



Ref. No.: FAMD/FAPJ/412/FY23

Date: 29.11.2022

**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'2022to September'2022.

Reference:

- 1) MoEF File No: J-11011/03/2012-IA II (I) DATED 5th Nov 2015.
- 2) MoEF&CC's notification vide S.O-5845 (E), dt. 28th 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 5th Nov 2015** in respect of Ferro Alloys Plant, Joda of M/s TATA Steel Ltd. for the period from April'2022to September'2022 for your kind perusal.

This is in reference to the MoEF&CC's notification vide S.O-5845, dt. 28th 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.

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) Zonal Office Kolkata, Central Pollution Control Board, South end Conclave, Block 502, 5th and 6th Floors, 1582 Rajdanga Main Road, Kolkata, West Bengal 700107.
- 2) The Member Secretary, State Pollution Control Board, A/118, Nilakantha Nagar, Bhubaneswar, Odisha-751012.
- 3) 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 5th November 2015)

Period: April'2022 – Sep'2022

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'22 to September'2022

A. SPECIFIC CONDITION:

Sl. No.	Specific Condition	Compliance Status (April'22 to Sep'2022)
I	<p>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>	<p align="center"><u>Complied.</u></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&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 Annexure-1.</p> <p>Detailed Monitoring Reports for the period from April'22 to Sep'22 is enclosed as Annexure-2.</p>
II	<p>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 50 mg/Nm³ and installing energy efficient technology.</p>	<p align="center"><u>Complied.</u></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 with capital expenditure of around Rs.4.0 Cr. 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_x), Oxides of Nitrogen (NO_x). 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>Photographs of Pollution Control Measures (GCP) and Continuous Emission Monitoring System is enclosed as Annexure-3.</p> <p>Abstract of Stack Emission Monitoring Results (Detailed Reports) are enclosed as Annexure-4.</p>

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'22 to September'2022

Sl. No.	Specific Condition	Compliance Status (April'22 to Sep'2022)
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"><u>Complied.</u></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">Pl. Refer to Annexure-1 & Annexure-2.</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 th May, 2008 should be followed.	<p align="center"><u>Complied.</u></p> <p>Following the standards notified by the Ministry vide G.S.R. 414 (E) dated 30th May 2008, fugitive dust emission is monitored at strategic locations such as Slag Crusher Area, Raw Material Storage Yard, Feed hopper on quarterly basis for Particulate Matter. Sampling and Analysis is carried out by an MoEF&CC recognised laboratory.</p> <p>The results confirm that fugitive dust emission is well within the permissible limit of 2000 µg/m³. Monitoring Results of past two quarters is enclosed as Annexure-5.</p>
V	Water sprinkling arrangements as well as dry fog system to control fugitive emission shall be undertaken.	<p align="center"><u>Complied.</u></p> <p>For containing fugitive dust generation from the roads within plant premises, capital project for development of RCC road over 3.0 Kms with an expenditure of around 1.3Cr has been completed.</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>Photographs of RCC roads and Fixed Sprinkling arrangements are enclosed as Annexure-6.</p>
VI	Tap hole emissions shall be taken to GCP system by providing proper hood and suction system.	<p align="center"><u>Complied.</u></p> <p>Two nos. of fume extraction system are in place for existing plant with proper hooding and suction facility to take care of the taphole emissions. Photographs enclosed Annexure 7.</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"><u>Complied.</u></p> <p>Presently, a fully functional roof top rainwater harvesting cum recharging project at the administrative office and furnace building is in working stage. The potential of rainwater harvesting is around 1500 cu.m/year.</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 1200 cum/year.</p>

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'22 to September'2022

Sl. No.	Specific Condition	Compliance Status (April'22 to Sep'2022)
		<p>To reduce water consumption, close circuit cooling system is in operation. Specific water consumption at present for the plant is around 4.10 Kl/Tn of Product.</p> <p>Photographs of Rainwater Harvesting Project is enclosed as Annexure-8.</p>
VIII	<p>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>	<p align="center"><u>Complied.</u></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. Treated effluent is reused for gardening and horticulture purposes. Effluent samples from the STP are getting analysed on monthly basis.</p> <p>Photographs and Monitoring Reports are enclosed as Annexure-9.</p>
IX	<p>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>	<p align="center"><u>Complied.</u></p> <p>Monitoring of surface water (from Kundra nala/Sona River) is carried out on monthly basis. Similarly, ground water and subsurface water samples are also collected from the borewells as well as nearby peripheral areas on monthly basis. Sampling and analysis is carried out by an MoEF&CC as well as 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 April'22 to Sep'22 is enclosed as Annexure-10. Leachate study is also carried out by professional agencies during the monsoon season. Recently Detailed surface runoff as well as leachate analysis has been carried out by SGS. Study Report is enclosed.</p>
X	<p>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>	<p align="center"><u>Complied.</u></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>

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Sl. No.	Specific Condition	Compliance Status (April'22 to Sep'2022)
		During FY 2022-23, Total, slag generated 18443 MT approx. out of which 12725 MT approx. is sold to the Ferro Alloys Industry for making Si-Mn and rest used inhouse.
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"><u>Complied.</u></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> <ol style="list-style-type: none"> Letter no. FAPJ/4249/2016, dated. 01.02.2016 for Central Pollution Control Board, New Delhi, Letter no. FAP(J)/4250/2016, dated. 01.02.2016, for the erstwhile Ministry of Environment & Forest, Eastern Regional Office, Bhubaneswar Letter no. FAP(J)/4251/2016, dated. 01.02.2016 to State Pollution Control Board, Bhubaneswar. <p>[Copy of the letters is enclosed as Annexure-11</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"><u>Complied.</u></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 & Sinter Plant) in respect of which the subject EC has been granted.</p> <p>The said proposed expansion project has been initiated however it is envisaged that there would be significant delay to establish and commission the upcoming plants/projects for the purpose of which, an application for extension of the validity of prevailing Environmental Clearance is sought from the Ministry.</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 16 Acres with self-sustained plantation of around 16500 Nos.</p> <p>Photographs of greenbelt developed inside plant premises is enclosed as Annexure- 12.</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"><u>Complied.</u></p> <p>All the applicable recommendations of CREP have been implemented.</p>

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'22 to September'2022

Sl. No.	Specific Condition	Compliance Status (April'22 to Sep'2022)
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.	<u>Complied.</u> All the CSR measures are carried out by the CSR wing of the company under the banner of Tata Steel Foundation. During FY 22-23, the company has spent around Rs. 5.83 Crore on the strengthening of social welfare infrastructure of the area (Joda valley) from Ferro Alloys Division. Details of expenditure is provided as Annexure- 13.
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	<u>Complied.</u> There are no labour camps within the Site. However, workers are provided with all necessary infrastructure and facilities such as fuel for cooking mobile toilets, mobile STP, Safe drinking water, medical health care, crèche etc outside the plant premises.

B. General Conditions

Sl. No.	General Condition	Compliance Status (April'22 to Sep'2022)
I	The project authorities must strictly adhere to the stipulations made by the Odisha Pollution Control Board and the State Government.	<u>Complied.</u> 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).	<u>Noted.</u>
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.	<u>Complied.</u> 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. 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 waste water 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.	<u>Complied.</u> It has been followed. Treated wastewater is utilised for plantation/gardening purpose.

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'22 to September'2022

Sl. No.	General Condition	Compliance Status (April'22 to Sep'2022)
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).	<p align="center"><u>Complied.</u></p> <p>All the Noise generating sources have been provided with requisite acoustic enclosures. Ambient Noise level is also monitored at several places inside plant premises.</p> <p>Abstract of the Ambient Noise level Monitoring Result is enclosed as Annexure-15.</p>
VI	Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act	<p align="center"><u>Complied.</u></p> <p>Periodic medical check-ups were conducted yearly. Last medical check-up was done in November 2022 and 617 nos. of employees are examined including contractual employees. Records were maintained as per Orissa factory rule. Reports awaiting.</p> <p>[Last PME record sample is enclosed as Annexure 16]</p>
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"><u>Complied.</u></p> <p>Presently, a fully functional roof top rainwater harvesting cum recharging project at the administrative office and furnace building is in working stage. The potential of rainwater harvesting is around 1500 cu.m/year. 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 1200 cum/year. To reduce water consumption, close circuit cooling system is in operation. Specific water consumption at present for the plant is around 3.1 Kl/Tn of Product. Photographs of Rainwater Harvesting Projects are enclosed as Annexure-7.</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"><u>Complied.</u></p> <p>Necessary Environmental Protection Measures are implemented in line with the provision of EIA/EMP report. During FY 2022-23, the company kept a budget of Rs. 86.2 lakh (as Recurring) and Rs. 5 Crore approx. (Capital expenses for Effluent Treatment Plant) for the Environmental Protection Measures.</p> <p>Details of Environmental Expenditure for FY 2022-23 is enclosed as Annexure-17.</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 22-23, the company has spent around Rs. 5.83 crore on the strengthening of social welfare infrastructure of the area (Joda valley) from Ferro Alloys Division.</p> <p>Details of expenditure is provided as Annexure- 13.</p>

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'22 to September'2022

Sl. No.	General Condition	Compliance Status (April'22 to Sep'2022)
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"><u>Complied.</u></p> <p>During FY 2022-23, the company kept a budget of Rs. 86.2 lakh (as Recurring) and Rs. 5 Crore approx. (Capital expenses for Effluent Treatment Plant) for the Environmental Protection Measures.</p> <p>Details of Environmental Expenditure for FY 2022-23 is enclosed as Annexure-17.</p>
X	A copy of clearance letter shall be sent by the proponent to concern Panchayat, Zila Parishad/Municipal Corporation, Urban Local Body and the local NGO, if any, from whom suggestions/representations, if any, were received while processing the proposal. The clearance letter shall also be put on the web site of the company by the proponent.	<p align="center"><u>Complied.</u></p> <p>Already Complied. Intimation of obtaining Environmental Clearance is given to Zila Parishad vide letter No. FAPJ/4136/2015. Copy of Letter is given in Annexure-18</p>
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.	<p align="center"><u>Complied.</u></p> <p>The six-monthly compliance reports along with the monitoring results are uploaded in Tata Steel's website www.tatasteel.com for public view and updated periodically.</p> <p>Photograph is given in the Annexure - 19</p>
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.	<p align="center"><u>Complied.</u></p> <p>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/183/FY23 dt.19.05.2022 for the period from October-2021 to March-2022.</p>
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	<p align="center"><u>Complied.</u></p> <p>The Environment statement in Form V was submitted for the year 2021-22 on 29th Sep 2022 vide letter no.- Ref. No. FAMD/FAPJ/359/FY23 to SPCB, Bhubaneswar and</p>

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'22 to September'2022

Sl. No.	General Condition	Compliance Status (April'22 to Sep'2022)
	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.	Regional office, Keonjhar and the compliance of environmental conditions is uploaded on the website. [Copy of Letter is given in Annexure-20]
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 Climate Change (MoEFCC) at https://envfor.nic.in . 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.	<u>Complied.</u> Information regarding Environmental clearance issued is published on Sambad oriya newspaper on 13 th November issue and on the statesman English Newspaper of 13 th November issue. [Details of publication are given in Annexure -21]
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	Being Followed with. It will be strictly followed



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

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'22 to September'2022

ANNEXURE-1




ENVIRONMENTAL MONITORING RESULTS (APRIL'22 to SEPTEMBER'22)

Location	Main gate						
Parameters	NAAQ Standard	Apr-22	May-22	June-22	July-22	Aug-22	Sep-22
PM10	100(µg/m ³)	69.3	72.8	72.5	53.5	54.2	60.5
PM2.5	60 (µg/m ³)	42.5	43.7	43.5	32.1	20	21.7
SO2	80 (µg/m ³)	12.9	13.6	14.3	12.3	9	11.1
NO2	80(µg/m ³)	17.8	16.6	17.4	16.3	19.4	23.9
Carbon Monoxide (CO)	4(mg/m ³)	0.54	0.62	0.7	0.6	**	**
Location	Admin Building						
Parameters	NAAQ Standard	Apr-22	May-22	June-22	July-22	Aug-22	Sep-22
PM10	100(µg/m ³)	72.8	72.7	77.3	61.3	50.6	51.8
PM2.5	60 (µg/m ³)	46.9	43.6	46.4	37.1	17.7	18.5
SO2	80 (µg/m ³)	16.3	16.0	17.0	13.0	8.9	8.8
NO2	80(µg/m ³)	16.6	18.6	19.0	16.1	19.3	16.9
Carbon Monoxide (CO)	4(mg/m ³)	0.59	0.7	0.8	0.6	**	**
Location	Ore yard						
Parameters	NAAQ Standard	Apr-22	May-22	June-22	July-22	Aug-22	Sep-22
PM10	100(µg/m ³)	70.6	69.3	76.0	65.2	52.3	52.8
PM2.5	60 (µg/m ³)	44.8	41.6	45.6	39.2	20.1	17.7
SO2	80 (µg/m ³)	16.1	17.1	18.6	15.3	8.7	8.1
NO2	80(µg/m ³)	19.9	18.8	19.6	16.7	18.3	16.7
Carbon Monoxide (CO)	4(mg/m ³)	0.91	0.8	0.9	0.6	**	**
Location	Back gate						
Parameters	NAAQ Standard	Apr-22	May-22	June-22	July-22	Aug-22	Sep-22
PM10	100(µg/m ³)	72	74.9	79.3	60.2	51.8	58.1
PM2.5	60 (µg/m ³)	43.7	44.9	47.6	36.0	18.2	21.5
SO2	80 (µg/m ³)	13.9	14.2	16.1	14.8	7.2	10.6
NO2	80(µg/m ³)	15.6	16.4	16.7	15.5	16.4	22.9
Carbon Monoxide (CO)	4(mg/m ³)	0.60	0.6	0.7	0.5	**	**

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'22 to September'2022

Annexure - 2

Ambient Air quality Report From 01.04.2022 To 30-09-2022



Visiontek Consultancy Services Pvt. Ltd.
(Committed For Better Environment)
Certified for : ISO 9001:2015, ISO 14001:2015, ISO 45001:2018 (OH&S), ISO/IEC 17025:2017
Accredited by : NABET-A Grade, MOEF & CC/CPCB & SPCB-A Grade

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- 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

Ref : Envlab/22/R-1577 Date : 05.05.2022

AMBIENT AIR QUALITY MONITORING REPORT FOR APRIL 2022 (CORE ZONE)

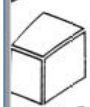
1. Name of Industry : FAP, JODA (M/s TATA Steel Limited)
2. Monitoring Instruments : RDS (APM 460 BL), FPS (APM 550) Envirotech, CO Analyzer.
3. Instrument Serial No & Calibration Validity : 2180-DTE-2017 (APM 460) 538-DTI-2017 (APM 550 MINI)
2136-DTI-2017 (APM 460) 498-DTD-2017 (APM 550 MINI)
Validity : 02.07.2022

4. Sample collected by : VCSPL Representative in presence of TATA Representative

Monitoring Date	PM ₁₀ (ug/m ³)	PM _{2.5} (ug/m ³)	SO ₂ (ug/m ³)	NO _x (ug/m ³)	CO (mg/m ³)	O ₃ (ug/m ³)	NH ₃ (ug/m ³)	C ₆ H ₆ (ug/m ³)	Bap (ng/m ³)	Pb (ug/m ³)	Ni (ng/m ³)	As (ng/m ³)
AAQMS-1-Gate No 1												
01.04.2022	66.80	40.6	13.2	16.8	0.52	<4	<20	<0.001	<0.002	<0.001	<0.01	<0.001
05.04.2022	69.60	41.6	13.6	17.4	0.56	<4	<20	<0.001	<0.002	<0.001	<0.01	<0.001
08.04.2022	70.60	41.8	13.8	17.8	0.55	<4	<20	<0.001	<0.002	<0.001	<0.01	<0.001
12.04.2022	71.40	42.2	12.6	18.4	0.54	<4	<20	<0.001	<0.002	<0.001	<0.01	<0.001
15.04.2022	66.80	42.6	12.2	18.2	0.53	<4	<20	<0.001	<0.002	<0.001	<0.01	<0.001
19.04.2022	62.80	47.2	11.8	19.1	0.51	<4	<20	<0.001	<0.002	<0.001	<0.01	<0.001
22.04.2022	72.60	41.2	13.2	17.2	0.55	<4	<20	<0.001	<0.002	<0.001	<0.01	<0.001
26.04.2022	73.80	41.6	13.10	17.40	0.54	<4	<20	<0.001	<0.002	<0.001	<0.01	<0.001
Monthly Average	69.3	42.4	12.9	17.8	0.54	<4	<20	<0.001	<0.002	<0.001	<0.01	<0.001
NAAQ Standard	100	60	80	80	4	100	400	5	01	01	20	06

Testing Method: Gravimetric, Gravimetric, Improved West and Gaeke method, Modified Jacob & Hochheiser (Na-Arsenite), NDIR Spectroscopy, Chemical Method, Indo Phenol Blue Method, Absorption & Desorption followed by GC, Solvent Extraction Followed by GC, AAS Method, AAS Method, AAS Method

DL Values: PM₁₀<20 ug/m³, PM_{2.5}<10 ug/m³, SO₂<4 ug/m³, NO_x<6 ug/m³, O₃<4 ug/m³, NH₃<20 ug/m³, Ni<2.5 ng/m³, As <1 ng/m³, C₆H₆<4 ug/m³, Bap<0.5 ng/m³, Pb<0.02 ug/m³, CO<0.1 mg/m³.



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

Ref : Envlab/22/R-1578 Date : 05.05.2022

AMBIENT AIR QUALITY MONITORING REPORT FOR APRIL 2022 (CORE ZONE)

1. Name of Industry : FAP, JODA (M/s TATA Steel Limited)
2. Monitoring Instruments : RDS (APM 460 BL), FPS (APM 550) Envirotech, CO Analyzer.
3. Instrument Serial No & Calibration Validity : 2225-DTI-2017 (APM 460) 535-DTI-2017 (APM 550 MINI)
2346-DTB-2012 (APM 460) 500-DTD-2017 (APM 550 MINI)
Validity : 02.07.2022

4. Sample collected by : VCSPL Representative in presence of TATA Representative

Monitoring Date	PM ₁₀ (ug/m ³)	PM _{2.5} (ug/m ³)	SO ₂ (ug/m ³)	NO _x (ug/m ³)	CO (mg/m ³)	O ₃ (ug/m ³)	NH ₃ (ug/m ³)	C ₆ H ₆ (ug/m ³)	Bap (ng/m ³)	Pb (ug/m ³)	Ni (ng/m ³)	As (ng/m ³)
AAQMS-3: Near Ore Yard												
01.04.2022	70.6	43.6	14.6	18.6	0.91	<4	<20	<0.001	<0.002	<0.001	<0.01	<0.001
05.04.2022	70.8	44.8	14.8	18.8	0.93	<4	<20	<0.001	<0.002	<0.001	<0.01	<0.001
08.04.2022	70.4	45.6	15.6	19.4	0.96	<4	<20	<0.001	<0.002	<0.001	<0.01	<0.001
12.04.2022	71.6	46.6	15.8	19.6	0.92	<4	<20	<0.001	<0.002	<0.001	<0.01	<0.001
15.04.2022	71.2	46.8	16.4	20.8	0.89	<4	<20	<0.001	<0.002	<0.001	<0.01	<0.001
19.04.2022	70.8	44.2	16.6	21.4	0.88	<4	<20	<0.001	<0.002	<0.001	<0.01	<0.001
22.04.2022	69.6	43.8	17.4	20.2	0.872	<4	<20	<0.001	<0.002	<0.001	<0.01	<0.001
26.04.2022	70.1	42.6	17.80	20.20	0.91	<4	<20	<0.001	<0.002	<0.001	<0.01	<0.001
Monthly Average	70.6	44.8	16.1	19.9	0.91	<4	<20	<0.001	<0.002	<0.001	<0.01	<0.001
NAAQ Standard	100	60	80	80	4	100	400	5	01	01	20	06

Monitoring Date	PM ₁₀ (ug/m ³)	PM _{2.5} (ug/m ³)	SO ₂ (ug/m ³)	NO _x (ug/m ³)	CO (mg/m ³)	O ₃ (ug/m ³)	NH ₃ (ug/m ³)	C ₆ H ₆ (ug/m ³)	Bap (ng/m ³)	Pb (ug/m ³)	Ni (ng/m ³)	As (ng/m ³)
AAQMS-4-Gate No 2												
01.04.2022	69.6	42.6	13.6	15.2	0.58	<4	<20	<0.001	<0.002	<0.001	<0.01	<0.001
05.04.2022	70.2	42.8	13.8	15.6	0.59	<4	<20	<0.001	<0.002	<0.001	<0.01	<0.001
08.04.2022	71.8	43.6	14.6	15.8	0.61	<4	<20	<0.001	<0.002	<0.001	<0.01	<0.001
12.04.2022	72.6	43.8	14.2	16.2	0.66	<4	<20	<0.001	<0.002	<0.001	<0.01	<0.001
15.04.2022	72.8	44.6	13.2	16.1	0.62	<4	<20	<0.001	<0.002	<0.001	<0.01	<0.001
19.04.2022	73.6	45.2	13.1	15.4	0.63	<4	<20	<0.001	<0.002	<0.001	<0.01	<0.001
22.04.2022	73.8	44.8	14.1	15.6	0.55	<4	<20	<0.001	<0.002	<0.001	<0.01	<0.001
26.04.2022	71.4	42.2	14.6	15.2	0.54	<4	<20	<0.001	<0.002	<0.001	<0.01	<0.001
Monthly Average	72.0	43.7	13.9	15.6	0.60	<4	<20	<0.001	<0.002	<0.001	<0.01	<0.001
NAAQ Standard	100	60	80	80	4	100	400	5	01	01	20	06

Testing Method: Gravimetric, Gravimetric, Improved West and Gaeke method, Modified Jacob & Hochheiser (Na-Arsenite), NDIR Spectroscopy, Chemical Method, Indo Phenol Blue Method, Absorption & Desorption followed by GC, Scheem Extraction Followed by GC, AAS Method, AAS Method, AAS Method

DL Values: PM₁₀<20 ug/m³, PM_{2.5}<10 ug/m³, SO₂<4 ug/m³, NO_x<6 ug/m³, O₃<4 ug/m³, NH₃<20 ug/m³, Ni<2.5 ng/m³, As <1 ng/m³, C₆H₆<4 ug/m³, Bap<0.5 ng/m³, Pb<0.02 ug/m³, CO<0.1 mg/m³.

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'22 to September'2022



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- Environmental & Social Study
- Renewable Energy
- Public Health Engineering
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Environment Lab
Food Lab
Material Lab
Soil Lab
Mineral Lab
&
Microbiology Lab

Ref : Envlab/22/R-5529 Date : 02.08.2022

AMBIENT AIR QUALITY MONITORING REPORT FOR JULY 2022 (CORE ZONE)

- Name of Industry : FAP, JODA (M/s TATA Steel Limited)
- Monitoring Instruments : RDS (APM 460 BL), FPS (APM 550) Envirotech, CO Analyzer.
- Instrument Serial No & Calibration Validity : 2180-DTE-2017(APM 460) 538-DTI-2017 (APM 550 MINI)
2236-DTJ-2017(APM 460) 498-DTD-2017 (APM 550 MINI)
Validity : 11.07.2023
- Sample collected by : VCSPL Representative in presence of TATA Representative

Monitoring Date	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)	SO ₂ (µg/m ³)	NO _x (µg/m ³)	CO (mg/m ³)	O ₃ (µg/m ³)	NH ₃ (µg/m ³)	C ₆ H ₆ (µg/m ³)	Bap (ng/m ³)	Pb (µg/m ³)	Ni (ng/m ³)	As (ng/m ³)
AAQMS-1-Gate No 1												
01.07.2022	56.6	34.0	11.6	15.6	0.59	<4	<20	<4	<0.5	<0.02	<2.5	<1
05.07.2022	54.8	32.9	11.8	15.6	0.56	<4	<20	<4	<0.5	<0.02	<2.5	<1
08.07.2022	53.8	32.3	12.4	15.4	0.61	<4	<20	<4	<0.5	<0.02	<2.5	<1
12.07.2022	52.6	31.6	12.6	16.6	0.56	<4	<20	<4	<0.5	<0.02	<2.5	<1
15.07.2022	51.9	31.1	11.4	16.4	0.58	<4	<20	<4	<0.5	<0.02	<2.5	<1
19.07.2022	52.4	31.4	12.4	16.2	0.58	<4	<20	<4	<0.5	<0.02	<2.5	<1
22.07.2022	53.6	32.2	13.1	17.1	0.59	<4	<20	<4	<0.5	<0.02	<2.5	<1
26.07.2022	51.9	31.1	12.80	16.20	0.61	<4	<20	<4	<0.5	<0.02	<2.5	<1
29.07.2022	53.6	32.6	12.60	17.40	0.66	<4	<20	<4	<0.5	<0.02	<2.5	<1
Monthly Average	53.5	32.1	12.3	16.3	0.59	<4	<20	<4	<0.5	<0.02	<2.5	<1
NAAQ Standard	100	60	80	80	4	100	400	5	01	01	20	06
Testing Method	Gravimetric	Gravimetric	Improved West and Gasko method	Modified Jacob & Hochhalter (Na-Arsenite)	NDIR Spectroscopy	Chemical Method	Indo Phenol Blue Method	Absorption & Desorption followed by GC	Solvent Extraction followed by GC	AAS Method	AAS Method	AAS Method

BDL Values: SO₂-4 µg/m³, NO_x-9 µg/m³, O₃-4 µg/m³, NH₃-20 µg/m³, Ni-0.01 ng/m³, As-0.001 ng/m³, C₆H₆-0.001 µg/m³, Bap-0.002 ng/m³, Pb-0.001 µg/m³, CO-0.1 mg/m³.

Reviewed By
M. Pande

Verified By
Pooja Mishra



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Soil Lab
Mineral Lab
&
Microbiology Lab

Ref : Envlab/22/R-5530 Date : 02.08.2022

AMBIENT AIR QUALITY MONITORING REPORT FOR JULY 2022 (CORE ZONE)

- Name of Industry : FAP, JODA (M/s TATA Steel Limited)
- Monitoring Instruments : RDS (APM 460 BL), FPS (APM 550) Envirotech, CO Analyzer.
- Instrument Serial No & Calibration Validity : 2225-DTI-2017(APM 460) 535-DTI-2017 (APM 550 MINI)
2346-DTB-2012(APM 460) 500-DTD-2017 (APM 550 MINI)
Validity : 11.07.2023
- Sample collected by : VCSPL Representative in presence of TATA Representative

Monitoring Date	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)	SO ₂ (µg/m ³)	NO _x (µg/m ³)	CO (mg/m ³)	O ₃ (µg/m ³)	NH ₃ (µg/m ³)	C ₆ H ₆ (µg/m ³)	Bap (ng/m ³)	Pb (µg/m ³)	Ni (ng/m ³)	As (ng/m ³)
AAQMS-3-Near Ore Yard												
01.07.2022	62.6	37.6	14.9	16.9	0.69	<4	<20	<4	<0.5	<0.02	<2.5	<1
05.07.2022	63.8	38.3	15.2	17.4	0.61	<4	<20	<4	<0.5	<0.02	<2.5	<1
08.07.2022	68.2	40.9	15.6	18.1	0.56	<4	<20	<4	<0.5	<0.02	<2.5	<1
12.07.2022	64.6	38.8	15.8	18.8	0.58	<4	<20	<4	<0.5	<0.02	<2.5	<1
15.07.2022	67.2	40.3	14.6	15.6	0.62	<4	<20	<4	<0.5	<0.02	<2.5	<1
19.07.2022	66.2	39.7	15.4	15.8	0.63	<4	<20	<4	<0.5	<0.02	<2.5	<1
22.07.2022	65.8	39.5	16.1	16.4	0.59	<4	<20	<4	<0.5	<0.02	<2.5	<1
26.07.2022	64.8	38.9	14.80	15.60	0.61	<4	<20	<4	<0.5	<0.02	<2.5	<1
29.07.2022	63.9	36.6	15.20	16.10	0.62	<4	<20	<4	<0.5	<0.02	<2.5	<1
Monthly Average	65.2	39.2	15.3	16.7	0.61	<4	<20	<4	<0.5	<0.02	<2.5	<1
NAAQ Standard	100	60	80	80	4	100	400	5	01	01	20	06
Testing Method	Gravimetric	Gravimetric	Improved West and Gasko method	Modified Jacob & Hochhalter (Na-Arsenite)	NDIR Spectroscopy	Chemical Method	Indo Phenol Blue Method	Absorption & Desorption followed by GC	Solvent Extraction followed by GC	AAS Method	AAS Method	AAS Method

BDL Values: SO₂-4 µg/m³, NO_x-9 µg/m³, O₃-4 µg/m³, NH₃-20 µg/m³, Ni-0.01 ng/m³, As-0.001 ng/m³, C₆H₆-0.001 µg/m³, Bap-0.002 ng/m³, Pb-0.001 µg/m³, CO-0.1 mg/m³.

Reviewed By
M. Pande

Verified By
Pooja Mishra

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'22 to September'2022



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- Recognized By Ministry of Environment & Forests (MoEF), New Delhi
- Approved by : Food Safety & Standards Authority of India under FSS Act.
- Bureau of Indian Standards (BIS); Agricultural & Processed Food Products Export Development Authority (APEDA);
- Export inspection council (EIC); AGMARK.

TEST REPORT

Page 1 of 1

Ambient Air Quality Monitoring Report-August-2022

Report No.: AN/AAQ/TSL-F/2022/1-1	TATA STEEL LIMITED FAP JODA, Keonjhar, FAMD, ODISHA-758034 (India)		Date: 03/09/2022
Name and Address of Industry:-	W. O. No.	3000144107/056	
Sample Description/ Type	Ambient Air Quality (Core Zone)	Sample Ref. No.:-	ALPL/26082022/ENV-114-1/TSLFAP-CZ/AAQMS-1 ALPL/26082022/ENV-114-1/TSLFAP-CZ/AAQMS-2
Sample Drawn By:-	Anacon Representative	Sample Inward Date:-	22, 29 Aug-2022 & 2-Sept-2022
Test Started On:-	22, 29 Aug-2022 & 2-Sept-2022	Test Completed On:-	22, 29 Aug-2022 & 2-Sept-2022
Sampling Procedure	ANtd/7.2/Mon-01		

Sr. No.	LOCATION	Date of sampling	PM ₁₀ µg/m ³	PM _{2.5} µg/m ³	SO ₂ µg/m ³	NO ₂ µg/m ³
Method Reference						
			IS 5182 (Part 23)	USEPA-40 (Part 50)	IS-5182 (Part-2)	IS-5182 (Part-6)
AAQMS-1	Nr. Main Gate	12/08/2022	62.8	18.3	7.2	16.9
		16/08/2022	57.3	22.7	9.7	21.6
		19/08/2022	54.2	19.1	8.4	18.3
		22/08/2022	48.1	19.6	7.6	19.4
		25/08/2022	53.6	21.8	11.7	22.8
		29/08/2022	49.3	18.2	9.2	17.3
Monthly Average Value			54.2	20.0	9.0	19.4
AAQMS-2	General Office	12/08/2022	47.3	16.4	7.3	17.2
		16/08/2022	51.6	17.3	9.1	18.7
		19/08/2022	48.1	16.2	8.7	16.9
		22/08/2022	53.6	21.7	11.4	23.6
		25/08/2022	54.9	18.3	9.1	21.4
		29/08/2022	48.3	16.4	7.6	18.2
Monthly Average Value			50.6	17.7	8.9	19.3

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

Shubhangi Armarkar
(Technical Manager)

Authorized Signatory

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

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

Laboratory address : FP-34, 35, Food Park, 5 Star Industrial Estate, MIDC Butibori, Nagpur - 441 122.
Email : support@anacon.in;
Please Visit us at : www.anaconlaboratories.com

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- Bureau of Indian Standards (BIS); Agricultural & Processed Food Products Export Development Authority (APEDA);
- Export inspection council (EIC); AGMARK.

TEST REPORT

Page 1 of 1

Ambient Air Quality Monitoring Report-August-2022

Report No.: AN/AAQ/TSL-F/2022/1-2	TATA STEEL LIMITED FAP JODA, Keonjhar, FAMD, ODISHA-758034 (India)		Date: 03/09/2022
Name and Address of Industry:-	W. O. No.	3000144107/056	
Sample Description/ Type	Ambient Air Quality (Core Zone)	Sample Ref. No.:-	ALPL/26082022/ENV-114-1/TSLFAP-CZ/AAQMS-3 ALPL/26082022/ENV-114-1/TSLFAP-CZ/AAQMS-4
Sample Drawn By:-	Anacon Representative	Sample Inward Date:-	22, 29 Aug-2022 & 2-Sept-2022
Test Started On:-	22, 29 Aug-2022 & 2-Sept-2022	Test Completed On:-	22, 29 Aug-2022 & 2-Sept-2022
Sampling Procedure	ANtd/7.2/Mon-01		

Sr. No.	LOCATION	Date of sampling	PM ₁₀ µg/m ³	PM _{2.5} µg/m ³	SO ₂ µg/m ³	NO ₂ µg/m ³
Method Reference						
			IS 5182 (Part 23)	USEPA-40 (Part 50)	IS-5182 (Part-2)	IS-5182 (Part-6)
AAQMS-3	Near Well Zone	12/08/2022	56.2	21.9	8.4	17.2
		16/08/2022	54.6	18.2	7.6	16.9
		19/08/2022	48.3	16.7	6.7	16.1
		22/08/2022	53.9	23.8	11.4	23.6
		25/08/2022	49.2	21.4	9.2	18.2
		29/08/2022	51.7	18.3	8.6	17.9
Monthly Average Value			52.3	20.1	8.7	18.3
AAQMS-4	Near Back Gate	12/08/2022	52.8	17.6	8.4	16.1
		16/08/2022	47.3	16.9	7.6	15.3
		19/08/2022	51.7	21.6	6.1	16.8
		22/08/2022	56.2	18.3	7.4	18.2
		25/08/2022	49.7	16.8	6.8	16.4
		29/08/2022	52.8	17.9	7.1	15.7
Monthly Average Value			51.8	18.2	7.2	16.4

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

Shubhangi Armarkar
(Technical Manager)

Authorized Signatory

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

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

Laboratory address : FP-34, 35, Food Park, 5 Star Industrial Estate, MIDC Butibori, Nagpur - 441 122.
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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'22 to September'2022



Anacon Laboratories Pvt. Ltd.

Test Report

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Page 1 of 1

Ambient Air Quality Monitoring Report-September-2022

Report No.: AN/AAQ/TSL-F/2022/1-1		Date: 03/10/2022	
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/26092022/ENV-139/TSLFAP-CZ/AAQMS-1 ALPL/26092022/ENV-139/TSLFAP-CZ/AAQMS-2
Sample Drawn By:-	Anacon Representative	Sample Inward Date:-	12,19,26,30 September-2022 & 3 Oct-2022
Test Started On:-	12,19,26,30 September-2022 & 3 Oct-2022	Test Completed On:-	12,19,26,30 September-2022 & 3 Oct-2022
Sampling Procedure	ANtd/7.2/Mon-01		

Sr. No.	LOCATION	Date of sampling	PM ₁₀ µg/m ³	PM _{2.5} µg/m ³	SO ₂ µg/m ³	NO ₂ µg/m ³		
Method Reference								
			IS 5182 (Part 23)	IS 5182 (Part 50)	IS 5182 (Part-2)	IS 5182 (Part-6)		
AAQMS-1	Nr. Main Gate	05/09/2022	68.2	27.6	13.8	31.6		
		08/09/2022	64.9	24.7	11.6	24.9		
		12/09/2022	57.3	18.2	9.2	21.3		
		14/09/2022	62.8	23.6	12.7	24.1		
		21/09/2022	54.1	16.9	8.3	17.3		
		23/09/2022	63.9	26.8	13.1	26.7		
		27/09/2022	58.3	19.2	11.6	21.4		
		29/09/2022	54.1	16.7	12.4	23.9		
		Monthly Average Value			60.5	21.7	11.6	23.9
		AAQMS-2	General Office	01/09/2022	53.6	18.2	9.1	16.8
08/09/2022	48.2			16.8	8.4	15.6		
12/09/2022	56.1			21.7	11.3	18.4		
15/09/2022	52.7			17.9	9.7	17.3		
21/09/2022	48.2			16.4	8.4	16.9		
23/09/2022	51.3			17.2	9.1	16.4		
26/09/2022	54.9			21.6	7.6	17.3		
28/09/2022	49.2			18.1	6.8	16.1		
Monthly Average Value				51.8	18.5	8.8	16.9	

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

Verified by

 Shubhangi Armarkar
 (Technical Manager)

Authorized Signatory

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

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Ambient Air Quality Monitoring Report-September-2022

Report No.: AN/AAQ/TSL-F/2022/1-2		Date: 03/10/2022	
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/26092022/ENV-139/TSLFAP-CZ/AAQMS-3 ALPL/26092022/ENV-139/TSLFAP-CZ/AAQMS-4
Sample Drawn By:-	Anacon Representative	Sample Inward Date:-	12,19,26,30 September-2022 & 3 Oct-2022
Test Started On:-	12,19,26,30 September-2022 & 3 Oct-2022	Test Completed On:-	12,19,26,30 September-2022 & 3 Oct-2022
Sampling Procedure	ANtd/7.2/Mon-01		

Sr. No.	LOCATION	Date of sampling	PM ₁₀ µg/m ³	PM _{2.5} µg/m ³	SO ₂ µg/m ³	NO ₂ µg/m ³		
Method Reference								
			IS 5182 (Part 23)	USEPA-40 (Part 50)	IS 5182 (Part-2)	IS 5182 (Part-6)		
AAQMS-3	Near Well Zone	05/09/2022	52.7	16.8	7.9	15.3		
		08/09/2022	47.6	15.2	6.8	15.7		
		12/09/2022	56.2	21.6	9.3	18.4		
		14/09/2022	54.8	18.3	6.4	16.2		
		21/09/2022	49.3	17.2	6.7	15.9		
		23/09/2022	53.6	16.8	7.3	16.1		
		27/09/2022	56.2	19.7	11.4	18.3		
		29/09/2022	51.7	16.2	9.3	17.4		
		Monthly Average Value			52.8	17.7	8.1	16.7
		AAQMS-4	Near Back Gate	01/09/2022	58.3	24.9	12.8	26.1
05/09/2022	61.7			28.1	13.4	28.7		
08/09/2022	56.1			19.7	9.3	21.4		
14/09/2022	52.8			18.6	8.7	19.7		
20/09/2022	63.4			23.7	11.2	23.6		
23/09/2022	56.9			19.2	9.6	21.4		
26/09/2022	54.2			16.8	8.4	18.3		
28/09/2022	61.7			21.3	11.6	23.9		
Monthly Average Value				58.1	21.5	10.6	22.9	

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

Verified by

 Shubhangi Armarkar
 (Technical Manager)

Authorized Signatory

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

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Annexure -3



Continious Emission Monitoring System

STACK EMISSION MONITORING RESULTS (APRIL'22 to SEPTEMBER'22)

Location	ARC FURANCE-1						
Parameters	UNIT	Apr-22	May-22	June-22	July-22	Aug-22	Sep-22
PM	(mg/Nm3)	59.4	55.2	56.8	54.6		62
SOX	(mg/Nm3)	92.8	91.6	92.2	89.6		284
NOX	(mg/Nm3)	142	142	148	146		102
Carbon Monoxide (CO)	(mg/Nm3)	63.6	60.8	61.8	60.8	**	**
Location	ARC FURNACE-2						
Parameters	NAAQ Standard	Apr-22	May-22	June-22	July-22	Aug-22	Sep-22
PM	(mg/Nm3)	56.7	56.8	58.2	56.6		56
SOX	(mg/Nm3)	91.8	93.8	94.2	92.8		329
NOX	(mg/Nm3)	138.8	141.6	144.2	142.8		116
Carbon Monoxide (CO)	(mg/Nm3)	60.8	63.2	64.2	62.2	**	**

Annexure - 4

Stack Monitoring Report



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



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Ref : Envlab/22/R-1582

Date : 05.05.2022

STACK ANALYSIS REPORT FOR THE MONTH OF APRIL 2022

- Name of Industry : FAP, JODA (M/s TATA Steel Limited)
- Sampling Location : ST-1: Furnance-1
ST-2: Furnance-2
- Date of Analysis : 26.04.2022
- Instrument Serial No & Calibration Validity : VBSS1-121919, Validity 06.12.2021
- Sample Collected by : VCSPL Representative in presence of TATA Representative

Description	26.04.2022 at 11.00AM		26.04.2022 at 11.45AM	
	Furnance-1		Furnance-2	
	Analysis Results	CPCB Limit	Analysis Results	CPCB Limit
A General Information about Stack				
1 Stack Connected to				
B Results of Sampling & Analysis of Gaseous Emission				
1 Temperature of Emission (°C)	78		82	
2 Barometric Pressure (mm of Hg)	714		714	
3 Velocity of Gas (m/sec.)	21.6		23.6	
4 Quantity of Gas Flow (Nm ³ /hr.)	6318.2		6821.6	
5 Concentration of Carbon monoxide (mg/Nm ³)	63.6		60.8	150
6 Concentration of Sulphur Dioxide (mg/Nm ³)	92.8		91.8	
7 Concentration of Nitrogen Dioxide (mg/Nm ³)	142	2255(1100 ppmv)	138.8	2255(1100 ppmv)
8 Concentration of Particulate Matters (mg/Nm ³)	59.4	75	56.69	75
C Pollution control Device				
Details of pollution control	Nil		Nil	
Device attached with the stack				

Ref : Envlab/22/R-2817

Date : 04.06.2022

STACK ANALYSIS REPORT FOR THE MONTH OF MAY 2022

- Name of Industry : FAP, JODA (M/s TATA Steel Limited)
- Sampling Location : ST-1: Furnance-1
ST-2: Furnance-2
- Date of Analysis : 16.05.2022
- Instrument Serial No & Calibration Validity : VBSS1-121919, Validity 06.12.2021
- Sample Collected by : VCSPL Representative in presence of TATA Representative

Description	16.05.2022 at 11.10AM		16.05.2022 at 12.20PM	
	Furnance-1		Furnance-2	
	Analysis Results	CPCB Limit	Analysis Results	CPCB Limit
A General Information about Stack				
1 Stack Connected to				
B Results of Sampling & Analysis of Gaseous Emission				
1 Temperature of Emission (°C)	82		81	
2 Barometric Pressure (mm of Hg)	714		714	
3 Velocity of Gas (m/sec.)	21.8		23.2	
4 Quantity of Gas Flow (Nm ³ /hr.)	6548.26		6882.6	
5 Concentration of Carbon monoxide (mg/Nm ³)	60.8		63.2	150
6 Concentration of Sulphur Dioxide (mg/Nm ³)	91.6		93.8	
7 Concentration of Nitrogen Dioxide (mg/Nm ³)	142	2255(1100 ppmv)	141.6	2255(1100 ppmv)
8 Concentration of Particulate Matters (mg/Nm ³)	55.2	75	56.8	75
C Pollution control Device				
Details of pollution control	Nil		Nil	
Device attached with the stack				



M. Panda



Pooja Mishra



M. Panda

Pooja Mishra



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'22 to September'2022



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- Environmental & Social Study
- Renewable Energy
- Public Health Engineering
- Waste Management Services



Ref: Envlab/22/R-4931

Date : 07.07.2022

STACK ANALYSIS REPORT FOR THE MONTH OF JUNE 2022

1. Name of Industry : FAP, JODA (M/s TATA Steel Limited)
2. Sampling Location : ST-1: Furnace-1
ST-2: Furnace-2
3. Date of Analysis : 29.06.2022
4. Instrument Serial No & Calibration Validity : VBSS1-121919, Validity 06.12.2021
5. Sample Collected by : VCSPL Representative in presence of TATA Representative

Description	29.06.2022 at 11.10AM		29.06.2022 at 12.20PM	
A General Information about Stack				
1 Stack Connected to	Furnace-1		Furnace-2	
B Results of Sampling & Analysis of Gaseous Emission	Analysis Results	CPCB Limit	Analysis Results	CPCB Limit
1 Temperature of Emission (°C)	84		81	
2 Barometric Pressure (mm of Hg)	714		714	
3 Velocity of Gas (m/sec.)	22.6		23.8	
4 Quantity of Gas Flow (Nm ³ /hr.)	6628.46		6891.22	
5 Concentration of Carbon monoxide (mg/Nm ³)	61.8		64.2	150
6 Concentration of Sulphur Dioxide (mg/Nm ³)	92.2		94.2	
7 Concentration of Nitrogen Dioxide (mg/Nm ³)	148	2255(1100 ppmv)	144.2	2255(1100 ppmv)
8 Concentration of Particulate Matters (mg/Nm ³)	56.8	75	58.2	75
C Pollution control Device				
Details of pollution control	Nil		Nil	
Device attached with the stack				



M. Pande



Pooja Mishra



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- Environmental & Social Study
- Renewable Energy
- Public Health Engineering
- Waste Management Services



Ref: Envlab/22/R-5534

Date : 02.08.2022

STACK ANALYSIS REPORT FOR THE MONTH OF JULY- 2022

1. Name of Industry : FAP, JODA (M/s TATA Steel Limited)
2. Sampling Location : ST-1: Furnace-1
ST-2: Furnace-2
3. Date of Analysis : 25.07.2022
4. Instrument Serial No & Calibration Validity : VBSS1-121919, Validity 06.12.2021
5. Sample Collected by : VCSPL Representative in presence of TATA Representative

Description	25.07.2022 at 11.30 AM		25.07.2022 at 12.20PM	
A General Information about Stack				
1 Stack Connected to	Furnace-1		Furnace-2	
B Results of Sampling & Analysis of Gaseous Emission	Analysis Results	CPCB Limit	Analysis Results	CPCB Limit
1 Temperature of Emission (°C)	82		80	
2 Barometric Pressure (mm of Hg)	714		714	
3 Velocity of Gas (m/sec.)	21.8		22.4	
4 Quantity of Gas Flow (Nm ³ /hr.)	6626.19		6882.28	
5 Concentration of Carbon monoxide (mg/Nm ³)	60.8		62.2	150
6 Concentration of Sulphur Dioxide (mg/Nm ³)	89.6		92.8	
7 Concentration of Nitrogen Dioxide (mg/Nm ³)	146	2255(1100 ppmv)	142.8	2255(1100 ppmv)
8 Concentration of Particulate Matters (mg/Nm ³)	54.6	75	56.6	75
C Pollution control Device				
Details of pollution control	Nil		Nil	
Device attached with the stack				



M. Pande



Pooja Mishra

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'22 to September'2022



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Stack Emission Monitoring Report

Report No.: ALPL/30092022/1-6		Date: 30/09/2022	
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 Monitoring	Sample Collected by	Anacon Laboratory
Sampling Location	Furnace-1	Sample Quantity/Packing	Thimble: 1 X 1 No. SO ₂ : 30 mL X 1 No. PVC Bottle NO _x : 30 mL X 1 No. PVC Bottle
Sample Ref. No.:	ALPL/26092022/ENV-139-S1	Date of Sampling	27/09/2022
Sampling Procedure	ANtd/7.2/Mon-01	Date of Receipt of Sample	29/09/2022
Date of Start of Analysis	29/09/2022	Date of Completion of Analysis	30/09/2022

Stack Details			
Stack Name			
Furnace			
Ambient Temperature	26	°C	
Ambient Relative Humidity	83	%	
Stack height above ground level	10	Meter	
Stack diameter	0.35	Meter	
Type of Fuel	Coal	---	
Parameter	Unit	Results	Method Reference
Flue gas temperature	°C	76	IS:11255 (Part 3)
Flue gas velocity	m/s	9.84	IS:11255 (Part 3)
Total gas quantity at STP	m ³ /h	3407.74	IS:11255 (Part 3)
Total gas quantity at NTP	Nm ³ /h	2909.76	IS:11255 (Part 3)
Particulate Matter (PM)	mg/Nm ³	62	IS:11255 (Part 1)
Sulphur Dioxide (SO ₂)	mg/Nm ³	284	IS 11255 (Part 2)
Oxide of Nitrogen (NO _x)	mg/Nm ³	102	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.

Verified by

 Subhangi Arma Kar
 (Technical Manager)

Authorized Signatory

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

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Stack Emission Monitoring Report

Report No.: ALPL/30092022/1-7		Date: 30/09/2022	
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 Monitoring	Sample Collected by	Anacon Laboratory
Sampling Location	Furnace-2	Sample Quantity/Packing	Thimble: 1 X 1 No. SO ₂ : 30 mL X 1 No. PVC Bottle NO _x : 30 mL X 1 No. PVC Bottle
Sample Ref. No.:	ALPL/26092022/ENV-139-S2	Date of Sampling	27/09/2022
Sampling Procedure	ANtd/7.2/Mon-01	Date of Receipt of Sample	29/09/2022
Date of Start of Analysis	29/09/2022	Date of Completion of Analysis	30/09/2022

Stack Details			
Stack Name			
Furnace-2			
Ambient Temperature	26	°C	
Ambient Relative Humidity	83	%	
Stack height above ground level	10	Meter	
Stack diameter	0.35	Meter	
Type of Fuel	Coal	---	
Parameter	Unit	Results	Method Reference
Flue gas temperature	°C	81	IS:11255 (Part 3)
Flue gas velocity	m/s	10.18	IS:11255 (Part 3)
Total gas quantity at STP	m ³ /h	3523.60	IS:11255 (Part 3)
Total gas quantity at NTP	Nm ³ /h	2966.20	IS:11255 (Part 3)
Particulate Matter (PM)	mg/Nm ³	56	IS:11255 (Part 1)
Sulphur Dioxide (SO ₂)	mg/Nm ³	329	IS 11255 (Part 2)
Oxide of Nitrogen (NO _x)	mg/Nm ³	116	IS 11255 (Part 7)

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Verified by

 Subhangi Arma Kar
 (Technical Manager)

Authorized Signatory

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


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Annexure – 5
Fugitive dust emission monitoring Report



Visiontek Consultancy Services Pvt. Ltd.
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Microbiology Lab

Report No: Envlab/22/R-2082 Date : 03.05.2022


FUGITIVE EMISSION REPORT FOR THE MONTH OF APRIL-2022

Name of The Industry	: M/s FAP, Joda (M/s TATA Steel Limited)
Sample Description	: Fugitive Dust Emission Monitoring
Sampling Code	: 2022/FE/003/S1 TO S4
Sample Location Name	: S1- Raw Material Yard (Latitude: 22.018018°, Longitude: 85.428064°) S2- Slag Crusher (Latitude: 22.018139°, Longitude: 85.427976°) S3- Feed Hopper (Latitude: 22.019838°, Longitude: 85.427306°) S4- ACS (Latitude: 22.020758°, Longitude: 85.426719°)
Environment Condition During Sampling	: Atmospheric Temp: 22°C TO 34°C Barometric Pressure : 751 mmHg
Sample Condition	: Air Tight Sealed
Sample Collected By	: Mr. Priyaranjan Mohanty
Date of Sampling	: 12.04.2022
Date of Sample Received On	: 14.04.2022
Date of Test Started On	: 14.04.2022
Date of test Complete On	: 15.04.2022
Sampling Procedure	: CPCB Guidelines (NAAQMS/Volume – I/2013-14)
Instrument Used	: RDS (2180-DTE-2017 (APM 460))


Sample Code	Name of the Parameter	Test Method	Test Results (µg/m³)	Standards as per MoEF GSR 414 (E)
S1	RSPM µg/m³	Gravimetric	461.2	2000 µg/m³
S2	RSPM µg/m³	Gravimetric	518.8	
S3	RSPM µg/m³	Gravimetric	490.6	
S4	RSPM µg/m³	Gravimetric	511.4	



Reviewed By *M. Panda*



Approved By *P. Mohanty*



Anacon Laboratories Pvt. Ltd.

Test Report

Anacon Laboratories Pvt. Ltd. Nagpur Lab
 ♡ 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

Fugitive Emission Monitoring Report-October-2022

Report No.: AN/FE/TS-JEIM/2022/1	Date: 31/10/2022
Name and Address of Industry:-	TATA STEEL LIMITED FAP JODA, Keonjhar, FAMD, ODISHA-758034 (India)
Sample Description/Type	Fugitive Emission
Sample Drawn By:-	Anacon Representative
Test Started On:-	18/10/2022
Sampling Procedure	ANtd/7.2/Mon-01

SI. No.	Location Name	Date of sampling	TSPM µg/m³
Method Reference			IS 5182 (Part 23)
FE-1	Near Main Gate	12/10/2022	837
FE-2	Near Back Gate	12/10/2022	521
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 Norms.

Verified by
Gajendra Desai
Gajendra Desai
(Technical Manager)

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

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

Thanks for putting in your faith and trust in our services. We at Anacon Laboratories cherish our relationship. We put in a lot of hard work to ensure that you have a seamless experience at every step of our relationship. In order to ensure that your next experience will be significantly better, we welcome your feedback over email on feedback@anacon.in



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



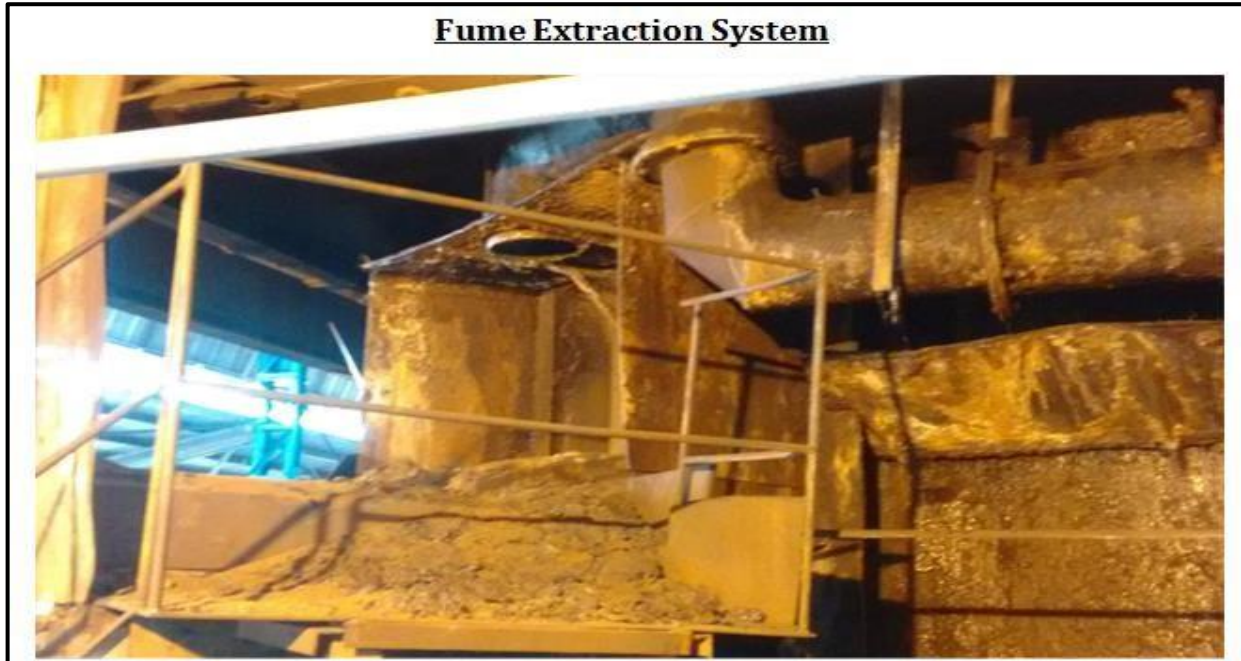
Auto Sprinkling of Water for Dust Suppression



RCC ROAD DEVELOPED IN SIDE THE PLANT

Annexure-7

Fume Extraction System



Fume Extraction System For existing Plant

Annexure-8

RAINWATER HARVESTING



BEFORE



AFTER

WATER HARVESTING STRUCTURE & BATHING GHAT AT JODA BASTI

Annexure- 9



INSTALLATION OF 10 KLD SEWAGE TREATMENT PLANT (STP) FOR RECYCLING WATER DISCHARGED FROM CANTEEN & ADMINSTRATIVE BUILDING



EFFLUENT TREATMENT PLANT (ETP)-30 M3/HR (CONSTRUCTION FINAL STAGE)

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'22 to September'2022

STP WATER QUALITY REPORT

GLOBAL TECH ENVIRO EXPERTS PVT. LTD.
(FORMERLY GLOBAL EXPERTS)
An ISO-9001:2008 Certified Company

C-23, BIR Nagar,
Bhubaneswar-751014
Ph: 0674-2434883
Fax: 0674-2434887
E-mail: globalexerts@rediffmail.com
globaltechenviro@gmail.com
www.globaltechenviroexperts.com

GTEEPL/LQR/56 **TEST REPORT**

NABL ULR NO : TC1010122000000116P Issue Date: 04.05.2022

Report No. : GTEEPL/04/22/EW/116A

Name of the Client : **Ferro Alloys Plant, M/s. TATA Steel Ltd.**

Address : Joda, Keonjhar, Odisha

Date of Sampling : 22.04.2022

Date of Testing : 24.04.2022 to 28.04.2022 Date of Receiving: 24.04.2022

Sampling Location : **10 KLD STP In-let**

Identification of Sample : Sewage Water

Quantity of Sample : ILTR X 2

Sampling Procedure : GTEEPL/SOP/09

Sl. No.	Parameter	Unit	Result	Test Methods
1	Total Suspended Solid as TSS	mg/l	60.5	IS 3025(Part-17)1984 RA 2017
2	pH Value	--	5.49	IS 3025(Part-11)1983 RA 2017
3	Biochemical Oxygen Demand as BOD (For 3 days at 27°C)	mg/l	145	IS 3025(Part-44)1998 RA 2017
4	Chemical Oxygen Demand as COD	mg/l	482	APHA 23 rd Ed. 2017 – 5220-D
5	Oil & Grease	mg/l	8.6	IS 3025(Part-39) 2021

-END OF REPORT-

Authorised Signatory
Global Tech Enviro Experts Pvt. Ltd.

N.B.:
 ● The results relate to the sample received in respect to the Parameters tested.
 ● Liability for return of sample ceases after 15 days from the date of Test certificate.
 ● The report cannot be reproduced either in full or in part, without prior written consent of Director.
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C-23, BIR Nagar,
Bhubaneswar-751014
Ph: 0674-2434883
Fax: 0674-2434887
E-mail: globalexerts@rediffmail.com
globaltechenviro@gmail.com
www.globaltechenviroexperts.com

GTEEPL/LQR/56 **TEST REPORT**

NABL ULR NO : TC1010122000000116P Issue Date: 04.04.2022

Report No. : GTEEPL/04/22/EW/116B

Name of the Client : **Ferro Alloys Plant, M/s. TATA Steel Ltd.**

Address : Joda, Keonjhar, Odisha

Date of Sampling : 22.04.2022

Date of Testing : 24.04.2022 to 28.04.2022

Sampling Location : **10 KLD STP Out-let**

Identification of Sample : Sewage Water

Quantity of Sample : ILTR X 2

Sampling procedure : GTEEPL/LSOP/09

Sl. No.	Parameter	Unit	Result	Requirement as per The Environment (Protection) Rules, 1986, Schedule-VI(a)	Test Methods
1	Total Suspended Solid as TSS	mg/l	24	100	IS 3025(Part-17)1984 RA2017
2	pH Value	--	7.12	5.5-9.0	IS 3025(Part-11)1983 RA 2017
3	Biochemical Oxygen Demand as BOD (For 3 days at 27°C)	mg/l	7.5	30	IS 3025(Part-44)1998 RA2017
4	Chemical Oxygen Demand as COD	mg/l	46	50	APHA 23 rd Ed. 2017 – 5220-D
5	Oil & Grease	mg/l	1.7	10	IS 3025(Part-39)2021

-END OF REPORT-

Authorised Signatory
Global Tech Enviro Experts Pvt. Ltd.

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Fax: 0674-2434887
E-mail: globalexerts@rediffmail.com
globaltechenviro@gmail.com
www.globaltechenviroexperts.com

GTEEPL/LQR/56 **TEST REPORT**

NABL ULR NO : TC1010122000000116P Issue Date: 04.05.2022

Report No. : GTEEPL/04/22/EW/116A

Name of the Client : **Ferro Alloys Plant, M/s. TATA Steel Ltd.**

Address : Joda, Keonjhar, Odisha

Date of Sampling : 22.04.2022

Date of Testing : 24.04.2022 to 28.04.2022 Date of Receiving: 24.04.2022

Sampling Location : **10 KLD STP In-let**

Identification of Sample : Sewage Water

Quantity of Sample : ILTR X 2

Sampling Procedure : GTEEPL/SOP/09

Sl. No.	Parameter	Unit	Result	Test Methods
1	Total Suspended Solid as TSS	mg/l	60.5	IS 3025(Part-17)1984 RA 2017
2	pH Value	--	5.49	IS 3025(Part-11)1983 RA 2017
3	Biochemical Oxygen Demand as BOD (For 3 days at 27°C)	mg/l	145	IS 3025(Part-44)1998 RA 2017
4	Chemical Oxygen Demand as COD	mg/l	482	APHA 23 rd Ed. 2017 – 5220-D
5	Oil & Grease	mg/l	8.6	IS 3025(Part-39) 2021

-END OF REPORT-

Authorised Signatory
Global Tech Enviro Experts Pvt. Ltd.

N.B.:
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globaltechenviro@gmail.com
www.globaltechenviroexperts.com

GTEEPL/LQR/56 **TEST REPORT**

Report No. : GTEEPL/06/22/EW/157B Issue Date: 01.07.2022

Name of the Client : **Ferro Alloys Plant, M/s. TATA Steel Ltd.**

Address : Joda, Keonjhar, Odisha

Date of Sampling : 18.06.2022

Date of Testing : 21.06.2022 to 26.06.2022 Date of Receiving: 20.06.2022

Sampling Location : **10 KLD STP Out-let**

Identification of Sample : Sewage Water

Quantity of Sample : ILTR X 2

Sampling procedure : GTEEPL/LSOP/09

Sl. No.	Parameter	Unit	Result	Requirement as per The Environment (Protection) Rules, 1986, Schedule-VI(a)	Test Methods
1	Total Suspended Solid as TSS	mg/l	24	100	IS 3025(Part-17)1984 RA2017
2	pH Value	--	7.15	5.5-9.0	IS 3025(Part-11)1983 RA 2017
3	Biochemical Oxygen Demand as BOD (For 3 days at 27°C)	mg/l	9.6	30	IS 3025(Part-44)1998 RA2017
4	Chemical Oxygen Demand as COD	mg/l	41	250	APHA 23 rd Ed. 2017 – 5220-D
5	Oil & Grease	mg/l	1.3	10	IS 3025(Part-39)2021

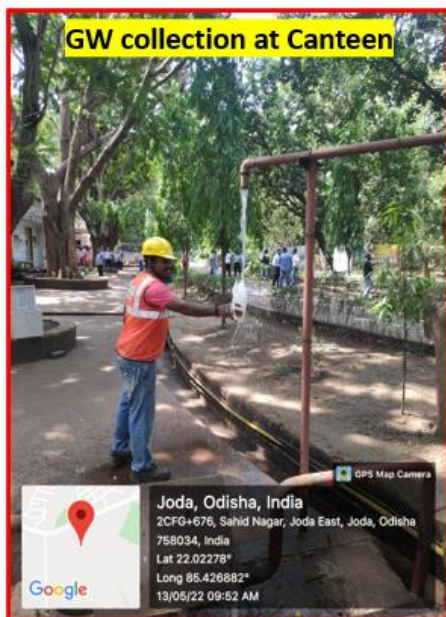
-END OF REPORT-

Authorised Signatory
Global Tech Enviro Experts Pvt. Ltd.


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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'22 to September'2022

Annexure - 10



Ground Water Analysis Report



Visiontek Consultancy Services Pvt. Ltd.
(Committed For Better Environment)

Certified for : ISO 9001:2015, ISO 14001:2015, ISO 45001:2018 (OH&S), ISO/IEC 17025:2017
Accredited by : NABET-A Grade, MOEF & CC/CPCB & SPCB-A Grade


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

Ref : Envlab/22/R-5536 Date : 02.08.2022

WATER QUALITY ANALYSIS REPORT FOR THE MONTH OF JULY- 2022


1. Name of Industry : FAP, JODA (M/s TATA Steel Limited)
2. Sampling location : GW1: Near Pump House, GW2: Near Canteen
3. Date of sampling : 20.07.2022
4. Date of analysis : 21.07.2022 TO 26.07.2022
5. Sample collected by : VCSPL Representative in presence of TATA Representative

Sl. No	Parameter	Testing Methods	Unit	Standard as per IS-10500:2012 Amended on 2015 & 2018		Analysis Results	
				Acceptable Limit	Permissible Limit	GW-1	GW-2
Essential Characteristics							
1	Colour	APHA 2120 B, C	Haem	5	15	<5	<5
2	Odour	APHA 2150 B	-	Agreeable	Agreeable	Agreeable	Agreeable
3	Taste	APHA 2160 C	-	Agreeable	Agreeable	Agreeable	Agreeable
4	Turbidity	APHA 2130 B	NTU	1	5	4.2	5.1
5	pH at 25°C	APHA 4500H' B	-	6.5-8.5	No Relaxation	7.18	7.31
6	Total Hardness (as CaCO ₃)	APHA 2340 C	mg/l	200	600	188	136
7	Iron (as Fe)	APHA 3500Fe, B	mg/l	1	No relaxation	2.4	1.6
8	Chloride (as Cl ⁻)	APHA 4500' C, B	mg/l	250	1000	52	44
9	Residual Free Chlorine	APHA 4500Cl, B	mg/l	0.2	1	ND	ND
Desirable Characteristics							
10	Dissolved Solids	APHA 2540 D	mg/l	500	2000	210	152
11	Calcium (as Ca)	APHA 3500Ca B	mg/l	75	200	52	40
12	Magnesium (as Mg)	APHA 3500Mg B	mg/l	30	100	28.2	22.4
13	Copper (as Cu)	APHA 3111 B,C	mg/l	0.05	1.5	<0.05	<0.05
14	Manganese (as Mn)	APHA 3500Ma B	mg/l	0.1	0.3	<0.05	<0.05
15	Sulphate (as SO ₄)	APHA 4500 SO4'-E	mg/l	200	400	4.4	3.8
16	Nitrate (as NO ₃)	APHA 4500 NO3'-E	mg/l	45	No Relaxation	3.6	3.2
17	Fluoride (as F)	APHA 4500F-C	mg/l	1.0	1.5	0.48	0.44
18	Phenolic Compounds (as C6H5OH)	APHA 5530 B,D	mg/l	0.001	0.002	0.044	0.032
19	Mercury (as Hg)	APHA 3500 Hg	mg/l	0.001	No Relaxation	<0.001	<0.001
20	Cadmium (as Cd)	APHA 3111 B,C	mg/l	0.003	No Relaxation	<0.001	<0.001
21	Selenium (as Se)	APHA 3114 B	mg/l	0.01	No Relaxation	<0.001	<0.001
22	Arsenic (as As)	APHA 3114 B	mg/l	0.01	No Relaxation	<0.001	<0.001
23	Cyanide (as CN)	APHA 4500 CN- C, D	mg/l	0.05	No Relaxation	ND	ND
24	Lead (as Pb)	APHA 3111 B,C	mg/l	0.01	No Relaxation	<0.01	<0.01
25	Zinc (as Zn)	APHA 3111 B,C	mg/l	5	15	<0.05	<0.05
26	Anionic Detergents (as MBAS)	APHA 5540 C	mg/l	0.2	1.0	<0.2	<0.2
27	Chromium (as Cr ^{VI})	APHA 3500' E	mg/l	-	-	<0.05	<0.05
28	Mineral Oil	APHA 5220 B	mg/l	0.5	No Relaxation	<0.001	<0.001
29	Alkalinity	APHA 2520 B	mg/l	200	600	124	90
30	Aluminium (as Al)	APHA 3500Al B	mg/l	0.03	0.2	<0.001	<0.001
31	Boron (as B)	APHA 4500B, B	mg/l	2.4	No relaxation	<0.01	<0.01
32	Poly Aromatic Hydrocarbon as PAH	APHA 6440 B	mg/l	0.0001	No Relaxation	<0.0001	<0.0001
33	Pesticide	APHA 6630 B,C	µg/l	-	No Relaxation	Absent	Absent



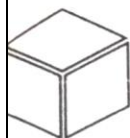
Reviewed By

M. Prasad



Certified By

Pooja Kishore



Visiontek Consultancy Services Pvt. Ltd.

(Committed For Better Environment)

Certified for : ISO 9001:2015, ISO 14001:2015, ISO 45001:2018 (OH&S), ISO/IEC 17025:2017

Accredited by : NABET-A Grade, MOEF & CC/CPCB & SPCB-A Grade

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

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

Ref : Envlab/22/R-1584

Date : 05.05.2022

WATER QUALITY ANALYSIS REPORT FOR THE MONTH OF APRIL 2022

1. Name of Industry : FAP, JODA (M/s TATA Steel Limited)
2. Sampling location : GW-1: Upstream of Ground Water From Test Well
GW-2: Downstream of Ground Water From Test Well
3. Date of sampling : 20.04.2022
4. Date of analysis : 21.04.2022 to 26.04.2022
5. Sample collected by : VCSPL Representative in presence of TATA Representative

Sl. No	Parameter	Testing Methods	Unit	Standard as per IS -10500:2012 Amended on 2015 & 2018		Analysis Results	
				Acceptable Limit	Permissible Limit	GW-1	GW-2
Essential Characteristics							
1	Colour	APHA 2120 B, C	Hazen	5	15	<5	<5
2	Odour	APHA 2150 B	--	Agreeable	Agreeable	Agreeable	Agreeable
3	Taste	APHA 2160 C	--	Agreeable	Agreeable	Agreeable	Agreeable
4	Turbidity	APHA 2130 B	NTU	1	5	<1	<1
5	pH at 25°C	APHA 4500H' B	--	6.5-8.5	No Relaxation	7.06	7.1
6	Total Hardness (as CaCO ₃)	APHA 2340 C	mg/l	200	600	54	110
7	Iron (as Fe)	APHA 3500Fe, B	mg/l	1	No relaxation	0.92	0.98
8	Chloride (as Cl)	APHA 4500Cl' B	mg/l	250	1000	10.2	18.6
9	Residual, free Chlorine	APHA 4500Cl, B	mg/l	0.2	1	ND	ND
Desirable Characteristics							
10	Dissolved Solids	APHA 2540 D	mg/l	500	2000	68	121
11	Calcium (as Ca)	APHA 3500Ca B	mg/l	75	200	20.8	24.6
12	Magnesium (as Mg)	APHA 3500Mg B	mg/l	30	100	8.1	18.2
13	Copper (as Cu)	APHA 3111 B,C	mg/l	0.05	1.5	<0.02	<0.02
14	Manganese (as Mn)	APHA 3500Mn B	mg/l	0.1	0.3	0.011	0.012
15	Sulphate (as SO ₄)	APHA 4500 SO42- E	mg/l	200	400	3.2	4.6
16	Nitrate (as NO ₃)	APHA 4500 NO3- E	mg/l	45	No Relaxation	10.8	13.9
17	Fluoride (as F)	APHA 4500F- C	mg/l	1.0	1.5	0.28	0.32
18	Phenolic Compounds (as C ₆ H ₅ OH)	APHA 5530 B,D	mg/l	0.001	0.002	<0.05	<0.05
19	Mercury (as Hg)	APHA 3500 Hg	mg/l	0.001	No Relaxation	<0.004	<0.004
20	Cadmium (as Cd)	APHA 3111 B,C	mg/l	0.003	No Relaxation	<0.01	<0.01
21	Selenium (as Se)	APHA 3114 B	mg/l	0.01	No Relaxation	<0.001	<0.001
22	Arsenic (as As)	APHA 3114 B	mg/l	0.01	No Relaxation	<0.004	<0.004
23	Cyanide (as CN)	APHA 4500 CN- C,D	mg/l	0.05	No Relaxation	<0.01	<0.01
24	Lead (as Pb)	APHA 3111 B,C	mg/l	0.01	No Relaxation	<0.02	<0.02
25	Zinc (as Zn)	APHA 3111 B,C	mg/l	5	15	<0.03	<0.03
26	Anionic Detergents (as MBAS)	APHA 5540 C	mg/l	0.2	1.0	<0.2	<0.2
27	Chromium (as Cr ⁶⁺)	APHA 3500Cr B	mg/l	--	--	<0.01	<0.01
28	Mineral Oil	APHA 5220 B	mg/l	0.5	No Relaxation	<0.001	<0.001
29	Alkalinity	APHA 2320 B	mg/l	200	600	40.8	26.6
30	Aluminium as(Al)	APHA 3500Al B	mg/l	0.03	0.2	<0.1	<0.1
31	Boron (as B)	APHA 4500B, B	mg/l	2.4	No relaxation	<0.1	<0.1
32	Poly Aromatic Hydrocarbon as PAH	APHA 6440 B	mg/l	0.0001	No Relaxation	<0.0001	<0.0001
33	Pesticide	APHA 6630 B,C	µg/l	--	No Relaxation	Absent	Absent

Note: CL : Colorless, AL: Agreeable, ND: Not Detected

BDL Value : Cu <0.02 mg/l, Mn <0.025 mg/l, C₆H₅OH<0.05 mg/l, Hg <0.004 mg/l, Cd <0.01 mg/l, Se <0.001 mg/l, As <0.003 mg/l, CN <0.001 mg/l, Pb <0.02 mg/l, Zn <0.03 mg/l, MBAS <0.2 mg/l, Cr⁶⁺ <0.01 mg/l, Moil <0.001 mg/l, Al<0.1mg/l,b<0.1mg/l



Manda




Puja Mahapatra

No.- M-22 & 23, Chandaka Industrial Estate, Patia, Bhubaneswar, Khurda, Odisha-751024, India Tel.: 0674-3511721
E-mail: visiontek@vcspl.org, visiontekin@gmail.com
Visit us at: www.vcspl.org

Annexure - 11

Risk & Disaster Mitigation Plan submission covering Letter

Risk & Disaster Management Plan Submitted to OSCPCB, Bhubaneswar



Ref. No. FAPJ/ 6251 /2016 Dated : 01.02.2016

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

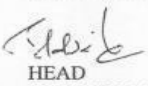
Sub : Submission of Risk & Disaster Management Plan along with the mitigation measures
for expansion of Ferro Manganese Plant, Joda.

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-IA.II (I) dated 5th 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

**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'22 to September'2022**

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 5th 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

Details of CSR funds allocated and released Expenditure against CSR Activities				
Period	Year-wise expenditure Planning in (Rs. Cr.)	Actual Expenditure for C.S.R. in Rs. Cr.	Name of CSR activities	Completed or Not
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	Completed
2019-20	13.02 Cr	12.8 Cr	Health, Education, Livelihood, Rural Infrastructure, Major Project Like Kalyan Mandap in Joda	Completed
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.	Completed
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.	Completed
2022-23	13.68 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.	H1 completed

Annexure- 15

Noise Monitoring Report from 01.04.2022 to 30.09.2022



Visiontek Consultancy Services Pvt. Ltd.

(Committed For Better Environment)

Certified for : ISO 9001:2015, ISO 14001:2015, ISO 45001:2018 (OH&S), ISO/IEC 17025:2017
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

Ref : Envlab/22/R-5540

Date : 02.08.2022

FAP, Joda (M/s. TATA Steel Limited)


Noise Analysis Report – JULY 2022

Date of Sampling : 07.07.2022


Sl.No	Sampling Location	Day	Night
1	Infront of Store	68.2	58.8
2	JCB 40X 1MTR Distance	71.4	61.2
3	Near Weight Bridge	72.2	53.6
4	Loader 2mtr distance	70.8	51.9
5	Crusher Area	71.6	51.6
6	Near Back Gate	73.4	60.2
7	Breaking Yard (During Work)	72	62.2
8	Plot No 4 B	71.6	61.4
9	Area Furnance Ground Floor	71.2	60.9
10	Area Furnance Floor	75.4	53.4
11	Pit Site Area	73.4	60.2
12	Near Cooling Tower	72.2	60.8
13	Pump House (Inside)	71.9	59.6
14	Telphar Floor	70.6	58.2
15	GCP Floor (1 mtr away from blower)	70.8	60.4
16	ACS Area	70.2	62.2
17	CMDS Area	77.6	63.4
18	Office Area	75.4	62.8
19	Quality Control Analysis Lab	75.6	55.8
20	Laboratory Crusher Room (During Work)	77.2	56.6
21	Canteen Kitchen	68.8	53.4
22	Near Main gate	71.6	55.4
23	D.G Room	78.2	53.2
24	Locomotive During Operation	73.9	52.8

Noise Standard For Auto Mobiles, Equipments & Work Zone		In dBA
i	Passenger or Commercial Vehicles up to 4 tones	72.6
ii	Passenger or Commercial Vehicles up to 4 tones & up to 12 tones	82.8
iii	Passenger or Commercial Vehicles exceeding 12 tones	85.2
iv	Work Zone Standard	66.8


Received By



Verified By





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'22 to September'2022



Anacon Laboratories Pvt. Ltd.

Test Report

TC 5458

ULR No.-TC545822000004394F Page 1 of 1

NOISE MONITORING REPORT

Report No.:	ALPL/31102022/1-6	Report Date:	31/10/2022
Issued to:	TATA STEEL LIMITED		
Address:	FAP Joda, Keonjhar, FAMD, ODISHA-758034 (India).		
Type of Work:	Noise Monitoring (October-2022)	Sample Inward No.:	ALPL/17102022/Mon-2/44-N-1
Sample Drawn By:	Anacon Representative	Date Received Date:	17/10/2022
Monitoring Start Date and Time	12/10/2022 @ 11:25 am	Sampling Plan	ANtd/7.3/Mon-02/Oct-22/4
Monitoring End Date and Time	13/10/2022 @ 11:25 am	Sampling Procedure	ANtd/7.2/Mon-01
Sampling Analysis date	----	Sampling Duration	24 hrs

METEOROLOGICAL DATA MONITORED AT SITE

Weather Condition	Wind Direction	Wind Speed	Temperature (°C)		Relative Humidity (%)	
			Min	Max	Min	Max
Clear	SSW	2.6 m/sec	22	30	24	81
			22-30		24-81	

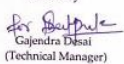
SL. NO.	LOCATION	Method	RESULT dB(A)	
			Day Time	Night Time
N1	Near Furnace Area	IS 9989:1981(R2001)	71.3	56.1

CPCB Standards		
Residential Area		55
Industrial Area		75

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.

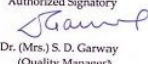
Remark: - All Results are within Limit as per CPCB Standards.

Verified by



Gajendra Desai
(Technical Manager)


Authorized Signatory




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

----End of Report----

Thanks For putting in your faith and trust in our services. We at Anacon Laboratories cherish our relationship. We put in a lot of hard work to ensure that you have a seamless experience at every step of our relationship. In order to ensure that your next experience will be significantly better, we welcome your feedback over email on feedback@anacon.in





Anacon Laboratories Pvt. Ltd. Nagpur Lab
 ♡ 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



Anacon Laboratories Pvt. Ltd.

Test Report

TC 5458

ULR No.-TC545822000004394F Page 1 of 1

NOISE MONITORING REPORT

Report No.:	ALPL/31102022/1-7	Report Date:	31/10/2022
Issued to:	TATA STEEL LIMITED		
Address:	FAP Joda, Keonjhar, FAMD, ODISHA-758034 (India).		
Type of Work:	Noise Monitoring (October-2022)	Sample Inward No.:	ALPL/17102022/Mon-2/44-N-2
Sample Drawn By:	Anacon Representative	Date Received Date:	17/10/2022
Monitoring Start Date and Time	13/10/2022 @ 11:50 am	Sampling Plan	ANtd/7.3/Mon-02/Oct-22/4
Monitoring End Date and Time	14/10/2022 @ 11:50 am	Sampling Procedure	ANtd/7.2/Mon-01
Sampling Analysis date	----	Sampling Duration	24 hrs

METEOROLOGICAL DATA MONITORED AT SITE

Weather Condition	Wind Direction	Wind Speed	Temperature (°C)		Relative Humidity (%)	
			Min	Max	Min	Max
Clear	SSW	2.6 m/sec	22	30	32	80
			22-30		32-80	

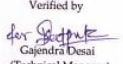
SL. NO.	LOCATION	Method	RESULT dB(A)	
			Day Time	Night Time
N2	Near Bagging Plot	IS 9989:1981(R2001)	64.8	51.7

CPCB Standards		
Residential Area		55
Industrial Area		75

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.

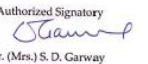
Remark: - All Results are within Limit as per CPCB Standards.

Verified by



Gajendra Desai
(Technical Manager)


Authorized Signatory



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

----End of Report----

Thanks For putting in your faith and trust in our services. We at Anacon Laboratories cherish our relationship. We put in a lot of hard work to ensure that you have a seamless experience at every step of our relationship. In order to ensure that your next experience will be significantly better, we welcome your feedback over email on feedback@anacon.in



Anacon Laboratories Pvt. Ltd. Nagpur Lab
 ♡ 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

Annexure- 16

Periodic Medical Examination Record

Form No. 31 - A HEALTH RECORD (Pre-employment /Periodical) (Prescribed under Rule 62-J)		Date: <u>27/10/21</u>
Aadhaar No.		Sl. No. <u>05</u>
PO No.		
1. Name of the Factory	: FAP, Joda	Photo
2. Name of the Employee	: Jhanka Mondal	
3. Name of the Agency	: I.T.L	
4. Employee Distinguishing Number:		
5. Age of the Employee	: 21/m	
Identification mark	: A cut mark on the R-cheek	
Nature of Job	: Dressing	
6. Date of Employment	: 18-11-2019	
7. Length of service in years	: 03 years	
8. General Survey		
Health	: Good / Fair / Poor	
Height	: 175cm	
Weight	: 61 Kg.	
9. Blood Group	: A +ve	
10. Eye Vision	: Normal / Abnormal	
use glass	: Yes / No	
11. Hearing	: Normal / Abnormal	
12. Respiratory system & Chest Measurement		
Inspiration	: 89cm	
Expiration	: 84cm	
16. Locomotor System	: Normal / Abnormal	
17. Skin condition	: Normal / Abnormal	
Remarks on any skin condition noticed	: <u>cut</u>	
18. Hernias	: Present / Absent	
19. Hydrosol	: Present / Absent	
20. Present Complain, if any	: <u>NO</u>	
21. Summary of Findings		
Heart Disease	: :	}
Hypertension	: :	
Diabetes	: :	
T.B.	: :	
Epilepsy	: :	
Poisoning	: :	
Others	: :	
Occupational disease, if any	: :	
22. Recommendation, if any further investigation	: <u>At for way</u>	
Signature of the Employee		Signature of the Medical Officer

Annexure-17

Expenses Incurred for Environment Management during FY-23			
Sl. No	Activity	Capital (Rs. In Lakhs)	Recurring (Rs.inLakhs)
1.	Annual maintenance of all four the Gas Cleaning Plant		40
2.	Annual Operation & maintenance of High velocity mobile type rotary water sprinkler		6
3.	Maintenance of existing fixed water sprinkler		5
4.	Annual Maintenance of Fume Extraction System		4
5.	Extensive Plantation in and around the Plant		2
6.	Operation and Maintenance of dry fog system		2
7.	Construction of roof top rainwater harvesting structures		8
8.	Operation and Maintenance of STP		3.6
9.	Maintenance of CAAQMS and spares		5
10.	Environmental Monitoring by third party	500	10.6
11.	Effluent Treatment Plant		
	Total	500	86.2

Annexure -18

Intimation Letter of EC to Zila Parishad



Ref: FAPJ/ 4136 /2015
Date : 9th 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*

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.

*Rhm
12.11.15
P.A. to President
Zilla Parishad
Keonjhar*

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: 9th 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'22 to September'2022

Annexure -19

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

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




The screenshot shows the Tata Steel website's 'Environment Compliance Reports' page. The header includes the Tata Steel logo, a menu icon, and navigation icons. The breadcrumb trail is: Home » Corporate » Our Organisation » Environment » Environment Compliance Reports. The main content area lists three reports:

- Six monthly EC compliance of Joda East Iron Mine of Tata Steel Ltd _October 21 to March 22**
Joda May 30, 2022
- Half Yearly EC compliance Report for October'2021 to March'2022 in respect of Ferro Alloys Plant, Joda (FAMD)**
Joda May 19, 2022
- Biomedical Waste Report of Tata Steel Hospital, Joda for the month of March 2022.**
Joda April 16, 2022
- Half Yearly EC compliance Report for Apr'21 to Sept'21 in respect of Ferro Alloys Plant, Joda (FAMD)**

Each report entry has a document icon and a 'CANCEL AUDIO' button. A 'EXPLORE MORE' button is visible on the right side of the page.

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 Oct'21 to Mar'2022



Half -Yearly Compliance Report

On

Environmental Clearance Conditions
(MoEF File No. J-11011/03/2012-IA. II (I) Dated 5th November 2015)

Period: Oct'2021 - Mar'2022

Submitted By:

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

At/Po - Joda, District - Keonjhar,
Odisha - 758034

Annexure -20

Covering Letter of Form V, Environment statement submission



TATA STEEL LTD.

FERRO MANGANESE PLANT, JODA

Ref. No. FAMD/FAPJ/359/FY 22

Dated: 29/09/2022

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 2021-22.

Dear Sir,

We are submitting one set of Annual Environmental Statement in FORM-V dully filled in for the year 2021-2022 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, OPCB, At-Baniapatt, College Road, Keonjhar - with enclosure.


TATA STEEL LTD.
Ferro Alloys & Minerals Division
Ferro Managanese 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

Annexure-21

Details of Publication on the Newspapers



Ferro Alloys Plant
M/s. Tata Steel Limited,
Joda, District- Keonjhar, Odisha


TATA
TATA STEEL

PUBLIC NOTICE

The Ministry of Environment, Forest and Climate Change (MoEF&CC), Govt. of India (IA Division), New Delhi has accorded Environmental Clearance vide letter no J-11011/03/2012-IA II(I), dated 05.11.2015 for expansion of Fe-Mn Alloy Plant of M/s Tata Steel Limited located at Joda, Keonjhar District, Odisha for enhancement of production of Ferro Manganese from 0.0504 MTPA to 0.06 MTPA and addition of 0.06 MTPA Silico-Manganese Plant and 0.05 MTPA Manganese Sinter Plant in existing Ferro Alloys Plant at Joda.

The copy of the Environmental Clearance is available with the State Pollution Control Board, Bhubaneswar, Odisha and may also be seen at the website of the Ministry of Environment, Forest and Climate Change at <http://envfor.nic.in>.

-Sd-
Pankaj Kumar Satija,
General Manager (Operations),
FA & MD, Tata Steel Ltd

Published on The Statesman of 12th 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'22 to September'2022



ନେଇ ସାଧାରଣରେ ଚର୍ଚ୍ଚା ଚାଲିଛି । ପଦ୍ମପୁର ପ୍ରଥମେ ବ୍ୟାଟ୍ କରି ୧୫.୬
 ଷ୍ଟ୍ରିକେଟ୍ ହରାଇ ୧୩୯ ରନ୍ କରିଥିଲା । ୯

ଫେରୋ ଆଲୟେଜ୍ ପ୍ଲାଣ୍ଟ
 ଟାଟା ଷ୍ଟିଲ ଲିମିଟେଡ୍,
 ଯୋଡ଼ା, ଜିଲ୍ଲା-କେନ୍ଦୁଝର, ଓଡ଼ିଶା

**TATA
 TATA STEEL**

ସର୍ବସାଧାରଣ ବିଜ୍ଞପ୍ତି

ଭାରତ ସରକାରଙ୍କ ପରିବେଶ, ଜଙ୍ଗଲ ଓ ଜଳବାୟୁ ପରିବର୍ତ୍ତନ ମନ୍ତ୍ରାଳୟ (ଏମ୍ପିଆଇଏଏଫ୍ ଆଣ୍ଡ୍ ସିପି), (ଆଇଏ ଟିଭିଜନ), ନୂଆଦିଲ୍ଲୀ ପକ୍ଷରୁ ଜାରି କରାଯାଇଥିବା ଚିଠି ସଂଖ୍ୟା J-11011/03/2012-IA II(I), ତା ୫.୧୧.୨୦୧୫ରିଖ ଅନୁସାରେ ଓଡ଼ିଶାର କେନ୍ଦୁଝର ଜିଲ୍ଲାର ଯୋଡ଼ାଠାରେ ଅବସ୍ଥିତ ଟାଟା ଷ୍ଟିଲ ଲିମିଟେଡ୍‌ର ଫେରୋ ଆଲୟେଜ୍ ପ୍ଲାଣ୍ଟରୁ ମହାଜଳ ସେରୋ ମାଙ୍ଗାନିଜ୍ ଉତ୍ପାଦନ କ୍ଷମତା ବାର୍ଷିକ ୦.୦୫୦୪ ନିୟୁଟ ଟନରୁ ୦.୦୬ ଟନରୁ ବୃଦ୍ଧି ଓ ଏହାସହିତ ଯୋଡ଼ାଠାରେ ଥିବା ଫେରୋ ଆଲୟେଜ୍ ପ୍ଲାଣ୍ଟରେ ବାର୍ଷିକ ୦.୦୬ ନିୟୁଟ ଟନ କ୍ଷମତା ଓମ୍ପନୁ ସିଲିକୋ-ମାଙ୍ଗାନିଜ୍ ପ୍ଲାଣ୍ଟ ଓ ବାର୍ଷିକ ୦.୦୫ ନିୟୁଟ ଟନ କ୍ଷମତା ସମ୍ପନ୍ନ ମାଙ୍ଗାନିଜ୍ ସିଣ୍ଡର ପ୍ଲାଣ୍ଟ ପାଇଁ ପରିବେଶ ମନ୍ତ୍ରାଳୟ ପ୍ରଦାନ କରିଛନ୍ତି ।

ପରିବେଶ ମନ୍ତ୍ରାଳୟ ନଜଲ ଓଡ଼ିଶାର ଭୁବନେଶ୍ୱରସ୍ଥିତ ରାଜ୍ୟ ପ୍ରଦ୍ୟୁଷଣ ନିୟନ୍ତ୍ରଣ ବୋର୍ଡ୍ ନିକଟରେ ଉପଲବ୍ଧ ଏବଂ ଭାରତ ସରକାରଙ୍କ ପରିବେଶ, ଜଙ୍ଗଲ ଓ ଜଳବାୟୁ ପରିବର୍ତ୍ତନ ମନ୍ତ୍ରାଳୟ ଷ୍ଟେସାଇଟ୍ <http://envfor.nic.in> ରେ ମଧ୍ୟ ଦେଖାଯାଇପାରିବ ।

ପଙ୍କଜ କୁମାର ସଚିକା,
 ମହା ପ୍ରବନ୍ଧକ (ଅପରେସନ୍ସ)
 ଏଫ୍ଏ ଆଣ୍ଡ୍ ଏମ୍ଡି, ଟାଟା ଷ୍ଟିଲ ଲିମିଟେଡ୍

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