l	IS 3025 (Part 39)	10.0	3.38	<1
8	Biochemical Oxygen Demand as BOD at 27°C For 3 Days	mg/l	IS 3025 (P-44)	30.0	25.8	4.1
9	Chemical Oxygen Demand as COD	mg/l	APHA 5220 B	250.0	78.2	10.2
10	Amm. Nitrogen (as NH <sub>3</sub> )	mg/l	APHA 4500-NH <sub>3</sub> F	50.0	4.23	0.48
11	Total Kjeldahl Nitrogen	mg/l	APHA 4500-N <sub>tot</sub> B	100.0	6.47	1.12
12	Free Ammonia	mg/l	Calculation	5.0	0.61	0.22
13	Nitrate as NO <sub>3</sub>	mg/l	APHA 4500-NO <sub>3</sub> -B	10.0	6.1	4.9
14	Diss. Phosphate (as P)	mg/l	APHA 4500-P D	5.0	0.95	<0.05
15	Fluoride	mg/l	APHA 4500 F	2.0	0.72	<0.1
16	Sulphide	mg/l	APHA 4500-S <sub>2</sub> -F	2.0	3.4	BDL
17	Phenolic Compound	mg/l	APHA 5530D	1.0	<0.05	<0.05
18	Cyanide (as CN)	mg/l	APHA SM 4500-CN C, E	0.2	<0.01	<0.01
19	Hexavalent Chromium as Cr <sup>+6</sup>	mg/l	APHA SM 3500 Cr B	0.1	0.42	<0.01
20	Mercury (as Hg)	mg/l	APHA 3112 B	0.01	<0.004	<0.004
21	Arsenic	mg/l	APHA 3500 As B	0.2	<0.004	<0.004
22	Lead (as Pb)	mg/l	APHA 3111 B	0.1	<0.02	<0.02
23	Cadmium (as Cd)	mg/l	APHA 3111 B	2.0	<0.01	<0.01
24	Total Chromium (as Cr)	mg/l	APHA 3111 B	2.0	0.82	<0.05
25	Copper (as Cu)	mg/l	APHA 3111 B	3.0	<0.02	<0.02
26	Zinc (as Zn)	mg/l	APHA 3111 B	5.0	<0.03	<0.03
27	Selenium (as Se)	mg/l	APHA 3500 Se C	0.05	<0.001	<0.001
28	Nickel (as Ni)	mg/l	APHA 3111 B	3.0	<0.1	<0.1
29	Manganese (as Mn)	mg/l	APHA 3500 Mn B	2.0	<0.025	<0.025
30	Iron (as Fe)	mg/l	APHA 3111 B	3.0	1.2	0.12
31	Vanadium (as V)	mg/l	APHA 3500 V	0.2	<0.2	<0.2
32	Bio-assay Test	%	IS:6582, Part 2	90% survival of fish after 96 hours in 100% effluent	88%	99%
33	Particle Size of Suspended Solids	-	APHA : 2560D	Shall pass 850 micron IS Sieve	FAIL	PASS
34	Pesticide	mg/l	APHA 6630 B	--	Absent	Absent

BDL Values: Arsenic- 0.004 mg/l, Lead- 0.02 mg/l, Cr<sup>+6</sup>- 0.01 mg/l, Copper- 0.02 mg/l, Selenium- 0.001 mg/l, Manganese- 0.025 mg/l, Mercury- 0.004 mg/l, Cadmium- 0.01 mg/l, Ammonia- 5.0 mg/l, BOD- 30 mg/l, Cyanide- 0.01 mg/l, Phenolic Compound- 0.05 mg/l.

Reviewed By:

Approved By:

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Mineral Lab  
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Report No: Envlab/24-25/TR-04204

Date: 04.06.2024

### WASTE WATER QUALITY ANALYSIS REPORT FOR MAY-2024

Name & Address of the Client : FAP, JODA ( M/s TATA Steel Limited),  
Dist. Jajpur, Odisha

Sample Type : Waste Water

Sampling Location : WW-3: STP Inlet  
: WW-4: STP Outlet

Date of Sampling : 06.05.2024

Date of Analysis : 07.05.2024 to 11.05.2024

Sampling done by : VISIONTEK CONSULTANCY SERVICES PVT.LTD

Sl. No.	Parameters	Unit of Measurement	Method of Testing	Standard	Results	
					WW-3	WW-4
1	pH at 25°C	-	APHA SM 4500-H <sup>+</sup> B	6.5-9.0	8.78	7.22
2	Suspended Solids	mg/l	APHA SM 2540 D	20	18.2	1.3
3	Oil & Grease	mg/l	IS 3025 (Part 39)	10	4.6	BDL
4	Biochemical Oxygen Demand as BOD at 27°C For 3 days	mg/l	IS 3025 (Part 44)	10	9.8	2.15
5	Chemical Oxygen Demand as COD	mg/l	APHA SM 5220 B	50	30.2	5.41
6	Hexavalent Chromium as Cr <sup>+6</sup>	mg/l	APHA SM 3500 Cr B	0.1	2.41	<0.01
7	Total Chromium (as Cr)	mg/l	APHA 3111 B	2.0	0.68	<0.1
8	Fecal Coli form	MPN/100 ml	APHA 9221 B	MPN/100ml	171	<1.1

Reviewed By:

Approved By:

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Material Lab  
Soil Lab  
Mineral Lab  
&  
Microbiology Lab

Report No: Envlab/24-25/TR-05538

Date: 06.07.2024

**WASTE WATER QUALITY ANALYSIS REPORT FOR JUNE 2024**

Name & Address of the Client : FAP, JODA (M/s TATA Steel Limited)  
Dist. Jajpur, Odisha

Sample Type : Waste Water

Sampling Location : WW1-ETP Inlet  
: WW2-ETP Outlet

Date of Sampling : 05.06.2024

Date of Analysis : 06.06.2024 to 11.06.2024

Sampling done by : VISIONTEK CONSULTANCY SERVICES PVT.LTD

Sl. No.	Parameters	Unit of Measurement	Method of Testing	Standard as per Schedule-VI of EP Act (Discharge to Inland Surface Water)	Results	
					WW-1	WW-2
1	pH at 25°C		APHA 4500-H <sup>+</sup> B	5.5-9.0	7.41	7.12
2	Colour	Hazen	APHA 2120 B	5	<15	<5
3	Odour		IS 3025, Part 5	Agreeable	Agreeable	Agreeable
4	Temperature	°C	IS:3025, Part 9	Shall not exceed 5°C above the receiving water	28.6	26.1
5	Suspended Solids	mg/l	APHA 2540 D	100	141	48.3
6	Total Residual Chlorine	mg/l	IS 3025, Part 26	1.0	1.54	0.67
7	Oil & Grease	mg/l	IS 3025 (Part 39)	10.0	3.87	<1
8	Biochemical Oxygen Demand as BOD at 27°C For 3 Days	mg/l	IS 3025 (P-44)	30.0	27.1	3.58
9	Chemical Oxygen Demand as COD	mg/l	APHA 5220 B	250.0	82.6	11.6
10	Amm. Nitrogen (as N)	mg/l	APHA 4500-NH <sub>3</sub> F	50.0	5.25	0.79
11	Total Kjeldahl Nitrogen	mg/l	APHA 4500-N <sub>total</sub> B	100.0	7.46	1.45
12	Free Ammonia	mg/l	Calculation	5.0	1.8	0.30
13	Nitrate as NO <sub>3</sub>	mg/l	APHA 4500-NO <sub>3</sub> -B	10.0	4.59	3.21
14	Dis. Phosphate (as P)	mg/l	APHA 4500-P D	5.0	0.78	<0.05
15	Fluoride	mg/l	APHA 4500 F	2.0	0.85	<0.1
16	Sulphide	mg/l	APHA 4500-S <sub>2</sub> -F	2.0	2.63	BDL
17	Phenolic Compound	mg/l	APHA 5530D	1.0	<0.05	<0.05
18	Cyanide (as CN)	mg/l	APHA SM 4500-CN C, E	0.2	<0.01	<0.01
19	Hexavalent Chromium as Cr <sup>+6</sup>	mg/l	APHA SM 3500 Cr B	0.1	0.58	<0.01
20	Mercury (as Hg)	mg/l	APHA 3112 B	0.01	<0.004	<0.004
21	Arsenic	mg/l	APHA 3500 As B	0.2	<0.004	<0.004
22	Lead (as Pb)	mg/l	APHA 3111 B	0.1	<0.02	<0.02
23	Cadmium (as Cd)	mg/l	APHA 3111 B	2.0	<0.01	<0.01
24	Total Chromium (as Cr)	mg/l	APHA 3111 B	2.0	0.62	<0.05
25	Copper (as Cu)	mg/l	APHA 3111 B	3.0	<0.02	<0.02
26	Zinc (as Zn)	mg/l	APHA 3111 B	5.0	<0.03	<0.03
27	Selenium (as Se)	mg/l	APHA 3500 Se C	0.05	<0.001	<0.001
28	Nickel (as Ni)	mg/l	APHA 3111 B	3.0	<0.1	<0.1
29	Manganese (as Mn)	mg/l	APHA 3500 Mn B	2.0	<0.025	<0.025
30	Iron (as Fe)	mg/l	APHA 3111 B	3.0	1.4	0.36
31	Vanadium (as V)	mg/l	APHA 3500 V	0.2	<0.2	<0.2
32	Bio-assay Test	%	IS:6582, Part 2	90% survival of fish after 96 hours in 100% effluent	90%	99%
33	Particle Size of Suspended Solids		APHA : 2560D	Shall pass 850 micron IS Sieve	FAIL	PASS
34	Pesticide	mg/l	APHA 6630 B		Absent	Absent

BDL Values: Arsenic<0.004 mg/l, Lead<0.02 mg/l, Cr<sup>+6</sup><0.01 mg/l, Selenium<0.001 mg/l, Manganese<0.025 mg/l, Mercury<0.004 mg/l, Cadmium <0.01 mg/l, Aluminium <0.1 mg/l, Boreon <0.1 mg/l, Cyanide<0.01 mg/l, Phenolic Compound<0.05 mg/l.

Reviewed By:

Approved By:

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Report No: Envlab/24-25/TR-05539

Date: 06.07.2024

**WASTE WATER QUALITY ANALYSIS REPORT FOR JUNE 2024**

Name & Address of the Client : FAP, JODA (M/s TATA Steel Limited),  
Dist. Jajpur, Odisha

Sample Type : Waste Water

Sampling Location : WW-3: STP Inlet  
: WW-4: STP Outlet

Date of Sampling : 05.06.2024

Date of Analysis : 06.06.2024 to 11.06.2024

Sampling done by : VISIONTEK CONSULTANCY SERVICES PVT.LTD

Sl. No.	Parameters	Unit of Measurement	Method of Testing	Standard	Results	
					WW-3	WW-4
1	pH at 25°C	-	APHA SM 4500-H <sup>+</sup> B	6.5-9.0	8.49	7.41
2	Suspended Solids	mg/l	APHA SM 2540 D	20	19.6	1.42
3	Oil & Grease	mg/l	IS 3025 (Part 39)	10	3.7	BDL
4	Biochemical Oxygen Demand as BOD at 27°C For 3 days	mg/l	IS 3025 (Part 44)	10	7.4	2.47
5	Chemical Oxygen Demand as COD	mg/l	APHA SM 5220 B	50	24.1	6.38
6	Hexavalent Chromium as Cr <sup>+6</sup>	mg/l	APHA SM 3500 Cr B	0.1	1.46	<0.01
7	Total Chromium (as Cr)	mg/l	APHA 3111 B	2.0	0.73	<0.1
8	Fecal Coli form	MPN/100 ml	APHA 9221 B	MPN/100ml	154	<1.1



Reviewed By:



Approved By:

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Material Lab  
Soil Lab  
Mineral Lab  
&  
Microbiology Lab

Report No: Envlab/24-25/TR-07772

Date:30.07.2024

**WASTE WATER QUALITY ANALYSIS REPORT FOR JULY 2024**

Name & Address of the Client : FAP, JODA (M/s TATA Steel Limited)

Dist. Jajpur, Odisha

Sample Type : Waste Water

Sampling Location : WW1- ETP Inlet

: WW2- ETP Outlet

Date of Sampling : 03.07.2024

Date of Analysis : 04.07.2024 to 08.07.2024

Sampling done by : VISIONTEK CONSULTANCY SERVICES PVT.LTD

Sl. No.	Parameters	Unit of Measurement	Method of Testing	Standard as per Schedule-VI of E.P. Act (Discharge to Inland Surface Water)	Results	
					WW-1	WW-2
1	pH at 25°C	-	APIA 4500-H <sup>+</sup> B	5.5-9.0	7.91	7.12
2	Colour	-	APIA 2120 B	5	<15	<5
3	Odour	-	IS 3025, Part 5	Agreeable	Agreeable	Agreeable
4	Temperature	°C	IS 3025, Part 9	Shall not exceed 5°C above the receiving water	25.2	26.3
5	Suspended Solids	mg/l	APIA 2540 D	100	152	46.2
6	Total Residual Chlorine	mg/l	IS 3025, Part 26	1.0	1.64	0.55
7	Oil & Grease	mg/l	IS 3025 (Part 39)	10.0	3.74	<1
8	Biochemical Oxygen Demand as BOD at 27°C For 3 days	mg/l	IS 3025 (P-44)	30.0	26.4	4.12
9	Chemical Oxygen Demand as COD	mg/l	APIA 5220 B	250.0	78.5	13.5
10	Amm. Nitrogen (as N)	mg/l	APIA 4500-NH <sub>4</sub> F	50.0	5.47	0.72
11	Total Kjeldahl Nitrogen	mg/l	APIA 4500-N <sub>tot</sub> B	100.0	8.12	1.23
12	Free Ammonia	mg/l	Calculation	5.0	2.13	2.97
13	Nitrate as NO <sub>3</sub>	mg/l	APIA 4500-NO <sub>3</sub> -B	10.0	5.32	2.36
14	Dis. Phosphate (as P)	mg/l	APIA 4500-P D	5.0	0.81	<0.05
15	Fluoride	mg/l	APIA 4500 F	2.0	0.74	<0.1
16	Sulphide	mg/l	APIA 4500-S <sub>2</sub> F	2.0	2.15	BDL
17	Phenolic Compound	mg/l	APIA 5530D	1.0	<0.05	<0.05
18	Cyanide (as CN <sup>-</sup> )	mg/l	APIA SM 4500-CN C, E	0.2	<0.01	<0.01
19	Hexavalent Chromium as Cr <sup>+6</sup>	mg/l	APIA SM 3500 Cr B	0.1	0.61	<0.01
20	Mercury (as Hg)	mg/l	APIA 3112 B	0.01	<0.004	<0.004
21	Arsenic	mg/l	APIA 3500 As B	0.2	<0.004	<0.004
22	Lead (as Pb)	mg/l	APIA 3111 B	0.1	<0.02	<0.02
23	Cadmium (as Cd)	mg/l	APIA 3111 B	2.0	<0.01	<0.01
24	Total Chromium (as Cr)	mg/l	APIA 3111 B	2.0	0.54	<0.05
25	Copper (as Cu)	mg/l	APIA 3111 B	3.0	<0.02	<0.02
26	Zinc (as Zn)	mg/l	APIA 3111 B	5.0	<0.03	<0.03
27	Selenium (as Se)	mg/l	APIA 3500 Se C	0.05	<0.001	<0.001
28	Nickel (as Ni)	mg/l	APIA 3111 B	3.0	3.1	<0.1
29	Manganese (as Mn)	mg/l	APIA 3500 Mn B	2.0	<0.025	<0.025
30	Iron (as Fe)	mg/l	APIA 3111 B	3.0	1.1	0.21
31	Vanadium (as V)	mg/l	APIA 3500 V	0.2	<0.2	<0.2
32	Bio-assay Test	%	IS:6582, Part 2	90% survival of fish after 96 hours in 100% effluent	96%	99%
33	Particle Size of Suspended Solids	-	APIA : 2560D	Shall pass 850 micron IS Sieve	FAIL	PASS
34	Pesticide	mg/l	APIA 6630 B		Absent	Absent

BDL Values: Arsenic- 0.004 mg/l, Lead- 0.02 mg/l, Cr<sup>6+</sup> 0.01 mg/l, Copper- 0.02 mg/l, Selenium- 0.001 mg/l, Manganese- 0.025 mg/l, Mercury- 0.004 mg/l, Cadmium 0.01 mg/l, Aluminium 0.1 mg/l, Barium 0.1 mg/l, Cyanide- 0.01 mg/l, Phenolic Compound 0.05 mg/l.

Reviewed By:

Approved By:

Plot No.- M-22 & 23, Chandaka Industrial Estate, Patia, Bhubaneswar, Khurda, Odisha-751024, India Tel.: 0674-3511721  
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• Mineral/Sub-Soil Exploration  
• Waste Management Services

Laboratory Services  
Environment Lab  
Food Lab  
Material Lab  
Soil Lab  
Mineral Lab  
&  
Microbiology Lab

Report No: Envlab/24-25/TR-07773

Date:30.07.2024

**WASTE WATER QUALITY ANALYSIS REPORT FOR JULY 2024**

Name & Address of the Client : FAP, JODA (M/s TATA Steel Limited),

Dist. Jajpur, Odisha

Sample Type : Waste Water

Sampling Location : WW-3: STP Inlet

: WW-4: STP Outlet

Date of Sampling : 03.07.2024

Date of Analysis : 04.07.2024 to 08.07.2024

Sampling done by : VISIONTEK CONSULTANCY SERVICES PVT.LTD

Sl. No.	Parameters	Unit of Measurement	Method of Testing	Standard	Results	
					WW-3	WW-4
1	pH at 25°C	-	APIA SM 4500-H <sup>+</sup> B	6.5-9.0	8.56	7.12
2	Suspended Solids	mg/l	APIA SM 2540 D	20	22.4	1.11
3	Oil & Grease	mg/l	IS 3025 (Part 39)	10	4.5	BDL
4	Biochemical Oxygen Demand as BOD at 27°C For 3 days	mg/l	IS 3025 (Part 44)	10	6.54	2.36
5	Chemical Oxygen Demand as COD	mg/l	APIA SM 5220 B	50	20.3	8.13
6	Hexavalent Chromium as Cr <sup>+6</sup>	mg/l	APIA SM 3500 Cr B	0.1	1.64	<0.01
7	Total Chromium (as Cr)	mg/l	APIA 3111 B	2.0	0.81	<0.1
8	Fecal Coliform	MPN/100 ml	APIA 9221 B	MPN/100ml	151	<1.1

Reviewed By:

Approved By:

Plot No.- M-22 & 23, Chandaka Industrial Estate, Patia, Bhubaneswar, Khurda, Odisha-751024, India Tel.: 0674-3511721  
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# Six Monthly Compliance Report to the Terms of Conditions of Environmental Clearance granted in favor of Ferro Alloys Plant, Joda, M/s Tata Steel Limited for April'24 to September'2024



## Visiontek Consultancy Services Pvt. Ltd.

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- Mine Planning & Design
- Mineral/Sub-Soil Exploration
- Waste Management Services



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- Renewable Energy
- Agricultural Development
- Information Technology
- Public Health Engineering
- Mine Planning & Design
- Mineral/Sub-Soil Exploration
- Waste Management Services



Report No: Envlab/24-25/TR-02967

Date: 04.09.2024

### WASTE WATER QUALITY ANALYSIS REPORT FOR AUG 2024

Name & Address of the Client : FAP, JODA (M/s TATA Steel Limited)  
Dist. Jajpur, Odisha

Sample Type : Waste Water

Sampling Location : WW1- ETP Inlet  
: WW2- ETP Outlet

Date of Sampling : 07.08.2024

Date of Analysis : 08.08.2024 to 10.08.2024

Sampling done by : VISIONTEK CONSULTANCY SERVICES PVT.LTD

Sl. No.	Parameters	Unit of Measurement	Method of Testing	Standard as per Schedule-VI of EP Act (Discharge to Inland Surface Water)	Results	
					WW-1	WW-2
1	pH at 25°C	-	APHA 4500-H B	5.5-9.0	7.45	7.22
2	Colour	Hazen	APHA 1120 B	5	<15	<5
3	Odour	-	IS 3025, Part 5	Agreeable	Agreeable	Agreeable
4	Temperature	°C	IS 3025, Part 9	Shall not exceed 5°C above the receiving water	26.2	27.1
5	Suspended Solids	mg/l	APHA 2540 D	100	148	51.1
6	Total Residual Chlorine	mg/l	IS 3025, Part 35	1.0	1.23	0.68
7	Oil & Grease	mg/l	IS 3025 (Part 39)	10.0	4.21	<1
8	Biochemical Oxygen Demand at 27°C For 3 days	mg/l	IS 3025 (P-44)	30.0	24.3	4.51
9	Chemical Oxygen Demand as COD	mg/l	APHA 5120 B	250.0	74.1	15.3
10	Amm. Nitrogen (as N)	mg/l	APHA 4500-NH <sub>4</sub> F	50.0	4.38	0.83
11	Total Kjeldahl Nitrogen	mg/l	APHA 4500-N <sub>T</sub> B	100.0	7.45	1.78
12	Free Ammonia	mg/l	Calculation	5.0	3.78	2.23
13	Nitrate as NO <sub>3</sub>	mg/l	APHA 4500-NO <sub>3</sub> B	10.0	0.21	2.41
14	Dis. Phosphate (as P)	mg/l	APHA 4500-P D	5.0	0.75	<0.05
15	Fluoride	mg/l	APHA 4500 F	2.0	0.81	<0.1
16	Sulphide	mg/l	APHA 4500-S <sub>2</sub> F	2.0	3.44	BDL
17	Phenolic Compound	mg/l	APHA 5530 D	1.0	<0.05	<0.05
18	Cyanide (as CN)	mg/l	APHA SM 4500-CN C, E	0.2	<0.01	<0.01
19	Hexavalent Chromium as Cr <sup>++</sup>	mg/l	APHA SM 3500 Cr B	0.1	0.67	<0.01
20	Mercury (as Hg)	mg/l	APHA 3112 B	0.01	<0.004	<0.004
21	Arsenic	mg/l	APHA 3500 As B	0.2	<0.004	<0.004
22	Lead (as Pb)	mg/l	APHA 3111 B	0.1	<0.02	<0.02
23	Cadmium (as Cd)	mg/l	APHA 3111 B	2.0	<0.01	<0.01
24	Total Chromium (as Cr)	mg/l	APHA 3111 B	2.0	0.59	<0.05
25	Copper (as Cu)	mg/l	APHA 3111 B	3.0	<0.02	<0.02
26	Zinc (as Zn)	mg/l	APHA 3111 B	5.0	<0.03	<0.03
27	Selenium (as Se)	mg/l	APHA 3500 Se C	0.05	<0.001	<0.001
28	Nickel (as Ni)	mg/l	APHA 3111 B	3.0	<0.1	<0.1
29	Manganese (as Mn)	mg/l	APHA 3500 Mn B	2.0	<0.025	<0.025
30	Iron (as Fe)	mg/l	APHA 3111 B	3.0	1.56	0.34
31	Vanadium (as V)	mg/l	APHA 3500 V	0.2	<0.2	<0.2
32	Bio-assay Test	%	IS:6582, Part 2	90% survival of fish after 96 hours in 100% effluent	96%	99%
33	Particle Size of Suspended Solids	-	APHA : 2600D	Shall pass 850 micron IS Sieve	FAIL	PASS
34	Pesticide	mg/l	APHA 6630 B	-	Absent	Absent

BDL Values: Arsenic<0.04 mg/l, Lead<0.02 mg/l, Cr<0.01 mg/l, Copper<0.02 mg/l, Selenium<0.001 mg/l, Manganese<0.025 mg/l, Mercury<0.004 mg/l, Cadmium<0.01 mg/l, Aluminium<0.1 mg/l, Boron<0.1 mg/l, Cyanide<0.01 mg/l, Phenolic Compound<0.05 mg/l.

Reviewed By:



Approved By:



Report No: Envlab/24-25/TR-02968

Date: 04.09.2024

### WASTE WATER QUALITY ANALYSIS REPORT FOR AUG 2024

Name & Address of the Client : FAP, JODA (M/s TATA Steel Limited),  
Dist. Jajpur, Odisha

Sample Type : Waste Water

Sampling Location : WW-3: STP Inlet  
: WW-4: STP Outlet

Date of Sampling : 07.08.2024

Date of Analysis : 08.08.2024 to 10.08.2024

Sampling done by : VISIONTEK CONSULTANCY SERVICES PVT.LTD

Sl. No.	Parameters	Unit of Measurement	Method of Testing	Standard	Results	
					WW-3	WW-4
1	pH at 25°C	-	APHA SM 4500-H+ B	6.5-9.0	8.43	7.31
2	Suspended Solids	mg/l	APHA SM 2540 D	20	23.4	1.45
3	Oil & Grease	mg/l	IS 3025 (Part 39)	10	3.89	BDL
4	Biochemical Oxygen Demand as BOD at 27°C For 3 days	mg/l	IS 3025 (Part 44)	10	5.89	2.46
5	Chemical Oxygen Demand as COD	mg/l	APHA SM 5120 B	50	18.45	8.52
6	Hexavalent Chromium as Cr <sup>++</sup>	mg/l	APHA SM 3500 Cr B	0.1	1.52	<0.01
7	Total Chromium (as Cr)	mg/l	APHA 3111 B	2.0	2.67	<0.1
8	Fecal Coli form	MPN/100 ml	APHA 9221 B	MPN/100ml	148	<1.1



Reviewed By:



Approved By:

Plot No.- M-22 & 23, Chandaka Industrial Estate, Patia, Bhubaneswar, Khurda, Odisha-751024, India Tel: 0674-3511721  
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# Six Monthly Compliance Report to the Terms of Conditions of Environmental Clearance granted in favor of Ferro Alloys Plant, Joda, M/s Tata Steel Limited for April'24 to September'2024



## Visiontek Consultancy Services Pvt. Ltd.

(Committed For Better Environment)

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- Waste Management Services

Laboratory Services

Environment Lab

Food Lab

Material Lab

Soil Lab

Mineral Lab

Microbiology Lab



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- Mineral/Sub-Soil Exploration
- Waste Management Services

Laboratory Services

Environment Lab

Food Lab

Material Lab

Soil Lab

Mineral Lab

Microbiology Lab

Report No: Envlab/24-25/TR-10407

Date:05.10.2024

### WASTE WATER QUALITY ANALYSIS REPORT FOR SEP 2024

Name & Address of the Client : FAP, JODA (M/s TATA Steel Limited)  
Dist. Jajpur, Odisha

Sample Type : Waste Water

Sampling Location : WW1- ETP Inlet  
: WW2- ETP Outlet

Date of Sampling : 09.09.2024

Date of Analysis : 10.09.2024 to 14.09.2024

Sampling done by : VISIONTEK CONSULTANCY SERVICES PVT.LTD

Sl. No.	Parameters	Unit of Measurement	Method of Testing	Standard as per Schedule-VI of EP Act (Discharge to Inland Surface Water)	Results	
					WW-1	WW-2
1	pH at 25°C	-	APHA 4500-H <sup>+</sup> B	6.5-9.0	7.61	7.53
2	Colour	Hazen	APHA 2120 B	5	<5	<5
3	Odour	-	IS 3025, Part 5	Agreeable	Agreeable	Agreeable
4	Temperature	°C	IS 3025, Part 9	Shall not exceed 5°C above the receiving water	24.8	25.4
5	Suspended Solids	mg/l	APHA 2540 D	100	154	46.3
6	Total Residual Chlorine	mg/l	IS 3025, Part 16	1.0	1.44	0.82
7	Oil & Grease	mg/l	IS 3025 (Part 39)	10.0	3.56	<1
8	Biochemical Oxygen Demand as BOD at 20°C For 3 Days	mg/l	IS 3025 (P-44)	30.0	23.4	5.12
9	Chemical Oxygen Demand as COD	mg/l	APHA 5220 B	250.0	71.4	16.7
10	Ammon. Nitrogen (as N)	mg/l	APHA 4500-NH <sub>4</sub> F	50.0	5.36	0.74
11	Total Kjeldahl Nitrogen	mg/l	APHA 4500-N <sub>total</sub> B	100.0	6.58	1.68
12	Free Ammonia	mg/l	Calculation	5.0	4.16	2.36
13	Nitrate as NO <sub>3</sub>	mg/l	APHA 4500-NO <sub>3</sub> B	10.0	5.27	1.54
14	Dis. Phosphate (as P)	mg/l	APHA 4500-P D	5.0	0.81	<0.05
15	Fluoride	mg/l	APHA 4500 F	2.0	0.65	<0.1
16	Sulphide	mg/l	APHA 4500-S <sub>2</sub> F	2.0	2.24	BDL
17	Phenolic Compound	mg/l	APHA 5530D	1.0	<0.05	<0.05
18	Cyanide (as CN)	mg/l	APHA SM 4500-CN C, E	0.2	<0.01	<0.01
19	Hexavalent Chromium as Cr <sup>++</sup>	mg/l	APHA SM 3500 Cr B	0.1	0.61	<0.01
20	Mercury (as Hg)	mg/l	APHA 3112 B	0.01	<0.004	<0.004
21	Arsenic	mg/l	APHA 3500 As B	0.2	<0.004	<0.004
22	Lead (as Pb)	mg/l	APHA 3111 B	0.1	<0.02	<0.02
23	Cadmium (as Cd)	mg/l	APHA 3111 B	2.0	<0.01	<0.01
24	Total Chromium (as Cr)	mg/l	APHA 3111 B	2.0	0.66	<0.05
25	Copper (as Cu)	mg/l	APHA 3111 B	3.0	<0.02	<0.02
26	Zinc (as Zn)	mg/l	APHA 3111 B	5.0	<0.03	<0.03
27	Selenium (as Se)	mg/l	APHA 3500 Se C	0.05	<0.001	<0.001
28	Nickel (as Ni)	mg/l	APHA 3111 B	3.0	<0.1	<0.1
29	Manganese (as Mn)	mg/l	APHA 3500 Mn B	2.0	<0.025	<0.025
30	Iron (as Fe)	mg/l	APHA 3111 B	3.0	1.47	0.26
31	Vanadium (as V)	mg/l	APHA 3500 V	0.2	<0.2	<0.2
32	Bio-assay Test	%	IS:4682, Part 2	90% survival of fish after 96 hours in 100% effluent	96%	99%
33	Particle Size of Suspended Solids	-	APHA : 2560D	Shall pass 850 micron IS Sieve	FAIL	PASS
34	Pesticide	mg/l	APHA 6630 B	-	Absent	Absent

BDL Values: Arsenic<0.004 mg/l, Lead<0.02 mg/l, Cr<sup>++</sup><0.01mg/l, Copper<0.02 mg/l, Selenium<0.001 mg/l, Manganese<0.025 mg/l, Mercury<0.004 mg/l, Cadmium <0.01 mg/l, Aluminium <0.1 mg/l, Barium <0.1 mg/l, Cyanide<0.01 mg/l, Phenolic Compound<0.05 mg/l

Reviewed By:

Approved By:

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Report No: Envlab/24-25/TR-10408

Date:05.10.2024

### WASTE WATER QUALITY ANALYSIS REPORT FOR SEP 2024

Name & Address of the Client : FAP, JODA (M/s TATA Steel Limited),  
Dist. Jajpur, Odisha

Sample Type : Waste Water

Sampling Location : WW-3: STP Inlet  
: WW-4: STP Outlet

Date of Sampling : 09.09.2024

Date of Analysis : 10.09.2024 to 14.09.2024

Sampling done by : VISIONTEK CONSULTANCY SERVICES PVT.LTD

Sl. No.	Parameters	Unit of Measurement	Method of Testing	Standard	Results	
					WW-3	WW-4
1	pH at 25°C	-	APHA SM 4500-H <sup>+</sup> B	6.5-9.0	9.46	7.25
2	Suspended Solids	mg/l	APHA SM 2540 D	20	27.5	1.26
3	Oil & Grease	mg/l	IS 3025 (Part 39)	10	4.51	BDL
4	Biochemical Oxygen Demand as BOD at 20°C For 3 days	mg/l	IS 3025 (Part 44)	10	4.56	2.32
5	Chemical Oxygen Demand as COD	mg/l	APHA SM 5220 B	50	14.5	7.25
6	Hexavalent Chromium as Cr <sup>++</sup>	mg/l	APHA SM 3500 Cr B	0.1	1.49	<0.01
7	Total Chromium (as Cr)	mg/l	APHA 3111 B	2.0	3.22	<0.1
8	Fecal Coli form	MPN/100 ml	APHA 9221 B	MPN/100ml	147	<11

Reviewed By:

Approved By:

Plot No.- M-22 & 23, Chandaka Industrial Estate, Patia, Bhubaneswar, Khurda, Odisha-751024, India Tel.: 0674-3511721  
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Six Monthly Compliance Report to the Terms of Conditions of Environmental Clearance granted in favor of Ferro Alloys Plant, Joda, M/s Tata Steel Limited for April'24 to September'2024

**Annexure - 10**  
**(Water Sample Collections from Different Location)**



**Sample Water Analysis Reports**



**Anacon Laboratories**

**Anacon Laboratories Pvt. Ltd. Nagpur Lab**  
QFP-34, 35, Food Park, Five Star Industrial Estate,  
MDC Butibori, Nagpur, Maharashtra, India - 441 122  
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🌐 https://www.anaconlaboratories.com

**Test Report**

Test Report No. : ALPL/30042024/1-8		dated 30/04/2024		Page 1 of 1	
Issued To : TATA STEEL LIMITED FAP JODA, Keonjhar, FAMD, ODISHA-758034 (India)		Sample Inward No. ALPL/26042024/ENV-90-GW-2 Inward Date 26/04/2024 Reference W.O.- 3000144107/056-19.04.2022		Analysis Start 26/04/2024 Analysis End 30/04/2024 Report Issue Date 30/04/2024 Sample Category Water	
Sample Name Ground Water		Sample Source Borewell		Sample Particulars GW-2 Ground Water	
Sample Collected By Anacon Representative		Sampling Date 23/04/2024		Quantity Received 2 lit	
		Sampling Time 12.20 pm		Sampling Location In Plant	
Tests Required : Iron, Total Chromium, Copper, Selenium, Arsenic, Cadmium, Mercury, Lead, Zinc, Manganese.					

TEST RESULTS					
S.N.	Test Parameter	Measurement Unit	Test Method	Requirement as per IS 10500 : 2012 (Drinking Water Specifications) Including Amendment No. 4	
				Acceptable Limit	Permissible Limit #
I	Chemical Testing 1. Residues In Water				
1	Iron (as Fe)	mg/l	IS 3025 (Part 2) : 2019	1.0	No relaxation
2	Total Chromium (as Cr)	mg/l	IS 3025 (Part 2) : 2019	0.05	BDL (DL - 0.02)
3	Copper (as Cu)	mg/l	IS 3025 (Part 2) : 2019	0.05	BDL (DL - 0.02)
4	Selenium (as Se)	mg/l	IS 3025 (Part 56) : 2003	0.01	No relaxation
5	Arsenic (as As)	mg/l	IS 3025 (Part 37) : 2022	0.01	No relaxation
6	Cadmium (as Cd)	mg/l	IS 3025 (Part 2) : 2019	0.003	BDL (DL - 0.002)
7	Mercury (as Hg)	mg/l	IS 3025 (Part 48) : 1994	0.001	No relaxation
8	Lead (as Pb)	mg/l	IS 3025 (Part 2) : 2019	0.01	BDL (DL - 0.01)
9	Zinc (as Zn)	mg/l	IS 3025 (Part 2) : 2019	5	BDL (DL - 0.02)
10	Manganese (as Mn)	mg/l	IS 3025 (Part 2) : 2019	0.1	BDL (DL - 0.02)

**NOTES:** • Please see watermark "Original Test Report" to confirm the authenticity of this report. • Results shall be referred to tested sample(s) and applicable to tested parameters only. • Test report shall not be reproduced except in full without prior written approval of Anacon Labs. • Liability of Anacon Labs is limited to invoiced amount only. • Non-perishable and perishable sample(s) shall be disposed off after 30 days and 15 days respectively from the date of issue of Test Report, unless specified otherwise. • "mg/l" is equivalent to "ppm". • MPN indicates most probable number. • BDL indicates Below detection limit. • DL indicates detection limit of instrument/method and shall be considered as "absent".

**REMARKS :** As requested by the client, sample was tested for above parameters only. The submitted sample complies with requirement as per IS: 10500:2012, for tests conducted only.

Verified By  
*Nidhi Dubey*  
Nidhi Dubey  
Deputy Technical Manager

Authorized Signatory  
*Dr. (Mrs.) S.D. Garway*  
Dr. (Mrs.) S.D. Garway  
Quality Manager

—End of Report—



**Anacon Laboratories**

**Anacon Laboratories Pvt. Ltd. Nagpur Lab**  
QFP-34, 35, Food Park, Five Star Industrial Estate,  
MDC Butibori, Nagpur, Maharashtra, India - 441 122  
☎ + 91 8045685558 ✉ Email : info@anacon.in  
🌐 https://www.anaconlaboratories.com

**Test Report**

Test Report No. : ALPL/30042024/1-9		dated 30/04/2024		Page 1 of 1	
Issued To : TATA STEEL LIMITED		Sample Inward No. : ALPL/26042024/ENV-90-SW-1 & 2		Analysis Start : 26/04/2024	
FAP JODA, Keonjhar,		Inward Date : 26/04/2024		Analysis End : 30/04/2024	
FAMD, ODISHA-758034 (India)		Reference : W.O. - 3000144107/056		Report Issue Date : 30/04/2024	
		Reference Date : 19.04.2022		Sample Category : Water	
Sample Name : Surface Water		Sample Source : 1. Upstream 2. Downstream		Sample Particulars : Sample Code-SW-1 & 2	
Sample Collected By : Anacon Representative		Sampling Date : 23/04/2024		Sampling Time : 2.30 & 2.50 pm	
				Sample Condition : Sealed & Ice Preserved	
				Quantity Received : 2.0 Lit & 250 ml	
				Sampling Location : 1. Sona River Upstream (SW-1) 2. Sona River Downstream (SW-2)	

TEST RESULTS					
S.N.	Test Parameter	Measurement Unit	Test Method	Standards as per IS 2296:1992 Class C	
				SW-1	SW-2
I	Biological Testing 1. Water				
1	Coliform	MPN/100ml	IS 1622 : 1981	5000	BDL (DL-2)
II	Chemical Testing 1. Water				
2	pH value	-	IS 3025 (Part 11) : 2022	6.0 to 9.0	6.28 at 25°C
3	Colour	Hazen units	IS 3025 (Part 4) : 2021	300	41
4	Dissolved Oxygen	mg/l	IS 3025 (Part 38) : 1989	4.0	6.7
5	Total Suspended Solid (as TSS)	mg/l	IS 3025 (Part 17) : 2022	—	32
6	BOD (3 days at 27°C)	mg/l	IS-3025 (Part 44) : 2023	3.0	2.81
7	Chemical oxygen demand	mg/l	IS-3025 (Part 58) : 2022	—	7.64
8	Total Dissolved Solids (TDS)	mg/l	IS 3025 (Part 16) : 2023	1500	1258
9	Copper (as Cu)	mg/l	IS 3025 (Part 2) : 2019	1.5	0.04
10	Chloride (as Cl)	mg/l	IS 3025 (Part 32) : 1988	600	147.29
11	Sulphate (as SO <sub>4</sub> )	mg/l	IS 3025 (Part 24) : 2022	400	304.91
12	Nitrate (as NO <sub>3</sub> )	mg/l	APHA method 23rd edition: 2017	50	34.62
13	Fluoride (as F)	mg/l	IS 3025 (Part 60) : 2008	1.5	0.46
14	Cyanide (as CN)	mg/l	IS 3025 (Part 27) : 2021	0.05	BDL (DL-0.005)
15	Phenolic compounds (as C <sub>6</sub> H <sub>5</sub> OH)	mg/l	IS 3025 (Part 43) : 1992	0.005	BDL (DL-0.001)
16	Anionic Detergents (as MBAS)	mg/l	IS 13428 (Annex K) : 2005	1.0	BDL (DL-0.01)
III	Chemical Testing 2. Residues In Water				
17	Iron (as Fe)	mg/l	IS 3025 (Part 2) : 2019	0.5	0.37
18	Cadmium (as Cd)	mg/l	IS 3025 (Part 2) : 2019	0.01	BDL (DL-0.002)
19	Selenium (as Se)	mg/l	IS 3025 (Part 56) : 2003	0.05	BDL (DL-0.01)
20	Arsenic (as As)	mg/l	IS 3025 (Part 37) : 2022	0.2	BDL (DL-0.01)
21	Lead (as Pb)	mg/l	IS 3025 (Part 2) : 2019	0.1	BDL (DL-0.01)
22	Zinc (as Zn)	mg/l	IS 3025 (Part 2) : 2019	15	BDL (DL-0.02)
23	Hexa Chromium (as Cr <sup>6+</sup> )	mg/l	IS 3025 (Part 52) : 2003	0.05	BDL (DL-0.01)
24	Mercury (as Hg)	mg/l	IS 3025 (Part 48) : 1994	—	BDL (DL-0.001)
25	Manganese (as Mn)	mg/l	IS 3025 (Part 2) : 2019	—	BDL (DL-0.02)

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**REMARKS :** As requested by the client, sample was tested for above parameters only.

Verified By  
*Nidhi Dubey*  
Nidhi Dubey  
Deputy Technical Manager

Authorized Signatory  
*Snehal Raut*  
Snehal Raut  
Deputy Technical Manager

Authorized Signatory  
*Dr. (Mrs.) S.D. Garway*  
Dr. (Mrs.) S.D. Garway  
Quality Manager

—End of Report—

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# Six Monthly Compliance Report to the Terms of Conditions of Environmental Clearance granted in favor of Ferro Alloys Plant, Joda, M/s Tata Steel Limited for April'24 to September'2024



**Anacon Laboratories**

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## Test Report

Test Report No. : ALPL/31052024/1-7 dated 31/05/2024 Page 1 of 1

<b>Issued To :</b> TATA STEEL LIMITED FAP JODA, Keonjhar, FAMD, ODISHA-758034 (India)	<b>Sample Inward No.</b> ALPL/17052024/ENV-130-GW-1 <b>Inward Date</b> 17/05/2024 <b>Reference</b> W.O. - 3000144107/056-19.04.2022	<b>Analysis Start</b> 20/05/2024 <b>Analysis End</b> 27/05/2024 <b>Report Issue Date</b> 31/05/2024 <b>Sample Category</b> Water
<b>Sample Name</b> Ground Water	<b>Sample Source</b> Borewell	<b>Sample Particulars</b> GW-1 Ground Water
<b>Quantity Received</b> 2 lit	<b>Sampling Date</b> 13/05/2024	<b>Sampling Location</b> Near DG Set
<b>Tests Required :</b> Iron, Total Chromium, Copper, Selenium, Arsenic, Cadmium, Mercury, Lead, Zinc, Manganese.		

## TEST RESULTS

S.N.	Test Parameter	Measurement Unit	Test Method	Requirement as per IS 10500 : 2012 (Drinking Water Specifications) Including Amendment No. 4		Test Result
				Acceptable Limit	Permissible Limit #	
I	Chemical Testing 1. Residues In Water					
1	Iron (as Fe)	mg/l	IS 3025 (Part 2) : 2019	1.0	No relaxation	0.21
2	Total Chromium (as Cr)	mg/l	IS 3025 (Part 2) : 2019	0.05	No relaxation	BDL (DL - 0.02)
3	Copper (as Cu)	mg/l	IS 3025 (Part 2) : 2019	0.05	1.5	BDL (DL - 0.02)
4	Selenium (as Se)	mg/l	IS 3025 (Part 56) : 2003	0.01	No relaxation	BDL (DL - 0.01)
5	Arsenic (as As)	mg/l	IS 3025 (Part 37) : 2022	0.01	No relaxation	BDL (DL - 0.01)
6	Cadmium (as Cd)	mg/l	IS 3025 (Part 2) : 2019	0.003	No relaxation	BDL (DL - 0.002)
7	Mercury (as Hg)	mg/l	IS 3025 (Part 48) : 1994	0.001	No relaxation	BDL (DL - 0.001)
8	Lead (as Pb)	mg/l	IS 3025 (Part 2) : 2019	0.01	No relaxation	BDL (DL - 0.01)
9	Zinc (as Zn)	mg/l	IS 3025 (Part 2) : 2019	5	15	BDL (DL - 0.02)
10	Manganese (as Mn)	mg/l	IS 3025 (Part 2) : 2019	0.1	0.3	BDL (DL - 0.02)

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**REMARKS :** As requested by the client, sample was tested for above parameters only. The submitted sample complies with requirement as per IS: 10500:2012, for tests conducted only.

Verified By

*Nidhi Dubey*  
Nidhi Dubey  
Deputy Technical Manager

Authorized Signatory

*S. Garway*  
Dr. (Mrs.) S.D. Garway  
Quality Manager

---End of Report---



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## Test Report

Test Report No. : ALPL/31052024/1-9 dated 31/05/2024 Page 1 of 1

<b>Issued To :</b> TATA STEEL LIMITED FAP JODA, Keonjhar, FAMD, ODISHA-758034 (India)	<b>Sample Inward No.</b> ALPL/17052024/ENV-130-SW-1 & 2 <b>Inward Date</b> 17/05/2024 <b>Reference</b> W.O. - 3000144107/056	<b>Analysis Start</b> 20/05/2024 <b>Analysis End</b> 27/05/2024 <b>Report Issue Date</b> 31/05/2024 <b>Sample Category</b> Water
<b>Sample Name</b> Surface Water	<b>Sample Source</b> 1. Upstream 2. Downstream	<b>Sample Particulars</b> Sample Code-SW-1 & 2
<b>Quantity Received</b> 2.0 lit & 250 ml	<b>Sampling Date</b> 15/05/2024	<b>Sampling Time</b> 3.10 & 3.25 pm
<b>Sampling Location</b> 1. Sona River Upstream (SW-1) 2. Sona River Downstream (SW-2)		

## TEST RESULTS

S.N.	Test Parameter	Measurement Unit	Test Method	Standards as per IS 2296:1992 Class C	Test Result	
					SW-1	SW-2
I	Biological Testing 1. Water					
1	Coliform	MPN/100ml	IS 1622 : 1981	5000	BDL (DL-2)	BDL (DL-2)
2	pH value		IS 3025 (Part 11) : 2022	6.0 to 9.0	6.37 at 25°C	6.41 at 25°C
3	Colour	Hazen units	IS 3025 (Part 4) : 2021	300	32	26
4	Dissolved Oxygen	mg/l	IS 3025 (Part 38) : 1989	4.0	6.4	6.1
5	Total Suspended Solid (as TSS)	mg/l	IS 3025 (Part 17) : 2022	--	28	21
6	BOD (3 days at 27°C)	mg/l	IS 3025 (Part 44) : 2023	3.0	2.73	2.48
7	Chemical oxygen demand	mg/l	IS 3025 (Part 58) : 2022	--	7.19	6.53
8	Total Dissolved Solids (TDS)	mg/l	IS 3025 (Part 16) : 2023	1500	1427	1341
9	Copper (as Cu)	mg/l	IS 3025 (Part 2) : 2019	1.5	0.06	0.04
10	Chloride (as Cl)	mg/l	IS 3025 (Part 32) : 1988	600	153.92	147.26
11	Sulphate (as SO <sub>4</sub> )	mg/l	IS 3025 (Part 24) : 2022	400	316.54	281.71
12	Nitrate (as NO <sub>3</sub> )	mg/l	APHA method 2nd edition 2017	50	26.43	19.52
13	Fluoride (as F)	mg/l	IS 3025 (Part 60) : 2008	1.5	0.37	0.28
14	Cyanide (as CN)	mg/l	IS 3025 (Part 27) : 2021	0.05	BDL (DL-0.005)	BDL (DL-0.005)
15	Phenolic compounds (as C <sub>6</sub> H <sub>5</sub> OH)	mg/l	IS 3025 (Part 43) : 1992	0.005	BDL (DL-0.001)	BDL (DL-0.001)
16	Anionic Detergents (as MBAS)	mg/l	IS 13428 : (Annex K) : 2005	1.0	BDL (DL-0.01)	BDL (DL-0.01)
17	Iron (as Fe)	mg/l	IS 3025 (Part 2) : 2019	0.5	0.41	0.38
18	Cadmium (as Cd)	mg/l	IS 3025 (Part 2) : 2019	0.01	BDL (DL-0.002)	BDL (DL-0.002)
19	Selenium (as Se)	mg/l	IS 3025 (Part 56) : 2003	0.05	BDL (DL-0.01)	BDL (DL-0.01)
20	Arsenic (as As)	mg/l	IS 3025 (Part 37) : 2022	0.2	BDL (DL-0.01)	BDL (DL-0.01)
21	Lead (as Pb)	mg/l	IS 3025 (Part 2) : 2019	0.1	BDL (DL-0.01)	BDL (DL-0.01)
22	Zinc (as Zn)	mg/l	IS 3025 (Part 2) : 2019	15	BDL (DL-0.02)	BDL (DL-0.02)
23	Hexa Chromium (as Cr <sup>6+</sup> )	mg/l	IS 3025 (Part 52) : 2003	0.05	BDL (DL-0.01)	BDL (DL-0.01)
24	Mercury (as Hg)	mg/l	IS 3025 (Part 48) : 1994	--	BDL (DL-0.001)	BDL (DL-0.001)
25	Manganese (as Mn)	mg/l	IS 3025 (Part 2) : 2019	--	BDL (DL-0.02)	BDL (DL-0.02)

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**REMARKS :** As requested by the client, sample was tested for above parameters only.

Verified By

*Nidhi Dubey*  
Nidhi Dubey  
Deputy Technical Manager

Authorized Signatories

*Pooja Kathane*  
Pooja Kathane  
Technical Manager

*S. Garway*  
Dr. (Mrs.) S.D. Garway  
Quality Manager

---End of Report---



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# Six Monthly Compliance Report to the Terms of Conditions of Environmental Clearance granted in favor of Ferro Alloys Plant, Joda, M/s Tata Steel Limited for April'24 to September'2024



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## Test Report

Test Report No. : ALPL/29062024/1-7 dated 29/06/2024 Page 1 of 1

Issued To : <b>TATA STEEL LIMITED</b> FAP JODA, Koonjhar, FAMD, ODISHA-758034 (India)	Sample Inward No. ALPL/24062024/ENV-164-GW-1 Inward Date 24/06/2024 Reference W.O.- 3000144107/056-19.04.2022	Analysis Start 25/06/2024 Analysis End 29/06/2024 Report Issue Date 29/06/2024 Sample Category Water
Sample Name Ground Water	Sample Source Borewell	Sample Particulars GW-1 Ground Water
Sample Collected By Anacon Representative	Sampling Date 22/06/2024 Sampling Time 12.45 pm	Quantity Received 2 lit Sampling Location Near DG Set

Tests Required : Iron, Total Chromium, Copper, Selenium, Arsenic, Cadmium, Mercury, Lead, Zinc, Manganese.

## TEST RESULTS

S.N.	Test Parameter	Measurement Unit	Test Method	Requirement as per IS 10500 : 2012 (Drinking Water Specifications) Including Amendment No. 4		Test Result
				Acceptable Limit	Permissible Limit #	
1	Chemical Testing 1. Residues In Water					
1	Iron (as Fe)	mg/l	IS 3025 (Part 2) : 2019	1.0	No relaxation	0.36
2	Total Chromium (as Cr)	mg/l	IS 3025 (Part 2) : 2019	0.05	No relaxation	BDL (DL - 0.02)
3	Copper (as Cu)	mg/l	IS 3025 (Part 2) : 2019	0.05	1.5	BDL (DL - 0.02)
4	Selenium (as Se)	mg/l	IS 3025 (Part 56) : 2003	0.01	No relaxation	BDL (DL - 0.01)
5	Arsenic (as As)	mg/l	IS 3025 (Part 37) : 2022	0.01	No relaxation	BDL (DL - 0.01)
6	Cadmium (as Cd)	mg/l	IS 3025 (Part 2) : 2019	0.003	No relaxation	BDL (DL - 0.002)
7	Mercury (as Hg)	mg/l	IS 3025 (Part 48) : 1994	0.001	No relaxation	BDL (DL - 0.001)
8	Lead (as Pb)	mg/l	IS 3025 (Part 2) : 2019	0.01	No relaxation	BDL (DL - 0.01)
9	Zinc (as Zn)	mg/l	IS 3025 (Part 2) : 2019	5	15	BDL (DL - 0.02)
10	Manganese (as Mn)	mg/l	IS 3025 (Part 2) : 2019	0.1	0.3	BDL (DL - 0.02)

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REMARKS : As requested by the client, sample was tested for above parameters only. The submitted sample complies with requirement as per IS: 10500:2012, for tests conducted only.

Verified By  
  
 Nidhi Dubey  
 Deputy Technical Manager

Authorized Signatory  
  
 Dr. (Mrs.) S.D. Garway  
 Quality Manager

---End of Report---



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## Test Report

Test Report No. : ALPL/29062024/1-9 dated 29/06/2024 Page 1 of 1

Issued To : <b>TATA STEEL LIMITED</b> FAP JODA, Koonjhar, FAMD, ODISHA-758034 (India)	Sample Inward No. ALPL/24062024/ENV-164-SW-1 & 2 Inward Date 24/06/2024 Reference W.O.- 3000144107/056	Analysis Start 25/06/2024 Analysis End 29/06/2024 Report Issue Date 29/06/2024 Sample Category Water
Sample Name Surface Water	Sample Source 1. Upstream 2. Downstream	Sample Particulars Sample Code-SW-1 & 2
Sample Collected By Anacon Representative	Sampling Date 22/06/2024 Sampling Time 2.20 & 2.45 pm	Sampling Location 1. Sona River Upstream (SW-1) 2. Sona River Downstream (SW-2)

## TEST RESULTS

S.N.	Test Parameter	Measurement Unit	Test Method	Standards as per IS 2296:1992 Class C	Test Result	
					SW-1	SW-2
I	Biological Testing 1. Water					
1	Coliform	MPN/100ml	IS 1622 : 1981	5000	BDL (DL-2)	BDL (DL-2)
II	Chemical Testing 1. Water					
2	pH value	-	IS 3025 (Part 11) : 2022	6.0 to 9.0	6.52 at 25°C	6.47 at 25°C
3	Colour	Hazen units	IS 3025 (Part 4) : 2021	300	26	21
4	Dissolved Oxygen	mg/l	IS 3025 (Part 38) : 1989	4.0	6.2	5.8
5	Total Suspended Solid (as TSS)	mg/l	IS 3025 (Part 17) : 2022	--	26	18
6	BOD (3 days at 27°C)	mg/l	IS-3025 (Part 44) : 2023	3.0	2.84	2.76
7	Chemical oxygen demand	mg/l	IS-3025 (Part 58) : 2022	--	8.17	7.36
8	Total Dissolved Solids (TDS)	mg/l	IS 3025 : (Part 16) : 2023	1500	1341	1193
9	Copper (as Cu)	mg/l	IS 3025 (Part 2) : 2019	1.5	0.07	0.03
10	Chloride (as Cl)	mg/l	IS 3025 (Part 32) : 1988	600	182.94	176.31
11	Sulphate (as SO <sub>4</sub> )	mg/l	IS 3025 (Part 24) : 2022	400	251.68	249.14
12	Nitrate (as NO <sub>3</sub> )	mg/l	APHA method 23rd edition: 2017	50	21.46	16.37
13	Fluoride (as F)	mg/l	IS 3025 (Part 60) : 2008	1.5	0.31	0.27
14	Cyanide (as CN)	mg/l	IS 3025 (Part 27) : 2021	0.05	BDL (DL-0.005)	BDL (DL-0.005)
15	Phenolic compounds (as C <sub>6</sub> H <sub>5</sub> OH)	mg/l	IS 3025 (Part 43) : 1992	0.005	BDL (DL-0.001)	BDL (DL-0.001)
16	Anionic Detergents (as MBAS)	mg/l	IS 13428 : (Annex K) : 2005	1.0	BDL (DL-0.01)	BDL (DL-0.01)
17	Oil & Grease	mg/l	IS-3025 (Part 39) : 2021	--	BDL (DL-4)	BDL (DL-4)
18	Dissolved Phosphate (as P)	mg/l	IS 3025 (Part 31) : 1988	--	0.42	0.38
19	Ammonical Nitrogen (as N)	mg/l	IS 3025 (Part 34) : 1988	--	23.57	18.42
20	Nitrate Nitrogen	mg/l	APHA Method	--	4.19	3.87
Chemical Testing 2. Residues In Water						
21	Iron (as Fe)	mg/l	IS 3025 (Part 2) : 2019	0.5	0.43	0.37
22	Cadmium (as Cd)	mg/l	IS 3025 (Part 2) : 2019	0.01	BDL (DL-0.002)	BDL (DL-0.002)
23	Selenium (as Se)	mg/l	IS 3025 (Part 56) : 2003	0.05	BDL (DL-0.01)	BDL (DL-0.01)
24	Arsenic (as As)	mg/l	IS 3025 (Part 37) : 2022	0.2	BDL (DL-0.01)	BDL (DL-0.01)
25	Lead (as Pb)	mg/l	IS 3025 (Part 2) : 2019	0.1	BDL (DL-0.01)	BDL (DL-0.01)
26	Zinc (as Zn)	mg/l	IS 3025 (Part 2) : 2019	15	BDL (DL-0.02)	BDL (DL-0.02)
27	Hexa Chromium (as Cr <sup>6+</sup> )	mg/l	IS 3025 (Part 52) : 2003	0.05	BDL (DL-0.01)	BDL (DL-0.01)
28	Mercury (as Hg)	mg/l	IS : 3025 (Part 48) : 1994	--	BDL (DL-0.001)	BDL (DL-0.001)
29	Manganese (as Mn)	mg/l	IS 3025 (Part 2) : 2019	--	BDL (DL-0.02)	BDL (DL-0.02)

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REMARKS : As requested by the client, sample was tested for above parameters only.

Verified By  
  
 Nidhi Dubey  
 Deputy Technical Manager

Authorized Signatories  
  
 Seetal Raut  
 Technical Manager

Authorized Signatories  
  
 Pooja Kojane  
 Technical Manager


Authorized Signatories  
  
 Dr. (Mrs.) S.D. Garway  
 Quality Manager

---End of Report---



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ANALYTICAL LABORATORY  
Accredited by NABL as per ISO/IEC 17025:2017  
Certified by ISO 9001:2015, ISO 14001:2015 & ISO 45001:2018  
Recognized by Ministry of Environment, Forest & Climate Change (MoEFCC), Govt. of India, New Delhi

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Test Report No. : SAL/30072024/1-9 dated 30/07/2024 Page 1 of 1

Issued To : TATA STEEL LIMITED  
FAP JODA, Keonjhar,  
FAMD, ODISHA-758034 (India)

Sample Inward No. SAL/22072024/ENV-175-SW-1 & 2  
Inward Date 22/07/2024  
Reference W.O.- 3000144107/056  
Reference Date 19.04.2022

Analysis Start 22/07/2024  
Analysis End 29/07/2024  
Report Issue Date 30/07/2024  
Sample Category Water

Sample Name	Sample Source	Sample Particulars	Sample Condition	Quantity Received
Surface Water	1. Upstream 2. Downstream	Sample Code-SW-1 & 2	Sealed & Ice Preserved	2.0 Lit & 250 ml

Sample Collected By: Skylab Representative  
Sampling Date: 20/07/2024  
Sampling Time: 12.40 & 1.10 pm  
Sampling Location: 1. Sona River Upstream (SW-1)  
2. Sona River Downstream (SW-2)


S.N.	Test Parameter	Measurement Unit	Test Method	Standards as per IS 2296:1992 Class C	Test Result	
					SW-1	SW-2
<b>Biological Testing 1. Water</b>						
1	Coliform	MPN/100ml	IS 1622 : 1981	5000	BDL(DL-2)	BDL(DL-2)
<b>Chemical Testing 1. Water</b>						
2	pH value	-	IS 3025 (Part 11) : 2022	6.0 to 9.0	6.91 at 25°C	7.03 at 25°C
3	Colour	Hazen units	IS 3025 (Part 4) : 2021	300	21	16
4	Dissolved Oxygen	mg/l	IS 3025 (Part 38) : 1989	4.0	6.4	6.1
5	Total Suspended Solid (as TSS)	mg/l	IS 3025 (Part 17) : 2022	18	12	12
6	BOD (3 days at 27°C)	mg/l	IS-3025 (Part 44) : 2023	3.0	2.53	2.14
7	Chemical oxygen demand	mg/l	IS-3025 (Part 58) : 2022	6.94	5.82	5.82
8	Total Dissolved Solids (TDS)	mg/l	IS 3025 : (Part 16) : 2023	1500	1437	1294
9	Copper (as Cu)	mg/l	IS 3025 (Part 2) : 2019	1.5	0.06	0.03
10	Chloride (as Cl)	mg/l	IS 3025 (Part 32) : 1988	600	164.29	148.36
11	Sulphate (as SO <sub>4</sub> )	mg/l	IS 3025 (Part 24) : 2022	400	182.57	164.52
12	Nitrate (as NO <sub>3</sub> )	mg/l	APHA method 23rd edition: 2017	50	18.43	12.91
13	Fluoride (as F)	mg/l	IS 3025 (Part 60) : 2008	1.5	0.26	0.24
14	Cyanide (as CN)	mg/l	IS 3025 (Part 27) : 2021	0.05	BDL(DL-0.005)	BDL(DL-0.005)
15	Phenolic compounds (as C <sub>6</sub> H <sub>5</sub> OH)	mg/l	IS 3025 (Part 43) : 1992	0.005	BDL(DL-0.001)	BDL(DL-0.001)
16	Anionic Detergents (as MBAS)	mg/l	IS 13428 : (Annex K) : 2005	1.0	BDL(DL-0.01)	BDL(DL-0.01)
17	Oil & Grease	mg/l	IS-3025 (Part-39) : 2021	BDL(DL-4)	BDL(DL-4)	BDL(DL-4)
18	Dissolved Phosphate (as P)	mg/l	IS 3025 (Part 31) : 1988	0.37	0.37	0.28
19	Ammonical Nitrogen (as N)	mg/l	IS 3025 (Part 34) : 1988	16.43	12.91	12.91
20	Nitrate Nitrogen	mg/l	APHA Method	4.61	18.43	12.91
<b>Chemical Testing 2. Residues In Water</b>						
21	Iron (as Fe)	mg/l	IS 3025 (Part 2) : 2019	0.5	0.34	0.29
22	Cadmium (as Cd)	mg/l	IS 3025 (Part 2) : 2019	0.01	BDL(DL-0.002)	BDL(DL-0.002)
23	Selenium (as Se)	mg/l	IS 3025 (Part 56) : 2003	0.05	BDL(DL-0.01)	BDL(DL-0.01)
24	Arsenic (as As)	mg/l	IS 3025 (Part 37) : 2022	0.2	BDL(DL-0.01)	BDL(DL-0.01)
25	Lead (as Pb)	mg/l	3025 (Part 2) : 2019	0.1	BDL(DL-0.01)	BDL(DL-0.01)
26	Zinc (as Zn)	mg/l	IS 3025 (Part 2) : 2019	15	BDL(DL-0.02)	BDL(DL-0.02)
27	Hexa Chromium (as Cr <sup>6+</sup> )	mg/l	IS 3025 (Part 52) : 2003	0.05	BDL(DL-0.01)	BDL(DL-0.01)
28	Mercury (as Hg)	mg/l	IS 3025 (Part 48) : 1994	BDL(DL-0.001)	BDL(DL-0.001)	BDL(DL-0.001)
29	Manganese (as Mn)	mg/l	IS 3025 (Part 2) : 2019	BDL(DL-0.02)	BDL(DL-0.02)	BDL(DL-0.02)

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Verified By: Sr. Analyst  
For SKYLAB ANALYTICAL LABORATORY  
Authorized Signatory

---End of Report---

202, CFG-3, Asmeeta Texpa, Addl. Kalyan-Bhiwandi Industrial Area, MIDC, Village Kon, Tal. Bhiwandi, Dist., Thane, Maharashtra, INDIA. Pincode-421311.  
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• ENVIRONMENT • FOOD • TEXTILE

Test Report No. : SAL/30072024/1-8A dated 30/07/2024 Page 1 of 2

Issued To : TATA STEEL LIMITED  
FAP JODA, Keonjhar,  
FAMD, ODISHA-758034 (India)

Sample Inward No. SAL/22072024/ENV-175-GW-2  
Inward Date 22/07/2024  
Reference W.O.- 3000144107/056-19.04.2022

Analysis Start 22/07/2024  
Analysis End 29/07/2024  
Report Issue Date 30/07/2024  
Sample Category Water

Sample Name	Sample Source	Sample Particulars	Sample Condition	Quantity Received
Ground Water	Borewell	GW-2	Ground Water	2 lit

Sample Collected By: Skylab Representative  
Sampling Date: 19/07/2024  
Sampling Time: 11.50 am  
Sampling Location: Near Canteen

Tests Required : Coliform, pH, Turbidity, Total dissolved solids, Total Alkalinity, Total hardness, Calcium, Magnesium, Sulphate, Nitrate, Chloride, Fluoride, Phenolic compounds.

S.N.	Test Parameter	Measurement Unit	Test Method	Requirement as per IS 10500 : 2012 (Drinking Water Specifications) Including Amendment No. 4		Test Result
				Acceptable Limit	Permissible Limit #	
<b>Biological Testing 1. Water</b>						
1	Coliform	Per 100 ml	IS 15185 : 2016	Absent	Absent	Absent
2	Escherichia Coli	Per 100 ml	IS 15185 : 2016	Absent	Absent	Absent
<b>Chemical Testing 1. Water</b>						
3	pH	-	IS 3025 (Part 11) : 2022	6.5 to 8.5	No relaxation	7.82 at 25°C
4	Turbidity	NTU	IS 3025 : (Part 10) : 2023	1	5	0.1
5	Total dissolved solids	mg/l	IS 3025 (Part 16) : 2023	500	2000	494
6	Total Alkalinity (as Calcium Carbonate)	mg/l	IS 3025 (Part 23) : 1986	200	600	212.25
7	Total hardness (as CaCO <sub>3</sub> )	mg/l	IS 3025 (Part 21) : 2009	200	600	176
8	Calcium (as Ca)	mg/l	IS 3025 (Part 40) : 1991	75	200	40.80
9	Magnesium (as Mg)	mg/l	IS 3025 (Part 46) : 1994	30	100	17.98
10	Sulphate (as SO <sub>4</sub> )	mg/l	IS 3025 (Part 24) : 2022	200	400	23.41
11	Nitrate (as NO <sub>3</sub> )	mg/l	APHA method 23rd edition: 2017	45	No relaxation	3.87
12	Chloride (as Cl)	mg/l	IS 3025 (Part 32) : 1988	250	1000	154.98
13	Fluoride (as F)	mg/l	IS 3025 (Part 60) : 2008	1.0	1.5	0.24
14	Phenolic compounds (as C <sub>6</sub> H <sub>5</sub> OH)	mg/l	IS 3025 (Part 43/Sec 1) : 1992	0.001	0.002	BDL (DL - 0.001)
15	Electrical Conductivity at 25°C	µs/cm	IS 3025 (Part 14) : 2013	---	---	716
16	Total Suspended Solids	mg/l	IS 3025 (Part 17) : 2022	---	---	BDL(DL-10)


•Please Refer Last Page For Notes & Remark

Verified By: Sr. Analyst  
For SKYLAB ANALYTICAL LABORATORY  
Authorized Signatory



---End of Report---

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# Six Monthly Compliance Report to the Terms of Conditions of Environmental Clearance granted in favor of Ferro Alloys Plant, Joda, M/s Tata Steel Limited for April'24 to September'2024



**Anacon Laboratories**

TC-12998

Test Report

ULR No.- TC129982400001131F  
 Test Report No.: ALPL/31082024/1-7A dated 31/08/2024 Page 1 of 1

<b>Issued To:</b> TATA STEEL LIMITED FAP JODA, Keonjhar, FAMD, ODISHA-758034 (India)	<b>Sample Inward No.</b> ALPL/19082024/MON-26-W-1/4-3 <b>Inward Date</b> 19/08/2024 <b>Reference</b> W.O.- 3000144107/056-19.04.2022	<b>Analysis Start</b> 19/08/2024 <b>Analysis End</b> 26/08/2024 <b>Report Issue Date</b> 31/08/2024
---	--	---

Sample Name Drinking Water	Purpose of Analysis Drinking	Sample Condition Sealed & Ice Preserved	Quantity Received 5.0 Ltr & 250 ml
Sample Collected By Mr. Rasel Khan	Sampling Date 16/08/2024	Sampling Time 2.20 pm	Sampling Location / Source Near DG Set / Borewell


**TEST RESULTS**

S.N.	Test Parameter	Measurement Unit	Test Method	Requirement as per IS 10500 : 2012 (Drinking Water Specifications) Including Amendment No. 4		Test Result
				Acceptable Limit	Permissible Limit #	
<b>Group : Water</b>						
<b>Subgroup : Drinking water</b>						
1	Discipline : Chemical					
1	pH	-	IS 3025 (Part 11) : 2022	6.5 to 8.5	No relaxation	6.73 at 25°C
2	Turbidity	NTU	IS 3025 (Part 10) : 2023	1	5	0.2
3	Total dissolved solids	mg/l	IS 3025 (Part 16) : 2023	500	2000	481
4	Total Alkalinity (as Calcium Carbonate)	mg/l	IS 3025 (Part 23) : 1986	200	600	192.76
5	Total hardness (as CaCO <sub>3</sub> )	mg/l	IS 3025 (Part 21) Clause 5 : 2009	200	600	175.47
6	Calcium (as Ca)	mg/l	IS 3025 (Part 40) Clause 5 : 1991	75	200	43.51
7	Magnesium (as Mg)	mg/l	IS 3025 (Part 46) Clause 6 : 1994	30	100	16.24
8	Sulphate (as SO <sub>4</sub> )	mg/l	IS 3025 (Part 24 Sec 1) Clause 5 : 2022	200	400	6.27
9	Nitrate (as NO <sub>3</sub> )	mg/l	APHA 23rd edition; Method 4500-NO <sub>3</sub> 2017	45	No relaxation	
10	Chloride (as Cl)	mg/l	IS 3025 (Part 32) Clause 2 : 1988	250	1000	18.76
11	Fluoride (as F)	mg/l	IS 3025 (Part 60) Clause 6 : 2008	1.0	1.5	0.14
12	Phenolic compounds	mg/l	IS 3025 (Part 43/Sec 1) Clause 6 : 1992	0.001	0.002	BDL (LOQ-0.001)

NOTE: # Please see watermark "Original Test Report" to confirm the authenticity of this report. # Results shall be referred to tested sample(s) and applicable to tested parameters only. # Test report shall not be reproduced except in full without prior written approval of Anacon Labs. # Liability of Anacon Labs is limited to invoiced amount only. # Non-perishable and perishable sample(s) shall be disposed off after 30 days and 15 days respectively from the date of issue of Test Report, unless specified otherwise. # Permissible limit in absence of an alternate source for drinking water. # "mg/l" is equivalent to "ppm". # "µg/l" is equivalent to "ppb". # BDL= below limit of quantification, LOQ= limit of quantification. # Sampling Method-A/Std/7.2/MON-01 # Environmental condition - Satisfactory & Clear.

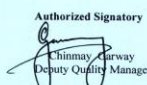
REMARKS: As requested by the client, sample was tested for above parameters only. The submitted sample complies with requirement as per IS: 10500:2012, for tests conducted only.

Verified By



Snehal Raut  
Technical Manager

Authorized Signatory




Chinmay Gajwani  
Deputy Quality Manager


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

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 # 91 8045685558 # Email : [info@anacon.in](mailto:info@anacon.in)  
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**Anacon Laboratories**



TC-12998

Test Report

Test Report No.: ALPL/31082024/1-9 dated 31/08/2024 Page 1 of 1

<b>Issued To:</b> TATA STEEL LIMITED FAP JODA, Keonjhar, FAMD, ODISHA-758034 (India)	<b>Sample Inward No.</b> ALPL/19082024/MON-26-EW-1 & 2 <b>Inward Date</b> 19/08/2024 <b>Reference</b> W.O.- 3000144107/056 <b>Reference Date</b> 19.04.2022	<b>Analysis Start</b> 20/08/2024 <b>Analysis End</b> 27/08/2024 <b>Report Issue Date</b> 31/08/2024 <b>Sample Category</b> Water
---	--	---

Sample Name Surface Water	Sample Source 1. Upstream 2. Downstream	Sample Particulars Sample Code-SW-1 & 2	Sample Condition Sealed & Ice Preserved
Sample Collected By Mr. Rasel Khan	Sampling Date 14/08/2024	Sampling Time 3.20 & 3.50 pm	Sampling Location 1. Sona River Upstream (SW-1) 2. Sona River Downstream (SW-2)


**TEST RESULTS**

S.N.	Test Parameter	Measurement Unit	Test Method	Standards as per IS 2286:1992 Class C	Test Result	
					SW-1	SW-2
<b>I Discipline : Biological</b>					<b>Subgroup : Surface water</b>	
1	Coliform	MPN/100ml	IS 1622 : 1981	5000	BDL (DL-2)	BDL (DL-2)
<b>II Discipline : Chemical</b>					<b>Subgroup : Surface water</b>	
2	pH value	-	IS 3025 (Part 11) : 2022	6.0 to 9.0	6.52 at 25°C	6.91 at 25°C
3	Colour	Hazen units	IS 3025 (Part 4) : 2021	300	16	14
4	Dissolved Oxygen	mg/l	IS 3025 (Part 38) : 1989	4.0	6.7	6.3
5	Total Suspended Solid (as TSS)	mg/l	IS 3025 (Part 17) : 2022	---	21	18
6	BOD (3 days at 27°C)	mg/l	IS 3025 (Part 44) : 2023	3.0	2.71	2.64
7	Chemical oxygen demand	mg/l	IS 3025 (Part 58) : 2022	---	7.39	6.82
8	Total Dissolved Solids (TDS)	mg/l	IS 3025 (Part 16) : 2023	1500	1372	1194
9	Copper (as Cu)	mg/l	IS 3025 (Part 2) : 2019	1.5	0.07	0.04
10	Chloride (as Cl)	mg/l	IS 3025 (Part 32) : 1988	600	216.53	182.91
11	Sulphate (as SO <sub>4</sub> )	mg/l	IS 3025 (Part 24) : 2022	400	137.29	116.54
12	Nitrate (as NO <sub>3</sub> )	mg/l	APHA method 23rd edition : 2017	50	17.32	14.73
13	Fluoride (as F)	mg/l	IS 3025 (Part 60) : 2008	1.5	0.31	0.27
14	Cyanide (as CN)	mg/l	IS 3025 (Part 27) : 1992	0.05	BDL (DL-0.005)	BDL (DL-0.005)
15	Phenolic compounds (as C <sub>6</sub> H <sub>5</sub> OH)	mg/l	IS 3025 (Part 43) : 1992	0.005	BDL (DL-0.001)	BDL (DL-0.001)
16	Anionic Detergents (as MBAS)	mg/l	IS 13428 (Annex K) : 2005	1.0	BDL (DL-0.01)	BDL (DL-0.01)
17	Oil & Grease	mg/l	IS 3025 (Part 39) : 2021	---	BDL (DL-4)	BDL (DL-4)
18	Dissolved Phosphate (as P)	mg/l	IS 3025 (Part 31) : 1988	---	0.27	0.19
19	Ammonical Nitrogen (as N)	mg/l	IS 3025 (Part 34) : 1988	---	23.58	18.72
20	Nitrate Nitrogen	mg/l	APHA Method	---	5.13	4.64
<b>III Discipline : Chemical</b>					<b>Subgroup : Trace metal elements</b>	
21	Iron (as Fe)	mg/l	IS 3025 (Part 2) : 2019	0.5	0.42	0.37
22	Cadmium (as Cd)	mg/l	IS 3025 (Part 2) : 2019	0.01	BDL (DL-0.002)	BDL (DL-0.002)
23	Selenium (as Se)	mg/l	IS 3025 (Part 56) : 2003	0.05	BDL (DL-0.01)	BDL (DL-0.01)
24	Arsenic (as As)	mg/l	IS 3025 (Part 37) : 2022	0.2	BDL (DL-0.01)	BDL (DL-0.01)
25	Lead (as Pb)	mg/l	IS 3025 (Part 2) : 2019	0.1	BDL (DL-0.01)	BDL (DL-0.01)
26	Zinc (as Zn)	mg/l	IS 3025 (Part 32) : 2019	15	BDL (DL-0.02)	BDL (DL-0.02)
27	Hexa Chromium (as Cr <sup>6+</sup> )	mg/l	IS 3025 (Part 52) : 2003	0.05	BDL (DL-0.01)	BDL (DL-0.01)
28	Mercury (as Hg)	mg/l	IS 3025 (Part 48) : 1994	---	BDL (DL-0.001)	BDL (DL-0.001)
29	Manganese (as Mn)	mg/l	IS 3025 (Part 2) : 2019	---	BDL (DL-0.02)	BDL (DL-0.02)

NOTE: # Please see watermark "Original Test Report" to confirm the authenticity of this report. # Results shall be referred to tested sample(s) and applicable to tested parameters only. # Test report shall not be reproduced except in full without prior written approval of Anacon Labs. # Liability of Anacon Labs is limited to invoiced amount only. # Non-perishable and perishable sample(s) shall be disposed off after 30 days and 15 days respectively from the date of issue of Test Report, unless specified otherwise. # "mg/l" is equivalent to "ppm". # BDL= Below detection limit. # DL= Indicates detection limit of instrument/method and shall be considered as "absent".


REMARKS: As requested by the client, sample was tested for above parameters only.

Verified By




Nidhi Dubey  
Deputy Technical Manager


Authorized Signatories



Snehal Raut  
Technical Manager



Pooja Khatane  
Technical Manager




Chinmay Gajwani  
Deputy Quality Manager



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Page 40 of 54

# Six Monthly Compliance Report to the Terms of Conditions of Environmental Clearance granted in favor of Ferro Alloys Plant, Joda, M/s Tata Steel Limited for April'24 to September'2024



**Anacon Laboratories**

TC-12998

*Test Report*

ULR No- TC129982400001639F  
 Test Report No.: ALPL/30092024/1-8A dated: 30/09/2024 Page 1 of 1


<b>Issued To :</b> TATA STEEL LIMITED FAP JODA, Konihar, FAMD, ODISHA-758034 (India)	<b>Sample Inward No.</b> ALPL/23092024/MON-41-W-1/4-4 <b>Inward Date</b> 23/09/2024 <b>Reference</b> W.O.- 3000144107/056-19.04.2022	<b>Analysis Start</b> 23/09/2024 <b>Analysis End</b> 30/09/2024 <b>Report Issue Date</b> 30/09/2024	
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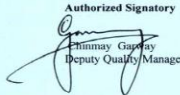
<b>Sample Name</b> Ground Water	<b>Purpose of Analysis</b> Drinking	<b>Sample Condition</b> Sealed & Ice Preserved	<b>Quantity Received</b> 5.0 Ltr & 250 ml
<b>Sample Collected By</b> Mr. Rasel Khan	<b>Sampling Date</b> 19/09/2024	<b>Sampling Time</b> 12.35 pm	<b>Sampling Location / Source</b> Near Canteen / Borewell

S.N.	Test Parameter	Measurement Unit	Test Method	Requirement as per IS 10500 : 2012 (Drinking Water Specifications) Including Amendment No. 4		Test Result
				Acceptable Limit	Permissible Limit #	
<b>TEST RESULTS</b>						
<b>Group : Water</b>						
1	Discipline : Chemical			Material or Product tested: Drinking water		
1	pH	-	IS 3025 (Part 11) : 2022	6.5 to 8.5	No relaxation	7.18 at 23°C
2	Turbidity	NTU	IS 3025 : (Part 10) : 2023	1	5	0.1
3	Total dissolved solids	mg/l	IS 3025 (Part 16) : 2023	500	2000	476
4	Total Alkalinity (as Calcium Carbonate)	mg/l	IS 3025 (Part 23) : 1986	200	600	164.29
5	Total hardness (as CaCO <sub>3</sub> )	mg/l	IS 3025 (Part 21) Clause 5 : 2009	200	600	180
6	Calcium (as Ca)	mg/l	IS 3025 (Part 40) Clause 5 : 1991	75	200	52.63
7	Magnesium (as Mg)	mg/l	IS 3025 (Part 46) Clause 6 : 1994	30	100	11.57
8	Sulphate (as SO <sub>4</sub> )	mg/l	IS 3025 (Part 24/ Sec1) Clause 5 : 2022	200	400	9.31
9	Nitrate (as NO <sub>3</sub> )	mg/l	APHA 23 <sup>rd</sup> edition: Method 4500-NO <sub>3</sub> -2017	45	No relaxation	3.82
10	Chloride (as Cl)	mg/l	IS 3025 (Part 52) Clause 2:1988	250	1000	28.53
11	Fluoride (as F)	mg/l	IS 3025 (Part 60) Clause 6 : 2008	1.0	1.5	0.16
12	Phenolic compounds	mg/l	IS 3025 (Part 43/Sec 1) Clause 6: 1992	0.001	0.002	BLQ (LOQ-0.001)

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REMARKS: As requested by the client, sample was tested for above parameters only. The submitted sample complies with requirement as per IS: 10500:2012, for tests conducted only.


**Verified By**  
  
 Snehal Raut  
 Technical Manager

**Authorized Signatory**  
  
 Chintan Gargi  
 Deputy Quality Manager


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

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**Anacon Laboratories**



TC-12998

*Test Report*

Test Report No.: ALPL/30092024/1-9 dated: 30/09/2024 Page 1 of 1


<b>Issued To :</b> TATA STEEL LIMITED FAP JODA, Konihar, FAMD, ODISHA-758034 (India)	<b>Sample Inward No.</b> ALPL/23092024/MON-41- EW-1/2-1 & 2 <b>Inward Date</b> 23/09/2024 <b>Reference</b> W.O.- 300144107/056 19.04.2022	<b>Analysis Start</b> 23/09/2024 <b>Analysis End</b> 30/09/2024 <b>Report Issue Date</b> 30/09/2024	
---	--	--	--




<b>Sample Name</b> Surface Water	<b>Sample Source</b> 1. Upstream 2. Downstream	<b>Sample Particulars</b> Sample Code-SW-1 & 2	<b>Sample Condition</b> Sealed & Ice Preserved
<b>Sample Collected By</b> Mr. Rasel Khan	<b>Sampling Date</b> 20/09/2024	<b>Sampling Time</b> 12.15 & 12.55 pm	<b>Sampling Location</b> 1. Sona River Upstream (SW-1) 2. Sona River Downstream (SW-2)

S.N.	Test Parameter	Measurement Unit	Test Method	Standards as per IS 2296:1992 Class C	Test Result	
					SW-1	SW-2
<b>TEST RESULTS</b>						
<b>Discipline : Biological</b>						
I	Coliform	MPN/100ml	IS 1622 : 1981	5000	BDL(DL-2)	BDL(DL-2)
<b>Discipline : Chemical</b>						
II	pH value	-	IS 3025 (Part 11) : 2022	6.0 to 9.0	6.41 at 25°C	6.73 at 25°C
3	Colour	Hazen units	IS 3025 (Part 41) : 2021	300	14	12
4	Dissolved Oxygen	mg/l	IS 3025 (Part 30) : 1989	4.0	8.8	6.4
5	Total Suspended Solid (as TSS)	mg/l	IS 3025 (Part 17) : 2022	---	23	16
6	BOD (3 days at 27°C)	mg/l	IS-3025 (Part 44) : 2021	3.0	2.51	2.17
7	Chemical oxygen demand	mg/l	IS-3025 (Part 58) : 2022	---	6.92	5.82
8	Total Dissolved Solids (TDS)	mg/l	IS 3025 : (Part 16) : 2023	1500	1436	1291
9	Copper (as Cu)	mg/l	IS 3025 (Part 2) : 2019	1.5	0.06	0.03
10	Chloride (as Cl)	mg/l	IS 3025 (Part 32) : 1988	600	252	194
11	Sulphate (as SO <sub>4</sub> )	mg/l	IS 3025 (Part 24) : 2022	400	136	107
12	Nitrate (as NO <sub>3</sub> )	mg/l	APHA method 23rd edition: 2017	50	16.24	13.58
13	Fluoride (as F)	mg/l	IS 3025 (Part 60) : 2008	1.5	0.26	0.17
14	Cyanide (as CN)	mg/l	IS 3025 (Part 27) : 2021	0.05	BDL(DL-0.005)	BDL(DL-0.005)
15	Phenolic compounds (as C <sub>6</sub> H <sub>5</sub> OH)	mg/l	IS 3025 (Part 43) : 1992	0.005	BDL(DL-0.001)	BDL(DL-0.001)
16	Anionic Detergents (as MBAS)	mg/l	IS 13428 (Annex K) : 2005	1.0	BDL(DL-0.01)	BDL(DL-0.01)
17	Oil & Grease	mg/l	IS-3025 (Part 39) : 2021	---	BDL(DL-4)	BDL(DL-4)
18	Dissolved Phosphate (as P)	mg/l	IS 3025 (Part 31) : 1988	---	0.43	0.37
19	Ammonical Nitrogen (as N)	mg/l	IS 3025 (Part 34) : 1988	---	21.52	16.94
20	Nitrate Nitrogen	mg/l	APHA Method	---	4.81	3.76
<b>Discipline : Chemical</b>						
III	Iron (as Fe)	mg/l	IS 3025 (Part 2) : 2019	0.5	0.41	0.38
22	Cadmium (as Cd)	mg/l	IS 3025 (Part 2) : 2019	0.01	BDL(DL-0.002)	BDL(DL-0.002)
23	Selenium (as Se)	mg/l	IS 3025 (Part 56) : 2003	0.05	BDL(DL-0.01)	BDL(DL-0.01)
24	Arsenic (as As)	mg/l	IS 3025 (Part 37) : 2022	0.2	BDL(DL-0.01)	BDL(DL-0.01)
25	Lead (as Pb)	mg/l	3025 (Part 2) : 2019	0.1	BDL(DL-0.01)	BDL(DL-0.01)
26	Zinc (as Zn)	mg/l	IS 3025 (Part 2) : 2019	15	BDL(DL-0.02)	BDL(DL-0.02)
27	Hexa Chromium (as Cr <sup>6+</sup> )	mg/l	IS 3025 (Part 52) : 2003	0.05	BDL(DL-0.01)	BDL(DL-0.01)
28	Mercury (as Hg)	mg/l	IS 3025 (Part 48) : 1994	---	BDL(DL-0.001)	BDL(DL-0.001)
29	Manganese (as Mn)	mg/l	IS 3025 (Part 2) : 2019	---	BDL(DL-0.02)	BDL(DL-0.02)

NOTES: # Please see watermark "Original Test Report" to confirm the authenticity of this report. # Results shall be referred to tested sample(s) and applicable to tested parameters only. # Test report shall not be reproduced except in full without prior written approval of Anacon Labs. # Liability of Anacon Labs is limited to invoiced amount only. # Non-perishable and perishable sample(s) shall be disposed off after 30 days and 15 days respectively from the date of issue of Test Report, unless specified otherwise. # "mg/l" is equivalent to "ppm". # BDL- below detection limit. # DL- Indicates detection limit of instrument/method and shall be considered as "absence".

REMARKS: As requested by the client, sample was tested for above parameters only.

**Verified By**  
  
 Pradya Pillwan  
 Deputy Technical Manager


**Authorized Signatories**  
  
 Snehal Raut  
 Technical Manager  
  
 Porja Kishore  
 Technical Manager  
  
 Chintan Gargi  
 Deputy Quality Manager

Thank you for instilling your trust and faith in our services. We cherish our relationship with you, and we put in a lot of hard work in making sure that you get a seamless experience at every stage of your interaction with us. In our constant endeavour towards ensuring that your next experience will be significantly better than the current one, we welcome your feedback on [feedback@anacon.in](mailto:feedback@anacon.in).

## **Annexure-11**

### **Risk & Disaster Mitigation Plan submission covering Letter.**

#### **Risk & Disaster Management Plan Submitted to OSCPCB, Bhubaneswar**



Ref. No. FAPJ/ 4251 /2016 Dated : 01.02.2016

To  
The Chairman  
Orissa Pollution Control Board  
Paribesh Bhawan  
A/118, Nilkantha Nagar  
Unit-VIII, Bhubaneswar - 751012

Sub : Submission of Risk & Disaster Management Plan along with the mitigation measures  
for expansion of Ferro Manganese Plant, Joda.

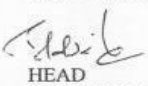
Sir,

It may kindly be aware that with reference to Environment Clearance issued for expansion of Ferro Manganese Plant, Joda, vide F. No. J-11011/03/2012-LA.II (I) dated 5<sup>th</sup> November, 2015, there is a specific condition mentioned in clause (xi) for submission of Risk & Disaster Management Plan along with the mitigation measures.

As such, we hereby enclose the Risk & Disaster Management Plan along with the mitigation measures for expansion of Ferro Manganese Plant from 0.0504 MTPA to 0.06 MTPA, Silico Manganese Plant of 0.06 MTPA and Manganese Sinter Plant of 0.05 MTPA.


Thanking you,

Yours faithfully,  
For TATA STEEL Ltd.

  
HEAD  
FERRO ALLOYS PLANT, JODA

Encl : as above.

*Received*  
*24/2/16*



**TATA STEEL LIMITED**

Ferro Alloys Plant, Joda-756034, Dist. Keonjhar, Odisha, India  
Tel. : 09238100945, e-mail : headoffice.fapj@tatasteel.com  
Registered Office : Bombay House, 24, Horni Mody Street, Fort, Mumbai-400001, India  
Tel. 91 22 66658282, Fax 91 22 66657724  
Corporate Identity Number L27100MH1907PLC000260, Website : www.tatasteel.com

**Risk & Disaster Management Plan Submitted to MOEF, Regional Office, Bhubaneswar**



Ref. No. FAPJ/ 4250 /2016

Dated : 01.02.2016

To  
The Additional Principal Chief Conservator of Forests(C)  
Ministry of Environment & Forests  
Regional office (EZ)  
A/3, Chandersekharpur,  
Bhubaneswar - 751023

Sub : Submission of Risk & Disaster Management Plan along with the mitigation measures  
for expansion of Ferro Manganese Plant, Joda.

Sir,

It may kindly be aware that with reference to Environment Clearance issued for expansion of Ferro Manganese Plant, Joda, vide F. No. J-11011/03/2012-IA.II (I) dated 5<sup>th</sup> November, 2015, there is a specific condition mentioned in clause (xi) for submission of Risk & Disaster Management Plan along with the mitigation measures.

As such, we hereby enclose the Risk & Disaster Management Plan along with the mitigation measures for expansion of Ferro Manganese Plant from 0.0504 MTPA to 0.06 MTPA, Silico Manganese Plant of 0.06 MTPA and Manganese Sinter Plant of 0.05 MTPA.  
Thanking you,

Yours faithfully,  
For TATA STEEL Ltd.

HEAD  
FERRO ALLOYS PLANT, JODA

Encl : as above.



**TATA STEEL LIMITED**

Ferro Alloys Plant, Joda-758034, Dist. Keonjhar, Odisha, India  
Tel. : 09238100945, e-mail : headoffice.fapj@tatasteel.com  
Registered Office : Bombay House, 24, Horni Mody Street, Fort, Mumbai-400001, India  
Tel. 91 22 66658282, Fax 91 22 66657724  
Corporate Identity Number L27100MH1907PLC000260, Website : www.tatasteel.com

**Annexure – 12**  
**Photographs of Greenbelt developed**



### **Annexure- 13**

#### **Details of CSR funds allocated and released Expenditure against CSR Activities**

<b>Period</b>	<b>Year-wise expenditure Planning in (Rs. Cr.)</b>	<b>Actual Expenditure for C.S.R. in Rs. Cr.</b>	<b>Name of CSR activities (Joda region)</b>
2018-19	10.21 Cr.	9.50 Cr.	Health, Drinking Water, Education, Rural Infra, Roads & Drains, Livelihood (Agriculture & Enterprise Dev.), Skill Development, Disability Screening Camp- 82 patients were provided with Prosthetics and orthopaedic aids and appliances, Support of School Infrastructure- SSVM, Joda, Support of School Infrastructure- Joda Valley Girls School, Construction of drain at Kundrunala, Awareness on flora and fauna
2019-20	13.02 Cr	12.8 Cr	Health, Education, Livelihood, Rural Infrastructure, Major Project Like Kalyan Mandap in Joda
2020-21	18.84 Cr.	16.61 Cr.	Construction of Three bathing Ghat & two change room, Construction & renovation of Community Resource Centre (CRC) for their cultural & community needs, 115 toilets constructed in Kundrupani village, mobile medical units and ambulances, waiver for free treatment at Tata Steel Hospital, Joda, School improvement project (1000 Schools project), Women Empowerment Programmes.
2021-22	17.59 Cr.	14.53 Cr	Health, Drinking Water, Education, Rural Infra, Roads & Drains, Livelihood (Agriculture & Enterprise Dev.), Skill Development, Support of School Infrastructure- SSVM, Joda, Construction of total 111 nos. of IHHL at Palsa Kha & Ka village, mobile medical units and ambulances, waiver for free treatment at Tata Steel Hospital, Joda, School improvement project (1000 Schools project), Community Resource Centre (CRC) for their cultural & community needs.
2022-23 (Apr-Sep)	13.80 Cr	5.83 Cr	Health, Drinking Water, Education, Rural Infra, Roads & Drains, Livelihood (Agriculture & Enterprise Dev.), Skill Development, Support of School Infrastructure- SSVM, Joda, Construction of total 111 nos. of IHHL at Palsa Kha & Ka village, mobile medical units and ambulances, waiver for free treatment at Tata Steel Hospital, Joda, School improvement project (1000 Schools project), Community Resource Centre (CRC) for their cultural & community needs.
2022-23 (Oct-Mar)		7.94 Cr	Health, Drinking Water, Education, Rural Infra, Roads & Drains, Livelihood (Agriculture & Enterprise Dev.), Skill Development, Support of School Infrastructure- SSVM, Joda, Sports & Sports Infra Development, Agriculture equipment support, mobile medical units and ambulances, waiver for free treatment at Tata Steel Hospital, Joda, School improvement project (1000 Schools project), Community Resource Centre (CRC) for their cultural & community needs.
2023-24	34.78	30.44	Health, Drinking Water, Education, Rural Infra, Roads & Drains, Livelihood (Agriculture & Enterprise Dev.), Skill Development, Support of School Infrastructure- Joda, mobile medical units and ambulances, waiver for free treatment at Tata Steel Hospital, Joda, School improvement project (1000 Schools project), Community Resource Centre (CRC) for their cultural & community needs
2024-25 (April – Sep)	17.7	6.13	Health, Drinking Water, Education, Rural Infra, Roads & Drains, Livelihood (Agriculture & Enterprise Dev.), Skill Development, Support of School Infrastructure Joda, mobile medical units and ambulances, waiver for free treatment at Tata Steel Hospital, Joda, School improvement project (1000 Schools project), Community Resource Centre (CRC) for their cultural & community needs

Six Monthly Compliance Report to the Terms of Conditions of Environmental Clearance granted in favor of Ferro Alloys Plant,  
Joda, M/s Tata Steel Limited for April'24 to September'2024

## Annexure- 14

### Noise Monitoring Report



**Anacon  
Laboratories**

Anacon Laboratories Pvt. Ltd. Nagpur Lab  
9 FP-34, 35 Food Park, Five Star Industrial Estate,  
MIDC Butibori, Nagpur, Maharashtra, India - 441 122  
☎ + 91 8045685558 ✉ Email : info@anacon.in  
🌐 https://www.anaconlaboratories.com

Test Report

Page 1 of 1

#### AMBIENT NOISE REPORT

Report No.:	ALPL/29062024/1	Report Date:	29/06/2024
Issued to:	TATA STEEL LIMITED		
Address	FAP Joda, Keonjhar, FAMD, ODISHA-758034 (India).		
Type of Work:	Ambient Noise (June-2024)	Sample Inward No.:	ALPL/21062024/ ENV-159-N
Sample Drawn By:	Anacon Representative	Date Received Date:	21/06/2024
Monitoring Date	12/06/2024 to 17/06/2024	Method	IS 9989:1981(R2001)
Sampling Procedure	ANtd/7.2/Mon-01		

Sr. No.	Sampling Location	Results dB(A)	
		Day Time	Night Time
1	Infront of Store	63.1	54.7
2	Near Weight Bridge	72.8	64.9
3	Loader 2mtr distance	61.2	53.1
4	Crusher Area	64.7	56.2
5	Near Back Gate	67.1	62.8
6	Breaking Yard ( During Work )	63.9	46.1
7	Plot No 4 B	53.6	39.2
8	Area Furnance Ground Floor	68.2	56.7
9	Area Furnance Floor	64.9	52.8
10	Pit Site Area	52.6	43.1
11	Near Cooling Tower	68.2	54.9
12	Pump House ( Inside)	62.8	47.3
13	Telphar Floor	48.1	36.9
14	GCP Floor (1 mtr away From Blower)	61.7	53.8
15	ACS Area	62.1	53.4
16	CMDs Area	56.7	42.9
17	Office Area	53.6	41.8
18	Quality Control Analysis Lab	48.1	37.4
19	Laboratory Crusher room ( During work)	51.9	43.6
20	Canteen Kitchen	62.1	48.3
21	Near Main Gate	72.7	53.9
22	D.G Room	67.1	56.2
23	Locomotive During Operation	52.9	41.7
CPCB Standards		Industrial Area	75
			70

NOTES: A) Please see watermark "Original Test Report" to confirm the authenticity of this report. • Results shall be referred to tested sample(s) and applicable to tested parameters only. • Test report shall not be reproduced except in full without prior written approval of Anacon Labs.

Remark: - All Results are within Limit as per CPCB Standards.

Verified by  
  
Snehal Raut  
Technical Manager

Authorized Signatory  
  
Dr. (Mrs.) S. D. Garway  
Quality Manager

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

Thank you for instilling your trust and faith in our services. We cherish our relationship with you, and we put in a lot of hard work in making sure that you get a seamless experience at every stage of your interaction with us. In our constant endeavor towards ensuring that your next experience will be significantly better than the current one, we welcome your feedback on [feedback@anacon.in](mailto:feedback@anacon.in).



**Anacon  
Laboratories**

Anacon Laboratories Pvt. Ltd. Nagpur Lab  
9 FP-34, 35 Food Park, Five Star Industrial Estate,  
MIDC Butibori, Nagpur, Maharashtra, India - 441 122  
☎ + 91 8045685558 ✉ Email : info@anacon.in  
🌐 https://www.anaconlaboratories.com

Test Report

Page 1 of 1

#### AMBIENT NOISE REPORT

Report No.:	ALPL/30102024/1-5	Report Date:	30/10/2024
Issued to:	TATA STEEL LIMITED		
Address	FAP Joda, Keonjhar, FAMD, ODISHA-758034 (India).		
Type of Work:	Ambient Noise (October-2024)	Sample Inward No.:	ALPL/21102024/ MON-41-NQ-1/23
Sampling by	Anacon Representative Mr. Rahul Mazi	Date Received Date:	21/10/2024
Monitoring Date	14/10/2024 to 18/10/2024	Method	IS 9989
Sampling Procedure	ANtd/7.2/Mon-01		

Sr. No.	Sampling Location	Results dB(A)	
		Day Time	Night Time
1	Infront of Store	62.1	53.9
2	Near Weight Bridge	71.6	62.8
3	Loader 2mtr distance	58.3	51.2
4	Crusher Area	67.1	58.6
5	Near Back Gate	64.9	53.1
6	Breaking Yard ( During Work )	62.7	42.8
7	Plot No 4 B	51.6	37.3
8	Area Furnance Ground Floor	67.2	54.6
9	Area Furnance Floor	62.7	51.8
10	Pit Site Area	53.9	42.1
11	Near Cooling Tower	62.1	53.7
12	Pump House ( Inside)	56.3	43.9
13	Telphar Floor	47.1	38.6
14	GCP Floor (1 mtr away From Blower)	68.2	54.9
15	ACS Area	61.7	51.3
16	CMDs Area	57.8	43.9
17	Office Area	52.4	42.8
18	Quality Control Analysis Lab	47.9	38.2
19	Laboratory Crusher room ( During work)	56.7	43.1
20	Canteen Kitchen	61.3	48.7
21	Near Main Gate	71.6	57.1
22	D.G Room	69.2	58.4
23	Locomotive During Operation	51.6	43.9
CPCB Standards		Industrial Area	75
			70

NOTES: A) Please see watermark "Original Test Report" to confirm the authenticity of this report. • Results shall be referred to tested sample(s) and applicable to tested parameters only. • Test report shall not be reproduced except in full without prior written approval of Anacon Labs.

Remark: - All Results are within Limit as per CPCB Standards.

Verified by  
  
Snehal Raut  
Technical Manager


Authorized Signatory  
  
Chinmay Garway  
Deputy Quality Manager

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

Thank you for instilling your trust and faith in our services. We cherish our relationship with you, and we put in a lot of hard work in making sure that you get a seamless experience at every stage of your interaction with us. In our constant endeavor towards ensuring that your next experience will be significantly better than the current one, we welcome your feedback on [feedback@anacon.in](mailto:feedback@anacon.in).

## Annexure- 15

### **Sample Periodic Medical Examination Record**

[ Form No. 31- A ]		Health Record -			
Pre-Employment/Periodical		[Prescribed Under Rule 62 - J]		Date : 03/11/23 Page 1 of 2	
Emp. Code :					
1) Name of the Factory :	TATA (QUESS CORP)	12) Cardiovascular system			
2) Name of Employee :	BISWARANJAN PRADHAN	. Pulse rate :	80	/min	
3) Employee distinguishing No:	TSP/905696/1023	. B.P. :	98/72	mmHg	
4) Age of the Employee :	29 Yrs.	. Heart Sound :	NORMAL		
. Identification Mark :	CUT MARK ON LT HAND	. E.C.G. :	NORMAL		
. Nature of Job :	SUPERVISOR	Remarks if any :	GOOD		
5) Date of Employment :	11.09.2023	13) Abdomen			
6) Length of Service in Years :	01 MONTH	Tenderness :	NO		
7) General Survey		Liver :	NORMAL		
. Health :	GOOD	Spleen :	NORMAL		
. Height :	160	14) Nervous system :	NORMAL		
. Weight :	70	. History of fits :	NO		
. BMI :	27.3	. Epilepsy :	NO		
8) Blood Group :	"B"	Remarks on Mental Health :	GOOD		
. Rh Typing :	POSITIVE	15) Locomotor system :	NORMAL		
9) Eye vision :	NORMAL	16) Skin condition :	NORMAL		
. Use of glass :	NO	17) Hernia :	ABSENT		
Distance Vision :	RE: 6/6 LE: 6/6	18) Hydrocele :	ABSENT		
Near Vision :	RE: N/6 LE: N/6	19) Present complain :	NO		
Colour Vision :	NORMAL	if any			
10) Hearing :	NORMAL				
. Audiometry :	NORMAL				
Right Ear :	NORMAL dB				
Left Ear :	NORMAL dB				
11) Respiratory system and chest measurement					
. Inspiration :	102				
. Expiration :	98				
. Respirate rate/min :	16				
. P.F.T :	NORMAL				
. FVC :	NORMAL				
. FEV1/FVC :	NORMAL				
. X-Ray :					
Remark if any :					

### **Annexure-16**

<b>Budget for Environment Management in FY-25</b>			
<b>Sl. No</b>	<b>Activity</b>	<b>A. Capital (Rs. In Lakhs)</b>	<b>B. Recurring (Rs. In Lakhs)</b>
1.	Annual Operation & maintenance of all four the Gas Cleaning Plant, Annual Maintenance of Fume Extraction System	-	25
2.	Solid Liquid Separation Plant Operation & Maintenance	-	23
3.	Annual Operation & maintenance of High velocity mobile type rotary water sprinkler	-	2
4.	Maintenance of existing fixed water sprinkler	-	2
5.	Extensive Plantation in and around the Plant	-	0.5
6.	Operation and Maintenance of dry fog system	-	0.5
7.	Operation and Maintenance of Effluent Treatment Plant and STP	-	32
8.	Maintenance of CAAQMS and spares	-	10
9.	Environmental Monitoring by third party	-	8.5
10.	Annual Water Audit	-	4.5
	<b>Total</b>	-	
	<b>Total (A+B): In Lakhs</b>		108

**Annexure -17**

**Intimation Letter of EC to Zila Parishad**



Ref : FAPJ/ 4136 /2015  
Date : 9<sup>th</sup> Nov, 2015

To  
President  
Zilla Parishad  
Keonjhar

**Sub: Intimation of obtaining Environmental Clearance under EIA Notification-2006 for  
the expansion of Ferro Alloys Plant of TATA STEEL Ltd., Joda, Keonjhar District.**

Dear Sir/ Madam,

Received  
Xerox copy  
of Environmental  
clearance

Rh  
12-11-15  
P.A. to President  
Zilla Parishad  
Keonjhar

We would like to inform you that Ministry of Environment Forests & Climate Change (MOEF&CC), Govt. Of India has granted Environmental Clearance for the expansion of capacity of our existing Ferro Manganese Plant from 0.0504 MTPA to 0.06 MTPA with 0.05 MTPA Sinter Plant & addition of 2\*18 MVA SAF for 0.06 MTPA Slico Manganese production at our Ferro Alloys Plant, Joda, Odisha vide letter No. F. No. J-11011/03/2012- IA II ( I) dt 05.11.2015.

We therefore request your good-self to kindly acknowledge the receipt of above letter.

Yours Faithfully  
F: Tata Steel Limited

HEAD  
FERRO ALLOYS PLANT, JODA

**Enclosed:**

1. Xerox copy of Environmental Clearance

**TATA STEEL LIMITED**

Ferro Alloys Plant, Joda-758034, Dist. Keonjhar, Odisha, India  
Tel. : 09238100945, e-mail : headoffice.fapj@tatasteel.com  
Registered Office : Bombay House, 24, Homi Mody Street, Fort, Mumbai-400001, India  
Tel. 91 22 66658282, Fax 91 22 66657724  
Corporate Identity Number L27100MH1907PLC000260, Website : www.tatasteel.com

## **Intimation Letter of EC to Chairman, Joda Municipality**



Ref : FAPJ/ 4135 /2015  
Date : 9<sup>th</sup> Nov, 2015

To  
Chairman  
Joda Municipality  
Joda.

**Sub: Intimation of obtaining Environmental Clearance under EIA Notification-2006 for  
the expansion of Ferro Alloys Plant of TATA STEEL Ltd., Joda, Keonjhar District.**

Dear Sir/ Madam,

We would like to inform you that Ministry of Environment Forests & Climate Change (MOEF&CC), Govt. Of India has granted Environmental Clearance for the expansion of capacity of our existing Ferro Manganese Plant from 0.0504 MTPA to 0.06 MTPA with 0.05 MTPA Sinter Plant & addition of 2\*18 MVA SAF for 0.06 MTPA Slico Manganese production at our Ferro Alloys Plant, Joda, Odisha vide letter No. F. No. J-11011/03/2012- IA II ( I ) dt 05.11.2015.

We therefore request your good-self to kindly acknowledge the receipt of above letter.

Yours Faithfully  
F: Tata Steel Limited

HEAD  
FERRO ALLOYS PLANT, JODA



**Enclosed:**

1. Xerox copy of Environmental Clearance

### **TATA STEEL LIMITED**

Ferro Alloys Plant, Joda-758034, Dist. Keonjhar, Odisha, India  
Tel. : 09238100945, e-mail : headoffice.fapj@tatasteel.com  
Registered Office : Bombay House, 24, Homi Mody Street, Fort, Mumbai-400001, India  
Tel. 91 22 66658282, Fax 91 22 66657724  
Corporate Identity Number L27100MH1907PLC000260, Website : www.tatasteel.com

Six Monthly Compliance Report to the Terms of Conditions of Environmental Clearance granted in favor of Ferro Alloys Plant, Joda, M/s Tata Steel Limited for April'24 to September'2024

**Annexure -18**

**Six-Monthly Compliance Reports Uploaded in Tata Steel's Website**

<https://www.tatasteel.com/corporate/our-organisation/environment/environment-compliance-reports/>

TATA STEEL

EXPANSION of Production from 12 MTPA to 19.5 MTPA of Joda East Iron Mine, M/s- Tata Steel Ltd

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Environment

Environment Compliance Reports

Half- yearly EC Compliance Report of Joda East Iron Mine for period April 2023 to September 2023

Joda January 25, 2024

Half Yearly EC Compliance\_ April'23 to September'23\_FAP Joda\_Tata Steel Limited

Joda November 29, 2023

Annual SDF Performance Bamebari Iron & Mn Mines-2021-22

Joda September 30, 2023

Annual SDF Performance Joda West Iron & Mn Mines-2021-22

Joda September 30, 2023

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15:16

22-05-2024

Your (Environment Clearance) application has been Submitted with following details

Proposal No	IA/OR/IND/4054/2012.
Compliance ID	27841274
Compliance Number(For Tracking)	EC/M/COMPLIANCE/27841274/2024
Reporting Year	2024
Reporting Period	01 Jun(01 Oct - 31 Mar)
Submission Date	23-05-2024
IRO Name	ARTATRANA MISHRA
IRO Email	jhk109@ifs.nic.in
State	ODISHA
IRO Office Address	Integrated Regional Offices, Bhubaneswar

**Note:-** SMS and E-Mail has been sent to ARTATRANA MISHRA, ODISHA with Notification to Project Proponent.

5/23/24, 10:00 AM

Uploaded Compliances

Ministry of Environment, Forest and Climate Change

LIFE

75

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Welcome Sabyasachy Mishra, Project Proponent

List of Uploaded Compliances

Sr.No.	Proposal No. / Name of Project	Compliance No. / EC Letter Number	State and District	Year of Compliance	Period of Compliance	Remarks	Uploaded Date	Status
1	IA/OR/IND/4054/2012. Ferro Alloys Plant, Joda, Tata Steel Limited	EC/M/COMPLIANCE/27841274/2024 J-11011/03/2012-IA II (I)	ODISHA KENDUJHAR	2024	01 Jun(01 Oct - 31 Mar)	Submission of half-yearly compliance report on the stipulated environmental clearance terms and conditions in respect of Ferro Alloys Plant, Joda of M/s TATA Steel Ltd., for the period from October 2023 to March 2024.	23-05-2024	Submitted Successfully

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## Annexure -19

### Covering Letter of Form V. Environment statement submission



Ref. No. FAMD/FAPJ/ 249 /FY24

Dated: 26/09/2024.

The Member Secretary  
State Pollution Control Board, Odisha  
Paribesh Bhavan  
A/118, Nilakantha Nagar, Unit-VIII  
Bhubaneswar-751012

Sub: Submission of Environmental Statement of Ferro Manganese Plant, Joda for the period of 2023-24.

Dear Sir,

We are submitting one set of Annual Environmental Statement in FORM-V dully filled in for the year 2023-2024 in respect of M/s Ferro Manganese Plant, Joda by Tata steel for your kind consideration.

We wish to maintain that necessary control measures have been installed and adopted to minimize the impact on environment.

We look forward to further your guidance which shall certainly help us in endeavoring further improvements in our Environmental Management Practices.

Thanking you,

Yours faithfully,  
For: TATA STEEL LTD.

Head & Factory Manager  
Ferro Manganese Plant,  
Joda

Encl: as above.

Copy to - Regional Officer, OPCR, At-Baniapatt, College Road, Keonjhar - with enclosure.

TATA STEEL LTD.  
Ferro Alloys & Minerals Division  
Ferro Manganese Plant, Joda  
Joda - 758034, Odisha, India  
Tel: 09238100945, e-mail - head.office@tatasteel.com  
Regd. Office: Bombay House, 24 Homi Mody Street, Mumbai - 400 001

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## ENVIRONMENT STATEMENT

FOR THE FINANCIAL YEAR 2023-24

Submitted to SPCB under Rule 14 of The Environment (Protection) Rules 1986

**TATA STEEL LIMITED**  
**FERRO MANGANESE PLANT**  
**JODA, KEONJHAR**

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TATA STEEL

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Environmental Statement of Power House unit of West Bokaro Division for the year 2023-24

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Environmental Statement of Washery-II unit of West Bokaro Division for the year 2023-24

West Bokaro September 30, 2024

Annual Environmental Statement – Year 2023-24 – Ferro Alloys Plant, Joda\_Tata Steel Limited

Ferro Alloys Plant, Joda September 30, 2024

Environment Statement for the year 2023-24 for Sukinda Chromite Mine

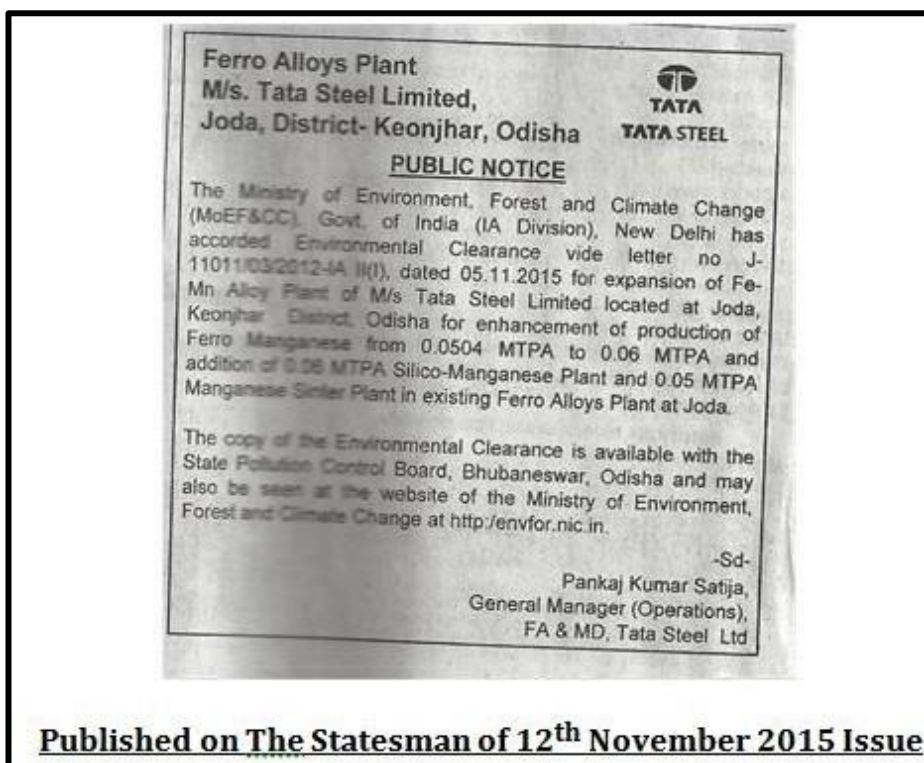
Sukinda September 26, 2024

CANCEL AUDIO

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## **Annexure-20**

### **Details of Publication on the Newspapers**



**Published on The Statesman of 12<sup>th</sup> November 2015 Issue**

**Six Monthly Compliance Report to the Terms of Conditions of Environmental Clearance granted in favor of Ferro Alloys Plant, Joda, M/s Tata Steel Limited for April'24 to September'2024**



**Published on Sambad of 13<sup>th</sup> November 2015 Issue**

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