

Ref. No.: FAMD/FAPBL/09/FY26

Date:29.05.2025

To,
Deputy Director General of Forests (Central)
Ministry of Environment, Forest & Climate Change,
Regional 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, Balasore of M/s TATA Steel Ltd., for the period from Oct '2024 to Mar '2025.

#### Reference:

- 1) ]-11011/55/2008-IA II (I), DATED 17th July 2008
- 2) ]-11011/519/2010-IA-II (I), DATED 26th February 2013
- 3) ]-11011/519/2010-IA-II (I), DATED 20th May 2014

#### 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-11011/519/2010-1A-II (I) DATED 20th May 2014 in respect of Ferro Alloys Plant, Balasore of M/s TATA Steel Ltd. for the period from Apr '2024 to Sept '2024 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,

Sai Swaroop Peela

Head Ferro Alloys Plant, Balasore

Tata Steel Limited sai.peela@tatasteel.com Mob: 8093033864

Encl: As above.

#### Copy To:

- 1. The Member Secretary, State Pollution Control Board, A/118, Nilakantha Nagar, Bhubaneswar, Odisha-751012.2)
- 2. The Regional Officer, Balasore, Ganeswarpur, P.O Januganj, Balasore

Your (Half Yearly Compliance Report) has been Submitted with following details				
Proposal No	IA/OR/IND/5459/2012			
Compliance ID	128489023			
Compliance Number(For Tracking)	EC/M/COMPLIANCE/128489023/2025			
Reporting Year	2025			
Reporting Period	01 Jun(01 Oct - 31 Mar)			
Submission Date	30-05-2025			
RO/SRO Name	Shri Senthil Kumar Sampath			
RO/SRO Email	agmu156@ifs.nic.in			
State	ODISHA			
RO/SRO Office Address	Integrated Regional Offices, Bhubaneswar			
Note:- SMS and E-Mail has been sent to Shri Senthil Kumar Sampath, ODISHA with Notification to Project Proponent.				

#### Half Yearly Compliance Report 2025 01 Jun(01 Oct - 31 Mar)

### Acknowledgement

Proposal Name	Expansion of Ferro Alloy Plant by installation of Submerged Arc Furnace (16.5 MVA) for production of Si-Mn - 26645 TPA/ Fe-Mn - 29500 TPA/Fe-Si -11400 TPA/ Fe-Cr - 25000 TPA at Plot No. Z-1 IDCO IID Centre Village Somnathpur District Balasore in Odisha
Name of Entity / Corporate Office	Tata Steel Limited
Village(s)	N/A
District	BALESHWAR

Proposal No.	IA/OR/IND/5459/2012
Plot / Survey / Khasra No.	N/A
State	ODISHA
MoEF File No.	J-11011/519/2010-IA- II(I)

Category	Industrial Projects - 1
Sub-District	N/A
Entity's PAN	****2803M
Entity name as per PAN	UTSAV KASHYAP

### **Compliance Reporting Details**

**Reporting Year** 2025

Remarks (if any)

**Reporting Period** 01 Jun(01 Oct - 31 Mar)

### **Details of Production and Project Area**

Name of Entity / Corporate Office

Tata Steel Limited

	Project Area as per EC Granted	<b>Actual Project Area in Possession</b>
Private	24.54	24.54
Revenue Land	0	0
Forest	0	0
Others	0	0
Total	24.54	24.54

### **Production Capacity**

Sr. no	Product Name	units	Valid Upto	Capacity	Production last year	Capacity as per CTO
1	Silico Manganese/Ferro Manganese/Ferro Silicon/Ferro Chrome	Tons per Annum (TPA)	31/03/2026	56140	33656.8	56140

#### **Conditions Specific Conditions** Sr.No. **Condition Type Condition Details ENERGY PRESERVATION** No charcoal shall be used as fuel. Pet coke shall be used as fuel 1 instead of charcoal from unknown sources. **MEASURES** Date: PPs Submission: Complied 30/05/2025 No charcoal is being used as fuel. Continuous monitoring facilities for the process stacks and sufficient air pollution control equipments viz. fume extraction AIR OUALITY 2 system with bag filters, ID fan and stack of adequate height to MONITORING AND submerged arc furnace shall be provided to control emissions below **PRESERVATION** 50 mg/Nm3. PPs Submission: Complied Date: Presently, the process stacks have been provided with Gas Cleaning Plant (GCP) of adequate 30/05/2025 capacity with fume extraction system and bag filters. ID fan and stack of adequate height (45m) is maintained. OCEMS system has also been installed. **AIR QUALITY** The National Ambient Air Quality Standards issued by the Ministry vide G.S.R. No. 826(E) dated 16th November, 2009 shall 3 MONITORING AND **PRESERVATION** be followed. PPs Submission: Complied Date: 30/05/2025 Presently, ambient Air Quality Standard notified vide G.S.R. No. 826(E) dated 16th November 2009 is followed. Secondary fugitive emissions from all the sources shall be AIR OUALITY controlled within the latest permissible limits issued by the Ministry 4 MONITORING AND and regularly monitored. Guidelines / Code of Practice issued by the **PRESERVATION** CPCB shall be followed. The raw material storage shall be covered. PPs Submission: Complied Date: Presently, Requisite provision has been provided for taking care of fugitive dust emissions such as 29/05/2025 suction hood near the tap hole for collection of fugitive dust during tapping and the same is connected to the Fume Extraction System for subsequent venting through the Gas Cleaning Plant. Regular monitoring of influent and effluent surface, sub-surface and ground water shall be ensured and treated wastewater shall meet WATER QUALITY the norms prescribed by the State Pollution Control Board or 5 MONITORING AND described under the Environment (Protection) Act, 1986 whichever **PRESERVATION** are more stringent. Leachate study for the effluent generated and analysis should also be regularly carried out and report submitted to the Ministrys Regional Office at Bhubaneswar, SPCB and CPCB. Date: PPs Submission: Agreed to Comply 30/05/2025 Regular monitoring of treated effluent is being carried out and the monitoring report is being submitted to OSPCB on monthly basis. The water quality report is attached herewith. The total water requirement for proposed expansion shall not WATER QUALITY

WATER QUALITY
MONITORING AND
PRESERVATION

The total water requirement for proposed expansion shall not exceed 139 m3/day. Zero effluent discharge shall be strictly followed and no wastewater should be discharged outside the plant premises.

	3/day). NOC from CGWA has been of NOC/IND/REN/2/2020/5687. The co	148 m3/day and for Furnace 2 is 139 m3/day (Total btained for drawl of 287m3/day vide NOC No. nsumption of water shall not exceed the permitted	Date: 29/05/2025
7	WATER QUALITY MONITORING AND PRESERVATION	Efforts shall be made to make use of rain water has needed, capacity of the reservoir should be enhance maximum water requirement. Only balance water should be met from other sources.	ed to meet the
		ed in the plant drains is being recycled for use in plant	Date: 29/05/2025
8	WASTE MANAGEMENT	Slag produced in Ferro Manganese (Fe-Mn) prodused in manufacture of Silico Manganese (Si-Mn). Si-Mn slag shall be used in the preparation of build	The Fe-Si and
	Submission: Complied g is being sold for use as building mate	erial.	Date: 30/05/2025
9	WASTE MANAGEMENT	All the Ferro chrome slag shall be used for land to plant or used as building material only after passin Chemical Leach ability Potential (TCLP) test. Othe substances shall be recovered from the slag and ou disposed in secured landfill as per CPCB guideline.	g through Toxic erwise, hazardou tput waste and b
	Submission: Complied		Date:
not app		aring the reporting period thus requirement of TCLP generated, necessary TCLP test will be carried out	29/05/2025
not app	licable. Whenever ferro chrome slag is		29/05/2025  the mitigation to the Ministry
not appi prior to	licable. Whenever ferro chrome slag is use of FeCr slag.  Risk Mitigation and Disaster	Risk and Disaster Management Plan along with t measures should be prepared and a copy submitted Regional Office at Bhubaneswar, SPCB and CPCF of issue of environment clearance letter.	he mitigation to the Ministry within 3 month  Date:
not appi prior to	licable. Whenever ferro chrome slag is use of FeCr slag.  Risk Mitigation and Disaster Management  Submission: Complied	Risk and Disaster Management Plan along with t measures should be prepared and a copy submitted Regional Office at Bhubaneswar, SPCB and CPCF of issue of environment clearance letter.	29/05/2025  the mitigation I to the Ministry Within 3 month  Date: 29/05/2025  at least 33 percent
not approprior to  10  PPs S Onsite I  11  PPs S Complication	Risk Mitigation and Disaster Management  Submission: Complied Emergency Plan available approved by GREENBELT  Submission: Complied	Risk and Disaster Management Plan along with the measures should be prepared and a copy submitted Regional Office at Bhubaneswar, SPCB and CPCE of issue of environment clearance letter.  DoFB.  As proposed, green belt should be developed in a of the project area. Selection of plant species shall CPCB guidelines in consultation with the DFO.	29/05/2025  the mitigation I to the Ministry Within 3 month  Date: 29/05/2025  at least 33 percent
not approprior to  10  PPs S Onsite I  11  PPs S Complication	Risk Mitigation and Disaster Management  Gubmission: Complied Emergency Plan available approved by GREENBELT  Gubmission: Complied ed. At present, around 2500 saplings of	Risk and Disaster Management Plan along with the measures should be prepared and a copy submitted Regional Office at Bhubaneswar, SPCB and CPCE of issue of environment clearance letter.  DoFB.  As proposed, green belt should be developed in a of the project area. Selection of plant species shall CPCB guidelines in consultation with the DFO.	Date: 29/05/2025  The mitigation I to the Ministry B within 3 month  Date: 29/05/2025  At least 33 percent be as per the  Date: 29/05/2025  Should be nent based on bound action pla Regional Office

	at of EC. After take over, Tata Steel has Steel Foundation.	has been carrying out CSR activities in the nearby areas	29/05/2025
13	Human Health Environment	The company shall provide housing for construction the site with all necessary infrastructure and facilities for cooking, mobile toilets safe drinking water, medic creche etc. The housing may be in the form of tempo to be removed after the completion of the project.	such as fuel cal health care
	bmission: Complied  1. Necessary infrastructure and facilit	ies for the construction labors were provided during	Date: 29/05/2025

#### General Conditions

the construction Work.

Sr.No.	Condition Type	Condition Details	
1	Statutory compliance	The project authorities must strictly adhere to the stip by the Odisha State Pollution Control Board and the S Government.	
	<b>abmission:</b> Agreed to Comply ons as made by the State and Centra	al Govt. are being adhered to from time to time.	Date: 29/05/2025
2	Statutory compliance	No further expansion or modifications in the plant shout without prior approval of the Ministry of Environn Forests.	
No furth	<b>abmission:</b> Agreed to Comply er expansion or modification in the of Environment and Forests.	plant shall be carried out without prior approval of the	Date: 29/05/2025
3	AIR QUALITY MONITORING AND PRESERVATION	At least four ambient air quality monitoring stations established in the downward direction as well as where ground level concentration of PM10, SO2 and NOX at consultation with the SPCB. Data on ambient air quali emission shall be regularly submitted to this Ministry Regional Office at Bhubaneswar and the SPCB/CPCB months.	e maximum re anticipated in ty and stack including its
Presently Ambient and analy Reports a	Air Quality Parameters as per Nations of State o	tations have been developed for the monitoring of onal Ambient Air Quality Standard 2009. Monitoring MoEFCC as well as NABL Accredited laboratory. ntrol Board Odisha on monthly basis. AAQ monitoring	Date: 30/05/2025
4	WATER QUALITY MONITORING AND PRESERVATION	Industrial wastewater shall be properly collected, tre conform to the standards prescribed under GSR 422 (F May, 1993 and 31st December, 1993 or as amended for time. The treated wastewater shall be utilized for plant	E) dated 19th orm time to

<b>PPs Submission:</b> Agreed to Comply Since no process-based effluents/trade effluents is getting generated thus requirement of leachate study is not applicable. However, ground water quality is being monitored on regular basis.	Date: 29/05/2025	
		-

Noise Monitoring & Prevention

The 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, enclosure sources of noise generation. The ambient noise levels sto the standards prescribed under EPA Rules, 1989 viz (daytime) and 70 dBA (nighttime).	should confort
Ambie	<b>Submission:</b> Complied ent Noise is regularly being monitored the standards.	. Noise levels around the Plant area are being maintained	Date: 29/05/2025
5	Human Health Environment	Occupational health surveillance of the workers shall regular basis and records maintained as per the Factori	
[nitial	Submission: Agreed to Comply Medical Examination of all employee yees will be covered under periodical	es employed has been ensured. With-in one year all the medical check-up.	Date: 29/05/2025
7	WATER QUALITY MONITORING AND PRESERVATION	The company shall develop surface water harvesting harvest the rain water for utilization in the lean season recharging the ground water table.	
		ected in the plant drains is being recycled for use in plant	Date: 29/05/2025
3	Corporate Environmental Responsibility	The project proponent shall also comply with all the protection measures and safeguards recommended in the report. Further, the company must undertake socio-eco development activities in the surrounding villages like development programmes, educational programmes, desupply and health care etc.	ne EIA/EMP nomic community
Enviro Socio-		ated in the EIA and EMP report have been implemented. Health, Education, Sports, agriculture, and infrastructure rounding and periphery villages.	Date: 29/05/2025
Enviro Socio- develo	onmental Protection measures as indica- economic developmental activities in	Health, Education, Sports, agriculture, and infrastructure	cost and l measures to Environment mentation herein shall Bhubaneswar
Enviro Socio- develo PPs	commental Protection measures as indicate conomic developmental activities in oppment are being carried out in the surface Corporate Environmental Responsibility  Submission: Complied	Health, Education, Sports, agriculture, and infrastructure rounding and periphery villages.  Requisite amount shall be earmarked towards capital recurring cost/annum for environment pollution contro implement the conditions stipulated by the Ministry of and Forests as well as the State Government. An imple schedule for implementing all the conditions stipulated be submitted to the Regional Office of the Ministry at 1	cost and l measures to Environment mentation herein shall Bhubaneswar
Enviro Socio- develo PPs Separa	commental Protection measures as indicate conomic developmental activities in oppment are being carried out in the surface Corporate Environmental Responsibility  Submission: Complied	Requisite amount shall be earmarked towards capital recurring cost/annum for environment pollution contro implement the conditions stipulated by the Ministry of and Forests as well as the State Government. An imple schedule for implementing all the conditions stipulated be submitted to the Regional Office of the Ministry at The funds so provided shall not be diverted for any oth	cost and I measures to Environment mentation I herein shall Bhubaneswar er purpose.  Date: 29/05/2025  ment to ation, Urban e processing
PPs Enviro  PPs Enviro	Corporate Environmental Responsibility  Submission: Complied ate budget has been earmarked towards ate budget has been earmarked towards and the submission: Complied and the submission and the submissi	Health, Education, Sports, agriculture, and infrastructure rounding and periphery villages.  Requisite amount shall be earmarked towards capital recurring cost/annum for environment pollution contro implement the conditions stipulated by the Ministry of and Forests as well as the State Government. An imple schedule for implementing all the conditions stipulated be submitted to the Regional Office of the Ministry at The funds so provided shall not be diverted for any oth s capital and operating environment expenditure.  A copy of clearance letter shall be sent by the proport concerned Panchayat, Zila Parishad/Municipal Corpora Local Body and the local NGO, if any, from whom suggestions/representations, if any, were received whill the proposal. The clearance letter shall also be put on the	cost and I measures to Environment mentation I herein shall Bhubaneswar er purpose.  Date: 29/05/2025  ment to ation, Urban e processing

		stipulated environment clearance conditions, including monitored data on their website and shall update the sa periodically. It shall simultaneously be sent to the Reg the MOEF at Bhubaneswar. The respective Zonal Officiand the SPCB. The criteria pollutant levels namely; PN (ambient levels as well as stack emissions) or critical s parameters, indicated for the projects shall be monitored displayed at a convenient location near the main gate of in the public domain.	me fonal Office of the of CPCB 410, SO2, NOx ectoral and
Last six www.tar levels na gate of t	tasteel.com. Electronic multi-line disamely, PM10, SO2, NOX or critical	een uploaded to the company's website splay board installed to display the criteria pollutant sectoral parameters, indicated for the projects at main The compliance reports are being sent to the Regional ffice of CPCB and SPCB.	Date: 29/05/2025
12	Statutory compliance	The project proponent shall also submit six monthly status of the compliance of the stipulated environmental including results of monitored data (both in hard copie e-mail) to the Regional Office of MOEF, the respective of CPCB and the SPCB. The Regional Office of this M Bhubaneswar/ CPCB / SPCB shall monitor the stipulate	al conditions s as well as by e Zonal Office linistry at
In comp six-mon		ide S.O-5845, dt. 28th Nov 2018, the online submitted d annexures is being submitted to MoEFCC/OSPCB	Date: 30/05/2025
13	Statutory compliance	The environmental statement for each financial year March in Form-V as is mandated to be submitted by the proponent to the concerned State Pollution Control Bo prescribed under the Environment (Protection) Rules, amended subsequently, shall also be put on the website company along with the status of compliance of environment conditions and shall also be sent to the respective Region the MOEF at Bhubaneswar by e-mail.	e project ard as 1986, as e of the inmental
The env	ubmission: Complied ironmental statement is being submite is also uploaded on Company webs	itted every year to OSPCB and RO MoEFCC. Copy of site.	Date: 30/05/2025
14	Statutory compliance	The Project Proponent shall inform the public that the been accorded environmental clearance by the Ministry the clearance letter are available with the SPCB and meat Website of the Ministry of Environment and Forests http://envfor.nic.in. This shall be advertised within seven the date of issue of the clearance letter, at least in two leaves newspapers that are widely circulated in the region of the in the vernacular language of the locality concerned the same should be forwarded to the Regional office at	y and copies of ay also be seen at on days from ocal which one shall and a copy of
The info	sfer and amendment of environmenta	Newspaper in Odia and English language. Subsequent to al clearance in Favour of M/s Tata Steel Limited, endments shall be published by Tata Steel.	Date: 29/05/2025
15	MISCELLANEOUS	Project authorities shall inform the Regional Office a Ministry, the date of financial closure and final approv project by the concerned authorities and the date of colland development work.	al of the

ast Site Visit Report Date:  Iditional Remarks:  Note: This acknowledgement is as per the deta considered as conclusion on any action on the	Visit Remark  N/A  ills submitted by p  compliance of the  reference purpos		
Iditional Remarks:  Note: This acknowledgement is as per the deta	ails submitted by p	roject proponent. In no way is this	
Note: This acknowledgement is as per the deta	compliance of the	roject proponent. In no way is this	
<b>Note:</b> This acknowledgement is as per the deta considered as conclusion on any action on the	compliance of the	roject proponent. In no way is this	



## **Half-Yearly Compliance Report**

### On

# **Environmental Clearance Conditions For**

Ferro Alloy Plant - Balasore

Env clearance vide F no J-11011/519/2010-IA-II (I) dated 26/02/2013

Period: October 2024 - March 2025

**Submitted By:** 

M/s. Tata Steel Limited	
At- Plot No. Z-1, IDCO, IID Centre, Village Somnathpur, District Balasore, Odisha – 756 019	

<ol> <li>No charcoal shall be used as fuel. Pet coke shall be used as fuel instead of charcoal from unknown sources.</li> <li>Continuous monitoring facilities for the process stacks and sufficient air pollution control equipment's viz.</li> </ol>	Compliance Status Complied No charcoal is being used as fuel. Complied Presently, the process stacks have been provided with Gas Cleaning Plant (GCP) of adequate capacity with tume extraction system and bag filters. ID fan and tack of adequate height (45m) is maintained. OCEMS
<ol> <li>No charcoal shall be used as fuel. Pet coke shall be used as fuel instead of charcoal from unknown sources.</li> <li>Continuous monitoring facilities for the process stacks and sufficient air pollution control equipment's viz.</li> </ol>	Complied No charcoal is being used as fuel.  Complied Presently, the process stacks have been provided with Gas Cleaning Plant (GCP) of adequate capacity with tume extraction system and bag filters. ID fan and
charcoal from unknown sources.  Continuous monitoring facilities for the process stacks and sufficient air pollution control equipment's viz.	Complied Presently, the process stacks have been provided with Gas Cleaning Plant (GCP) of adequate capacity with tume extraction system and bag filters. ID fan and
charcoal from unknown sources.  2 Continuous monitoring facilities for the process stacks and sufficient air pollution control equipment's viz. Ga	Complied Presently, the process stacks have been provided with Gas Cleaning Plant (GCP) of adequate capacity with tume extraction system and bag filters. ID fan and
the process stacks and sufficient air Pr pollution control equipment's viz. Ga	resently, the process stacks have been provided with Gas Cleaning Plant (GCP) of adequate capacity with ume extraction system and bag filters. ID fan and
pollution control equipment's viz. Ga	Gas Cleaning Plant (GCP) of adequate capacity with ume extraction system and bag filters. ID fan and
	ume extraction system and bag filters. ID fan and
fume extraction system with bag fu	
	tack of adequate height (45m) is maintained. OCEMS
· .	<u>-</u>
	ystem has also been installed.
be provided to control emissions	
below 50 mg/NM3	
	Complied
	Presently, ambient Air Quality Standard notified vide
	G.S.R. No. 826(E) dated 16th November 2009 is ollowed.
	Complied
	resently, Requisite measures have been provided for
	aking care of fugitive dust emissions such as suction
	nood near the tap hole for collection of fugitive dust
	luring tapping and the same is connected to the
· · · · · · · · · · · · · · · · · · ·	ume Extraction System for subsequent venting
raw material storage shall be covered. th	hrough the Gas Cleaning Plant
5 Regular monitoring of influent and A	Agreed to Comply.
effluent surface, sub-surface and Re	Regular monitoring of treated effluent is being
	arried out and the monitoring report is being
	ubmitted to OSPCB on monthly basis. The water
	uality report is attached herewith.
pollution Control Board or described	
under the Environment (Protection)	
Act, 1986 whichever are more	
stringent. Leachate study for the effluent generated and analysis	
should also be regularly carried	
out and analysis should also be	
regularly carried out and report	
submitted to the Ministry's Regional	
Office at Bhubaneswar, SPCB and	
СРСВ	
	Complied
· · · · · · · · · · · · · · · · · · ·	Maximum raw water requirement for Furnace 1 is
139 m3/day. 'Zero' effluent discharge 14	48 m³/day and for Furnace 2 is 139 m³/day (Total –

SI.	Condition	Compliance Status
	shall be strictly followed and no wastewater, should be discharged outside the plant premises.	287 m <sup>3</sup> /day). NOC from CGWA has been obtained for drawl of 287m3/day vide NOC No. CGWA/NOC/IND/REN/ 2/2020/5687. The consumption of water shall not exceed the permitted volume.
7	Efforts shall be made to make use of rainwater harvested. If needed capacity of the maximum water should requirement only balance water requirement should be met from other sources.	Complied  During monsoon, the rainwater getting collected in the plant drains is being recycled for use in plant process.
8	Slag produced in Ferro Manganese (Fe- Mn) production shall be used in manufacture of silico Manganese (Si-Mn). The Fe-Si and Si-Mn slag shall be used in the preparation of building materials.	Complied The slag is being sold for use as building material.
9	All the Ferro Chrome slag shall be used for land filling inside the plant after metal recovery or used as building material only after passing through Toxic Chemical Leachability Potential (TCLP) test. Otherwise, hazardous substances shall be recovered from the slag and output waste and be disposed in secured landfill as per CPCB guidelines.	Agreed to Comply.  No Ferro Chrome produced during the reporting period thus requirement of TCLP not applicable.  Whenever ferro chrome slag is generated, necessary TCLP test will be carried out prior to use of FeCr slag.
10	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.	Complied. Onsite Emergency Plan available which is approved by DoFB.
11	As proposed, green belt shall be developed in at least 33% of the project area. Selection of plant species shall be as per the CPCB guidelines in consultation with the DFO.	Being Complied. At present, around 2500 saplings covering an area of around 7.1 acres are in self-sustaining conditions. Additional plantation is planned for future.
12	At least 5% of the total cost of the project should be earmarked towards the Enterprise Social Commitment	Complied  The condition was applicable for previous owner of the plant during the first few years after grant of EC.

SI.	Condition	Compliance Status
	based on locals need and item-wise details along with time bound action plan should be prepared and submitted to the Ministry's Regional Office at Bhubaneswar. Implementation of such program shall be ensured accordingly in a time bound manner.	After take over, Tata Steel has been carrying out CSR activities in the nearby areas through Tata Steel Foundation.
13	The company shall provide housing for construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets safe drinking water, medical health care, creche etc. The housing may be in the form of temporary structures to be removed after completion of the project.	Complied  Necessary infrastructure & facilities for the construction labours were provided during the construction Work.
	Gene	ral Conditions
1	The project authorities must strictly adhere to the stipulations made by the Odisha State Pollution Control Board and the State Government	Agreed to Comply. Stipulations as made by the State & Central Govt. are being adhered to from time to time.
2	No further expansion or modification in the plant should be carried out without prior approval of the Ministry of Environment and Forests.	Agreed to Comply  No further expansion or modification in the plant shall be carried out without prior approval of the Ministry of Environment and Forests.
3	At least four ambient air quality monitoring stations shall be established in the downward direction as well as where maximum ground level concentration of PM10, SO2 and NOx are anticipated in consultation with the SPCB. Data on Ambient air quality and stack emissions should be regularly submitted to this Ministry including its Regional Office at Bhubaneswar and the SPCB/ CPCB once in six months	Complied  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 are carried out by engaging an MoEFCC as well as NABL Accredited laboratory. Reports are submitted to State Pollution Control Board Odisha on monthly basis. AAQ monitoring report is attached herewith.
4	Industrial wastewater shall be properly collected, treated so as to conform to the standards prescribed under GSR 422 (E) dated 19th May,	Agreed to Comply.  Since no process-based effluents/trade effluents is getting generated thus requirement of leachate study

SI.	Condition	Compliance Status
	1993 and 31 <sup>st</sup> December, 1993 or as amended form time to time. The treated wastewater shall be utilised for plantation purpose.	is not applicable. However, ground water quality is being monitored on regular basis.
5	The overall noise levels in and around the plant area shall be kept well within the standards (85dBA) 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. 75dBA (daytime) and 70dBA (night-time)	Complied  Ambient Noise is regularly being monitored. Noise levels around the Plant area are being maintained within the standards.
6	Occupational Health Surveillance of the workers shall be done on a regular basis and records maintained as per the factories act.	Being Complied. Initial Medical Examination of all employees employed has been ensured. With-in one year all the employees are covered under periodical medical check-up.
7	The company shall develop rainwater harvesting structure to harvest the rainwater for utilisation in the lean season besides recharging the ground water table.	Agreed to Comply.  During monsoon, the rainwater getting collected in the plant drains is being recycled for use in plant process.
8	The project proponent shall also comply with all the environmental protection measures and safeguards recommended in the EIA/EMP report. Further, the company must undertake socio-economic development activities in the surrounding villages like community development programmes, educational programmes, drinking water supply and health care etc.	Being Complied.  Environmental Protection measures as indicated in the EIA and EMP report have been implemented. Socio-economic developmental activities in Health, Education, Sports, agriculture, and infrastructure development are being carried out in the surrounding and periphery villages.
9	Requisite amount shall be earmarked towards capital cost and recurring cost/ annum for environment pollution control measures to implement the conditions stipulated by the Ministry of Environment and Forests as well as the State Government. An implementation	Complied Separate budget has been earmarked towards capital and recurring environment expenditure.

SI.	Condition	Compliance Status
	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.	
10	A copy of clearance letter shall be sent	Complied.
	by the proponent to concerned	Environment Clearance copy has been submitted to
	Panchayat, Zila Parishad/ Municipal	the concerned Govt. /Private Bodies. Environment
	Corporation, Urban Local Body and	Clearance letter has also been uploaded on the Tata
	the	Steel website, www.tatasteel.com
	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 website of the	
	company by the proponent.	
11	The project proponent shall upload	Being Complied.
	the status of compliance of the	Six-monthly EC compliance reports are uploaded to
	stipulated environment clearance	the company's website www.tatasteel.com.
	conditions, including results of	
	monitored data on their website and	Electronic multi-line display board installed to display
	shall update the same periodically. It	the criteria pollutant levels namely, PM10, SO2, NOX
	shall simultaneously be sent to the	or critical sectoral parameters, indicated for the
	Regional Office of the MoEFCC at	projects at main gate of the company for the public
	Bhubaneswar, the respective Zonal	domain.
	office of CPCB and the SPCB. The	
	Criteria pollutant levels namely; PM10,	The compliance reports are being sent to the
	SO2, NOx (ambient levels as well as	Regional Office, MoEFCC and the respective zonal
	stack emissions) or critical sectoral	office of CPCB and SPCB.
	parameter, indicated for the projects	
	shall be monitored and displayed at a	
	convenient location near the main	
	gate of the company in the public	
	domain.	
12	The project proponent shall also	Being Complied.
	submit six monthly reports on the	In compliance with MoEFCC's notification vide S.O-
	status of the compliance of the	5845, dt. 28th Nov 2018, the online submitted six-
	stipulated environmental conditions	monthly compliance report with required annexures
	including results of monitored data	is being submitted to MoEFCC/OSPCB Regional
	(both in hard copies as well as by	Office through e-mail.
	email) to the Regional office of MoEF,	
	the respective Zonal Office of CPCB	

SI.	Condition	Compliance Status
	and the SPCB. The Regional Office of the Ministry at Bhubaneswar/ CPCB/ SPCB shall monitor the stipulated conditions.	
13	The environmental statement for each financial year ending 31st March in Form-V as mandated to be submitted by the project proponent to the Concerned. State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be put on the website of the company along with the status of compliance of the company along with the status of compliance of Environmental Conditions and shall also be sent to the respective Regional Office of the MoEF at Bhubaneswar by e-Mail.	Complied.  The environmental statement is being submitted every year to OSPCB and RO MoEFCC. Copy of the same is also uploaded on Company's website.
14	The Project Proponent shall inform the public that the project has been accorded environmental clearance by the Ministry and copies of the clearance letter are available with the SPCB and may also be seen at Website of the Ministry of Environment and Forests at	Complied.  The information was published in the local Newspaper in Odia and English language. Subsequent to the transfer and amendment of environmental clearance in favour of M/s Tata Steel Limited, information about future clearances and amendments shall be publicised by Tata Steel.
15	Project authorities shall inform the Regional Office as well as the Ministry,	Complied.  The activity was completed by M/s Stork Ferro Alloys before the start of the construction Work.

SI.	Condition	Compliance Status
	commencing the land development	
	work.	



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

Ref: Envlab/25-26/R-08367 Date:04.04.2025

#### SIX MONTH COMPLIANCE OF DRINKING WATER QUALITY OCT 24 TO MAR 25

Name of Industry Ferro Alloys Plant Baleswar, (M/s TATA Steel Limited); Baleswar.

Near Electric Substation(Aquaguard Water) Sampling location

Sl.	Parameter	Testing Methods	Unit		r IS -10500:2012 n 2015 & 2018	Analysis Results
No.		-	,	Acceptable Limit	Permissible Limit	<u> </u>
Essen	tial Characteristics	T				
1	Colour	APHA 2120 B, C	Hazen	5	15	<5
2	Odour	APHA 2150 B		Agreeable	Agreeable	Agreeable
3	Taste	APHA 2160 C		Agreeable	Agreeable	Agreeable
4	Turbidity	APHA 2130 B	NTU	1	5	<1
5	pH Value (at 25°C)	APHA 4500H+B	-	6.5-8.5	No relaxation	7.22
6	Total Hardness (as CaCO <sub>3</sub> )	APHA 2340 C	mg/l	200	600	142.67
7	Iron (as Fe)	APHA 3500Fe, B	mg/l	1	No relaxation	0.24
8	Chloride (as Cl )	APHA 4500C1⁻B	mg/l	250	1000	20.07
9	Residual, free Chlorine	APHA 4500Cl, B	mg/l	0.2	1	0.59
	able Characteristics					
10	Dissolved Solids	APHA 2540 C	mg/l	500	2000	133.50
11	Calcium (as Ca )	APHA 3500Ca B	mg/l	75	200	36.57
12	Magnesium (as Mg)	APHA 3500Mg B	mg/l	30	100	12.48
13	Copper (as Cu)	APHA 3111 B,C	mg/l	0.05	1.5	< 0.02
14	Manganese (as Mn)	APHA 3500Mn B	mg/l	0.1	0.3	< 0.025
15	Sulphate (as SO <sub>4</sub> )	APHA 4500 SO <sub>4</sub> <sup>2</sup> - E	mg/l	200	400	2.56
16	Nitrate (as NO <sub>3</sub> )	APHA 4500 NO <sub>3</sub> E	mg/l	45	No relaxation	0.32
17	Fluoride (as F)	APHA 4500F-C	mg/l	1.0	1.5	0.39
18	Phenolic Compounds (as C <sub>6</sub> H <sub>5</sub> OH)	APHA 5530 B,D	mg/l	0.001	0.002	< 0.001
19	Mercury (as Hg)	APHA 3500 Hg	mg/l	0.001	No relaxation	<0.001
20	Cadmium (as Cd)	APHA 3111 B,C	mg/l	0.003	No relaxation	<0.001
21	Selenium (as Se)	APHA 3500 Se C	mg/l	0.01	No relaxation	<0.01
22	Arsenic (as As)	APHA 3114 B	mg/l	0.01	No relaxation	
	` '				No relaxation  No relaxation	<0.01
23	Cyanide (as CN)	APHA 4500 CN <sup>-</sup> C,D	mg/l	0.05		<0.05
24	Lead (as Pb)	APHA 3111 B,C	mg/l	0.01	No relaxation	<0.01
25	Zinc (as Zn)	APHA 3111 B,C	mg/l	5.0	15.0	< 0.03
26	Anionic Detergents (as MBAS)	APHA 5540 C	mg/l	0.2	1.0	< 0.2
27	Total Chromium (as Cr)	APHA 3500Cr B	mg/l	0.05	No relaxation	< 0.05
28	Mineral Oil	APHA 5220 B	mg/l	0.5	No relaxation	BDL
29	Alkalinity	APHA 2320 B	mg/l	200	600	111
30	Aluminium as( Al)	APHA 3500Al B	mg/l	0.03	0.2	< 0.03
31	Boron (as B)	APHA 4500B, B	mg/l	0.5	1.0	< 0.5
32	Poly Aromatic Hydrocarbon as PAH	APHA 6440 B	mg/l	0.0001	No relaxation	< 0.0001
33	Pesticide	АРНА 6630 В,С	μg/l			Absent
34	E Coli	IS 15185:2016	per 100 ml	shall not be detectable in any 100 ml sample	shall not be detectable in any 100 ml sample	Absent
35	Total Coli forms	IS 15185:2016	per 100 ml	shall not be detectable in any 100 ml sample		Absent

BDL (Below Detectable Limits) Values: Turbidity<1NTU, Cu<0.02 mg/l, Mn<0.025 mg/l, C<sub>6</sub>H<sub>5</sub>OH<0.05 mg/l, Hg<0.004 mg/l, Cd<0.03 mg/l, Se<0.001 mg/l, As<0.004 mg/l, Pb<0.02 mg/l, Zn<0.03 mg/l, Cr<sup>+6</sup><0.01 mg/l, Al<0.1 mg/l, B<0.1 mg/l, Anionic Detergents<0.2mg/l, PAH<0.0001 mg/l.







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

Ref: Envlab/25-26/R-08368

Date:04.04.2025

#### SIX MONTH COMPLIANCE OF DRINKING WATER QUALITY OCT 24 TO MAR 25

Ferro Alloys Plant Baleswar, (M/s TATA Steel Limited); Baleswar. Name of Industry Sampling location Near Canteen (Aquaguard water)

Sl. No.	Parameter	Testing Methods	Unit	Standard as per I Amended on 2 Acceptable Limit		Analysis Results
Essen	tial Characteristics			Treeepimore Emile	2 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
1	Colour	APHA 2120 B, C	Hazen	5	15	<5
2	Odour	APHA 2150 B		Agreeable	Agreeable	Agreeable
3	Taste	APHA 2160 C		Agreeable	Agreeable	Agreeable
4	Turbidity	APHA 2130 B	NTU	1	5	<1
5	pH Value (at 25°C)	APHA 4500H+B		6.5-8.5	No relaxation	7.15
6	Total Hardness (as CaCO <sub>3</sub> )	APHA 2340 C	mg/l	200	600	142.33
7	Iron (as Fe)	APHA 3500Fe, B	mg/l	1	No relaxation	0.26
8	Chloride (as Cl )	APHA 4500CFB	mg/l	250	1000	20.82
9	Residual, free Chlorine	APHA 4500Cl, B	mg/l	0.2	1	0.55
		Desirable Ch	aracteristics		'	
10	Dissolved Solids	APHA 2540 C	mg/l	500	2000	136.33
11	Calcium (as Ca )	APHA 3500Ca B	mg/l	75	200	35.90
12	Magnesium (as Mg)	APHA 3500Mg B	mg/l	30	100	12.80
13	Copper (as Cu)	APHA 3111 B,C	mg/l	0.05	1.5	< 0.02
14	Manganese (as Mn)	APHA 3500Mn B	mg/l	0.1	0.3	< 0.025
15	Sulphate (as SO <sub>4</sub> )	APHA 4500 SO <sub>4</sub> <sup>2-</sup> E	mg/l	200	400	3.10
16	Nitrate (as NO <sub>3</sub> )	APHA 4500 NO <sub>3</sub> E	mg/l	45	No relaxation	0.42
17	Fluoride (as F)	APHA 4500F-C	mg/l	1.0	1.5	0.35
18	Phenolic Compounds (as C <sub>6</sub> H <sub>5</sub> OH)	APHA 5530 B,D	mg/l	0.001	0.002	< 0.001
19	Mercury (as Hg)	APHA 3500 Hg	mg/l	0.001	No relaxation	< 0.001
20	Cadmium (as Cd)	APHA 3111 B,C	mg/l	0.003	No relaxation	< 0.003
21	Selenium (as Se)	APHA 3500 Se C	mg/l	0.01	No relaxation	< 0.01
22	Arsenic (as As)	APHA 3114 B	mg/l	0.01	No relaxation	< 0.01
23	Cyanide (as CN)	APHA 4500 CN-C,D	mg/l	0.05	No relaxation	< 0.05
24	Lead (as Pb)	APHA 3111 B,C	mg/l	0.01	No relaxation	<0.01
25	Zinc (as Zn)	APHA 3111 B,C	mg/l	5.0	15.0	< 0.03
26	Anionic Detergents (as MBAS)	APHA 5540 C	mg/l	0.2	1.0	<0.2
27	Chromium (as Cr <sup>+6</sup> )	APHA 3500Cr B	mg/l	0.05	No relaxation	<0.05
28	Mineral Oil	APHA 5220 B	mg/l	0.05	No relaxation	<0.5
29	Alkalinity	APHA 2320 B	mg/l	200	600	108
30	Aluminium as( Al)	APHA 3500AI B	mg/l	0.03	0.2	<0.03
31	Boron (as B)	APHA 4500B, B	mg/l	0.03	1.0	<0.5
32	Poly Aromatic Hydrocarbon as PAH	APHA 6440 B	mg/l	0.0001	No relaxation	<0.0001
33	Pesticide	APHA 6630 B,C	μg/l			Absent
34	E Coli	АРНА 9221-F	μg/1 MPN/ 100 ml	shall not be detectable in any 100 ml sample	-	Absent
35	Total Coli forms	АРНА 9221-В	MPN/ 100 ml	shall not be detectable in any 100 ml sample		Absent

Note: ND: Not Detected.

BDL (Below Detectable Limits) Values: Turbidity<1NTU, Cu<0.02 mg/l, Mn<0.025 mg/l, C<sub>6</sub>H<sub>5</sub>OH<0.05 mg/l, Hg<0.004 mg/l, Cd<0.03 mg/l, Se<0.001 mg/l, As<0.004 mg/l, Pb<0.02 mg/l, Zn<0.03 mg/l, Cr<sup>+6</sup><0.01 mg/l, Al<0.1 mg/l, B<0.1 mg/l, Anionic Detergents<0.2mg/l, PAH<0.0001 mg/l.





Tel.: 0674-3511721



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

Ref: Envlab/25-26/R-08369

#### Date:04.04.2025

#### SIX MONTH COMPLIANCE OF GROUND WATER QUALITY OCT 24 TO MAR 25

1. Name of Inc	lustry :	Ferro Alloys Plant Baleswar, (M/s TATA Steel Limited); Baleswar.
2. Sampling lo	cation :	Near Zigging Area

Colour	Sl. No.	Parameter	Testing Methods	Unit	Standard as per IS Amended on 20 Acceptable Limit		Analysis Results
1   Colour   APHA 2120 B, C   Hazen   5   15   <	Essen	tial Characteristics			Acceptable Limit	rermissible Limit	
April			APHA 2120 B. C	Hazen	5	15	<5
3   Taste					_		Agreeable
5         pH Value (at 25°C)         APHA 4500H°B         —         6.5-8.5         No relaxation           6         Total Hardness (as CaCO <sub>3</sub> )         APHA 2340 C         mg/l         200         600           7         Chloride (as C1)         APHA 4500CL B         mg/l         250         10000           8         Residual, free Chlorine         APHA 4500CL B         mg/l         0.2         1         BD           9         Dissolved Solids         APHA 2540 C         mg/l         500         2000         1           11         Calcium (as Ca)         APHA 3500Ca B         mg/l         75         200         1           12         Magnesium (as Mg)         APHA 3500Mn B         mg/l         30         100         100           13         Sulphate (as SOa)         APHA 4500 SOa* E         mg/l         200         400           14         Nitrate (as NOs)         APHA 4500 F° C         mg/l         45         No relaxation           15         Fluoride (as F)         APHA 4500 CN° CD         mg/l         0.001         0.002         <0.0	3	Taste		_	0	Agreeable	Agreeable
6 Total Hardness (as CaCO <sub>3</sub> ) APHA 2340 C mg/l 200 600 7 Chloride (as C1) APHA 4500C B mg/l 250 1000 8 Residual, free Chlorine APHA 4500C B mg/l 0.2 1 BB 9 Dissolved Solids APHA 2500C B mg/l 500 2000 11 Calcium (as Ca) APHA 3500Ca B mg/l 30 100 12 Magnesium (as Mg) APHA 3500Ca B mg/l 30 100 13 Sulphate (as SO <sub>4</sub> ) APHA 4500 SO <sub>4</sub> E mg/l 200 400 14 Nitrate (as NO <sub>3</sub> ) APHA 4500 NO <sub>2</sub> E mg/l 45 No relaxation 15 Fluoride (as F) APHA 4500 NO <sub>2</sub> E mg/l 1.0 1.5 <15 16 Phenolic Compounds (as CaHsOH) APHA 5503 B,D mg/l 0.001 0.002 <0.0 17 Cyanide (as CN) APHA 4500 CN°C,D mg/l 0.001 0.002 <0.0 18 Mineral Oil APHA 5220 B mg/l 200 600 19 Alkalinity APHA 5220 B mg/l 200 600 20 Aluminium as(Al) APHA 3500AB mg/l 0.0 21 Boron (as B) APHA 4500B,B mg/l 0.5 No relaxation <0.0 22 Poly Aromatic Hydrocarbon as PAH APHA 6440 B mg/l 0.0001 No relaxation <0.0 23 Pesticide APHA 6630 B,C μg/l 0.001 No relaxation <0.0 24 E Coli APHA 9221-F MPN/l 100 ml sample  Trace Metals  10 Iron (as Fe) APHA 3500Mg B mg/l 0.1 0.3 <0.2 24 Manganese(Mn) APHA 3500Mg B mg/l 0.1 0.3 <0.2 25 Manganese(Mn) APHA 3500Mg B mg/l 0.1 0.3 <0.0 26 Manganese(Mn) APHA 3500Mg B mg/l 0.1 0.3 <0.0 27 Marganese(Mn) APHA 3500Mg B mg/l 0.1 0.3 <0.0 28 Manganese(Mn) APHA 3500Mg B mg/l 0.1 0.3 <0.0 39 Copper (as Cu) APHA 3111 B,C mg/l 0.003 No relaxation <0.0 30 Copper (as Cu) APHA 3111 B,C mg/l 0.003 No relaxation <0.0 30 Copper (as Cu) APHA 3111 B,C mg/l 0.003 No relaxation <0.0 30 Cadmium (as Cd) APHA 3111 B,C mg/l 0.003 No relaxation <0.0 30 Selenium (as Se) APHA 3114 B mg/l 0.001 No relaxation <0.0 30 Arsenic (as As) APHA 3114 B mg/l 0.001 No relaxation <0.0	4	Turbidity	APHA 2130 B	NTU	1	5	<1
7	5	pH Value (at 25°C)	APHA 4500H+B	_	6.5-8.5	No relaxation	
Residual, free Chlorine	6	Total Hardness (as CaCO <sub>3</sub> )	APHA 2340 C	mg/l	200	600	
9   Dissolved Solids	7	Chloride (as Cl )	APHA 4500CFB	mg/l	250	1000	
11   Calcium (as Ca )	8	Residual, free Chlorine	APHA 4500Cl, B	mg/l	0.2	1	BDL
12   Magnesium (as Mg)	9	Dissolved Solids	APHA 2540 C	mg/l	500	2000	
13   Sulphate (as SO <sub>4</sub> )   APHA 4500 SO <sub>4</sub> E   mg/l   200   400     14   Nitrate (as NO <sub>3</sub> )   APHA 4500 NO <sub>5</sub> E   mg/l   45   No relaxation     15   Fluoride (as F)   APHA 4500FC   mg/l   1.0   1.5   <     16   Phenolic Compounds (as C <sub>6</sub> H <sub>8</sub> OH)   APHA 5530 B,D   mg/l   0.001   0.002   < 0.0   17   Cyanide (as CN)   APHA 4500 CN°C,D   mg/l   0.05   No relaxation   < 0.01     18   Mineral Oil   APHA 520 B   mg/l   0.5   No relaxation   < 0.01     19   Alkalinity   APHA 2320 B   mg/l   200   600     20   Aluminium as(Al)   APHA 3500A1 B   mg/l   0.5   1.0   < 0.2   < 0.0     21   Boron (as B)   APHA 4500 CN°C,D   mg/l   0.05   No relaxation   < 0.0     22   Poly Aromatic Hydrocarbon as PAH   APHA 6440 B   mg/l   0.0001   No relaxation   < 0.0     23   Pesticide   APHA 6630 B,C   µg/l     < 1     24   E Coli   APHA 9221-F   MPN/   Shall not be detectable in   any 100 ml sample   -   < 1.     25   Total Coli forms   APHA 9221-B   MPN/   shall not be detectable in   any 100 ml sample   -   < 1.     Trace Metals   1   Iron (as Fe)   APHA 3500Fe, B   mg/l   0.1   0.3   < 0.0     03   Copper (as Cu)   APHA 3111 B,C   mg/l   0.001   No relaxation   < 0.0     04   Mercury (as Hg)   APHA 3500 Hg   mg/l   0.001   No relaxation   < 0.0     05   Cadmium (as Cd)   APHA 3111 B,C   mg/l   0.001   No relaxation   < 0.0     06   Selenium (as Se)   APHA 3114 B   mg/l   0.01   No relaxation   < 0.0     07   Arsenic (as As)   APHA 3114 B   mg/l   0.01   No relaxation   < 0.0	11	Calcium (as Ca )	APHA 3500Ca B	mg/l	75	200	
Nitrate (as NO <sub>3</sub> )	12	Magnesium (as Mg)	APHA 3500Mn B	mg/l	30	100	
15   Fluoride (as F)	13	Sulphate (as SO <sub>4</sub> )	APHA 4500 SO <sub>4</sub> <sup>2-</sup> E	mg/l	200	400	
16	14	Nitrate (as NO <sub>3</sub> )	APHA 4500 NO <sub>3</sub> E	mg/l	45	No relaxation	
17   Cyanide (as CN)   APHA 4500 CN*C,D   mg/l   0.05   No relaxation   <0.08	15	Fluoride (as F)	APHA 4500F-C	mg/l	1.0	1.5	<1
18   Mineral Oil   APHA 5220 B   mg/l   0.5   No relaxation   <0	16	Phenolic Compounds (as C <sub>6</sub> H <sub>5</sub> OH)	APHA 5530 B,D	mg/l	0.001	0.002	<0.001
19   Alkalinity   APHA 2320 B   mg/l   200   600     20   Aluminium as(Al)   APHA 3500Al B   mg/l   0.03   0.2   <0.0000000000000000000000000000000000	17	Cyanide (as CN)	APHA 4500 CN <sup>-</sup> C,D	mg/l	0.05	No relaxation	< 0.05
20   Aluminium as(Al)   APHA 3500A1B   mg/l   0.03   0.2   <0.1     21   Boron (as B)   APHA 4500B, B   mg/l   0.5   1.0   <0.0     22   Poly Aromatic Hydrocarbon as PAH   APHA 6440 B   mg/l   0.0001   No relaxation   <0.0     23   Pesticide   APHA 6630 B,C   µg/l       <1     24   E Coli   APHA 9221-F   MPN/ 100 ml   shall not be detectable in any 100 ml sample     <1     25   Total Coli forms   APHA 9221-B   MPN/ 100 ml   shall not be detectable in any 100 ml sample     <1     25   Total Secondary   Total Seconda	18			mg/l	0.5	No relaxation	< 0.5
21   Boron (as B)   APHA 4500B, B   mg/l   0.5   1.0   <0.     22   Poly Aromatic Hydrocarbon as PAH   APHA 6440 B   mg/l   0.0001   No relaxation   <0.00     23   Pesticide   APHA 6630 B,C   μg/l       <1.     24   E Coli   APHA 9221-F   MPN/   shall not be detectable in any 100 ml sample   -   <1.     25   Total Coli forms   APHA 9221-B   MPN/   100 ml   shall not be detectable in any 100 ml sample   -   <1.     25   Total Coli forms   APHA 9221-B   MPN/   100 ml   shall not be detectable in any 100 ml sample   -   <1.     26   Trace Metals   MPN/   100 ml   Shall not be detectable in any 100 ml sample   -   <1.     26   Total Coli forms   APHA 3500Fe, B   mg/l   1   No relaxation       27   Manganese(Mn)   APHA 3500Mg B   mg/l   0.1   0.3   <0.00     28   APHA 3111 B,C   mg/l   0.005   1.5   <0.000     29   Cadmium (as Cu)   APHA 3111 B,C   mg/l   0.001   No relaxation   <0.0000     20   Cadmium (as Cd)   APHA 3111 B,C   mg/l   0.003   No relaxation   <0.0000     20   Arsenic (as As)   APHA 3114 B   mg/l   0.01   No relaxation   <0.0000     20   Arsenic (as As)   APHA 3114 B   mg/l   0.01   No relaxation   <0.0000     20   Arsenic (as As)   APHA 3114 B   mg/l   0.01   No relaxation   <0.0000     20   Arsenic (as As)   APHA 3114 B   mg/l   0.01   No relaxation   <0.0000     20   Arsenic (as As)   APHA 3114 B   mg/l   0.01   No relaxation   <0.0000     20   Arsenic (as As)   APHA 3114 B   mg/l   0.01   No relaxation   <0.0000     20   Arsenic (as As)   APHA 3114 B   mg/l   0.01   No relaxation   <0.0000     20   Arsenic (as As)   APHA 3114 B   mg/l   0.01   No relaxation   <0.0000     20   Arsenic (as As)   APHA 3114 B   mg/l   0.01   No relaxation   <0.0000     20   Arsenic (as As)   APHA 3114 B   mg/l   0.01   No relaxation   <0.0000     20   Arsenic (as As)   APHA 3114 B   mg/l   0.01   No relaxation   <0.00000     20   Arsenic (as As)   APHA 3114 B   mg/l   0.01   No relaxation   <0.00000     20   Arsenic (as As)   APHA 3114 B   mg/l   0.01   No relaxation   <0.00000     20   APHA 3114 B   mg/l		· · · · · · · · · · · · · · · · · · ·		mg/l			
22   Poly Aromatic Hydrocarbon as PAH   APHA 6440 B   mg/l   0.0001   No relaxation   <0.00		` /		mg/l			< 0.03
23   Pesticide   APHA 6630 B,C   μg/l       <1	21	Boron (as B)	APHA 4500B, B	mg/l	0.5	1.0	<0.5
APHA 9221-F   MPN/ 100 ml   shall not be detectable in any 100 ml sample   -   <1.	22	Poly Aromatic Hydrocarbon as PAH	APHA 6440 B	mg/l	0.0001	No relaxation	< 0.0001
APHA 9221-F   100 ml   any 100 ml sample	23	Pesticide	APHA 6630 B,C	μg/l	<b></b>		<10
Total Coli forms   APHA 9221-B   MPN/ 100 ml   shall not be detectable in any 100 ml sample   -   <1.	24	E Coli	АРНА 9221-F			-	<1.1
Trace Metals           01         Iron (as Fe)         APHA 3500Fe, B         mg/l         1         No relaxation           02         Manganese(Mn)         APHA 3500Mg B         mg/l         0.1         0.3         <0.	25	Total Coli forms	АРНА 9221-В		shall not be detectable in	_	<1.1
02         Manganese(Mn)         APHA 3500Mg B         mg/l         0.1         0.3         <0.0	Trace	Metals			J I		
03         Copper (as Cu)         APHA 3111 B,C         mg/l         0.05         1.5         <0.0	01	Iron (as Fe)	APHA 3500Fe, B	mg/l	1	No relaxation	
04         Mercury (as Hg)         APHA 3500 Hg         mg/l         0.001         No relaxation         <0.0           05         Cadmium (as Cd)         APHA 3111 B,C         mg/l         0.003         No relaxation         <0.0	02	Manganese(Mn)	APHA 3500Mg B	mg/l	0.1	0.3	< 0.05
05         Cadmium (as Cd)         APHA 3111 B,C         mg/l         0.003         No relaxation         <0.0           06         Selenium (as Se)         APHA 3500 Se C         mg/l         0.01         No relaxation         <0.0	03	Copper (as Cu)	АРНА 3111 В,С	mg/l	0.05	1.5	< 0.05
06         Selenium (as Se)         APHA 3500 Se C         mg/l         0.01         No relaxation         <0.           07         Arsenic (as As)         APHA 3114 B         mg/l         0.01         No relaxation         <0.	04	Mercury (as Hg)	APHA 3500 Hg	mg/l	0.001	No relaxation	< 0.001
07         Arsenic (as As)         APHA 3114 B         mg/l         0.01         No relaxation         <0.0	05	Cadmium (as Cd)	АРНА 3111 В,С	mg/l	0.003	No relaxation	< 0.003
of Arisente (us 18)	06	Selenium (as Se)	APHA 3500 Se C	mg/l	0.01	No relaxation	< 0.01
08 Lead (as Db) ADHA 3111 R.C. mg/l 0.01 No relevation db	07	Arsenic (as As)	APHA 3114 B	mg/l	0.01	No relaxation	< 0.01
vo Leau (as 1 v) At fia 3111 b,C ling/1 v.u1 No relaxation <0.	08	Lead (as Pb)	АРНА 3111 В,С	mg/l	0.01	No relaxation	< 0.01
09 Zinc (as Zn) APHA 3111 B,C mg/l 5.0 15.0 <0.	09	Zinc (as Zn)	APHA 3111 B,C	mg/l	5.0	15.0	< 0.03
10 Chromium (as Cr <sup>+6</sup> ) APHA 3500Cr B mg/l - <0.	10	Chromium (as Cr <sup>+6</sup> )	APHA 3500Cr B	mg/l		_	< 0.01

BDL (Below Detectable Limits) Values: Turbidity <1NTU, Cu<0.02 mg/l, Mn<0.025 mg/l, C<sub>6</sub>H<sub>5</sub>OH<0.05 mg/l, Hg<0.004 mg/l, Cd<0.03 mg/l, Se<0.001 mg/l, As<0.004 mg/l, Pb<0.02 mg/l, Zn<0.03 mg/l, Cr<sup>+6</sup><0.01 mg/l, Al<0.1 mg/l, B<0.1 mg/l, Anionic Detergents<0.2 mg/l, PA=0.0001 mg/l.





Tel.: 0674-3511721



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

Ref: Envlab/25-26/TR-08370

Date:04.04.2025

#### SURFACE WATER QUALITY ANALYSIS REPORT FOR OCT 24 TO MAR 25

1. Name of Industry	:	Ferro Alloys Plant Baleswar, (M/s TATA Steel Limited); Baleswar.
2. Sampling location	:	Near Darakhuli,Naraharipur (Pond water)
5. Sample collected by	:	VCSPL Representative

Sl. No.	Parameter	Testing Methods	Unit	Standards as per IS- 2296:1992 Class –'C'	Analysis Results
1	Colour	APHA 2120 B, C	Hazen	300	CL
2	Turbidity	APHA 2130 B	NTU		<1
3	pH Value (at 25°C)	APHA 4500H+B		6.0-9.0	7.10
4	Total Hardness (as CaCO <sub>3</sub> )	APHA 2340 C	mg/l		147
5	Iron (as Fe)	APHA 3500Fe, B	mg/l	0.5	0.48
6	Chloride (as Cl )	APHA 4500CFB	mg/l	600	30.4
7	Dissolved Solids	APHA 2540 C	mg/l	1500	314
8	Calcium (as Ca )	APHA 3500Ca B	mg/l		37.0
9	Magnesium (as Mg)	APHA 3500Mg B	mg/l		13
10	Copper (as Cu)	APHA 3111 B,C	mg/l	1.5	BDL
11	Sulphate (as SO <sub>4</sub> )	APHA 4500 SO <sub>4</sub> <sup>2</sup> E	mg/l	400	8.20
12	Nitrate (as NO <sub>3</sub> )	APHA 4500 NO <sub>3</sub> E	mg/l	50	1.70
13	Fluoride (as F)	APHA 4500F-C	mg/l	1.5	0.63
14	Phenolic Compounds (as C <sub>6</sub> H <sub>5</sub> OH)	APHA 5530 B,D	mg/l	0.005	BDL
15	Mercury (as Hg)	APHA 3500 Hg	mg/l		BDL
16	Cadmium (as Cd)	APHA 3111 B,C	mg/l	0.01	BDL
17	Selenium (as Se)	APHA 3500 Se C	mg/l	0.05	BDL
18	Arsenic (as As)	APHA 3114 B	mg/l	0.2	BDL
19	Cyanide (as CN)	APHA 4500 CN <sup>-</sup> C,D	mg/l	0.05	BDL
20	Lead (as Pb)	APHA 3111 B,C	mg/l	0.1	BDL
21	Zinc (as Zn)	APHA 3111 B,C	mg/l	15	0.30
22	Anionic Detergents (as MBAS)	APHA 5540 C	mg/l	0.2	<0.2
23	Chromium (as Cr <sup>+6</sup> )	APHA 3500Cr B	mg/l	0.05	BDL
24	Alkalinity	APHA 2320 B	mg/l		117
25	Pesticide	АРНА 6630 В,С	μg/l	-	Absent
26	Dissolved Oxygen (as DO)	АРНА 4500 О-С	mg/l	4.0	6.3
27	Biochemical Oxygen Demand (as BOD at 270C For 3 days)	IS 3025(P-44) : 1993 RA 2003	mg/l	3.0	3.3
28	Chemical Oxygen Demand (as COD)	APHA 23 <sup>RD</sup> Ed,2017: 5220 C	mg/l		11.6
29	Total Suspended Solids	APHA 2540 C	mg/l		91.1
30	Silica as SiO2	APHA 23 <sup>RD</sup> Ed,2017: 4500 SiO <sub>2</sub> C	mg/l		3.0
31	Total Coli forms	АРНА 9221-В	MPN/ 100 ml	5000	82.2

 $BDL~(Below~Detectable~Limits)~Values: Turbidity < 1NTU,~Cu < 0.02~mg/l,~Mn < 0.025~mg/l,~C_6H_5OH < 0.05~mg/l,~Hg < 0.004~mg/l,~Cd < 0.03~mg/l,~Se < 0.001~mg/l,~Cl < 0.001~mg$ mg/l, Pb<0.02 mg/l, Zn<0.03 mg/l, Cr<sup>+6</sup><0.01 mg/l, Al<0.1 mg/l, B<0.1 mg/l, Anionic Detergents<0.2 mg/l, PAH<0.0001 mg/l.





As<0.004

Tel.: 0674-3511721



Ref: Envlab/25-26/TR-08362 Date:04.04.2025

### **SIX MONTH COMPLIANCE REPORT AAQ MONITORING REPORT FOR OCT 2024 TO MAR 2025 (CORE ZONE)**

1. Name of Industry	:	M/s Ferro Alloys Plant Baleswar, (M/s TATA Steel Limited); Baleswar.
2. Sampling Location	•	Monitoring Station ID: AAQMS-1 (Near 11KVA Substation).
3. Monitoring Instruments	:	RDS(APM 460 BL), FPS(APM 550) Envirotech, CO Monitor, VOC Sampler
4. Sample collected by	:	VCSPL representative in presence of TATA representative.

	PARAMETERS											
Month	PM <sub>10</sub> (μg/m <sup>3</sup> )	PM <sub>2.5</sub> (μg/m <sup>3</sup> )	SO <sub>2</sub> (μg/m³)	NO <sub>x</sub> (μg/m <sup>3</sup> )	Ο <sub>3</sub> (μg/m³)	CO (mg/m³)	NH <sub>3</sub> (μg/m <sup>3</sup> )	C <sub>6</sub> H <sub>6</sub> (μg/m³)	BaP (ng/m³)	Ni (ng/m³)	Pb (μg/m³)	As (ng/m³)
OCT 24	61.5	31.4	11.6	21.7	11.9	0.7	22.6	BDL	BDL	BDL	BDL	BDL
NOV 24	63.4	32.7	12.7	23.0	10.2	0.8	24.7	BDL	BDL	BDL	BDL	BDL
DEC 24	65.1	33.4	14.5	24.9	9.7	0.8	25.6	BDL	BDL	BDL	BDL	BDL
JAN 25	68.5	35.2	14.6	25.8	8.6	0.9	25.8	BDL	BDL	BDL	BDL	BDL
FEB 25	67.6	34.9	12.2	24.4	8.7	0.9	25.9	BDL	BDL	BDL	BDL	BDL
MAR 25	67.5	35.2	13.8	24.7	8.3	0.9	26.6	BDL	BDL	BDL	BDL	BDL
Average	65.6	33.8	13.2	24.1	9.6	0.8	25.2	BDL	BDL	BDL	BDL	BDL
NAAQ Standard	100	60	80	80	180	4	400	5	1	20	1	6
Testing method	Gravi m etric	Gravimet ric	Improved West and Gaeke method	Modified Jacob & Hochheiser (Na- Arsenite)	Chemical Method	NDIR Spectro scopy	Indo phenol blue method	Absorption & Desorption followed by GC analysis	Solvent extraction followed by Gas Chromatogr aphy analysis	AAS method after sampling	AAS method after sampling	AAS method after samplin g

 $\textbf{BDL Values}: PM_{10} < 20 \ \mu g/m^3, PM_{2.5} < 10 \ \mu g/m^3 \ SO_2 < 4 \ \mu g/m^3, NO_X < 6 \ \mu g/m^3, O_3 < 4 \ \mu g/m^3, NH_3 < 20 \ \mu g/m^3, Ni < 2.5 \ ng/m^3, As < 1 \ ng/m^3, C_6H_6 < 4 \ \mu g/m^3, BaP < 0.5 \ ng/m^3, Pb < 0.02 \ \mu g/m^3, CO < 0.1 \ ng/m^3, Ph < 0.02 \ ng/m^3,$ 







Ref: Envlab/25-26/TR-08363 Date:04.04.2025

### **SIX MONTH COMPLIANCE REPORT** AAQ MONITORING REPORT FOR OCT 2024 TO MAR 2025 (CORE ZONE)

1. Name of Industry	:	M/s Ferro Alloys Plant Baleswar, (M/s TATA Steel Limited); Baleswar.
2. Sampling Location	:	Monitoring Station ID:AAQMS-3 (Near GCP)
3. Monitoring Instruments	:	RDS(APM 460 BL), FPS(APM 550) Envirotech, CO Monitor, VOC Sampler
4. Sample collected by	:	VCSPL representative in presence of TATA representative.

		PARAMETERS										
Date	PM <sub>10</sub> (μg/m <sup>3</sup> )	PM <sub>2.5</sub> (μg/m <sup>3</sup> )	SO <sub>2</sub> (μg/m³)	NO <sub>x</sub> (μg/m³)	Ο <sub>3</sub> (μg/m³)	CO (mg/m³)	NH <sub>3</sub> (μg/m <sup>3</sup> )	C <sub>6</sub> H <sub>6</sub> (μg/m³)	BaP (ng/m³)	Ni (ng/m³)	Pb (μg/m³)	As (ng/m³)
OCT 24	60.8	31.0	11.6	21.4	10.8	0.7	23.0	BDL	BDL	BDL	BDL	BDL
NOV 24	61.5	31.3	11.7	21.6	10.5	0.7	25.1	BDL	BDL	BDL	BDL	BDL
DEC 24	61.2	30.2	12.9	20.9	9.1	0.8	23.5	BDL	BDL	BDL	BDL	BDL
JAN 25	63.5	32.5	12.6	21.6	9.0	0.8	24.3	BDL	BDL	BDL	BDL	BDL
FEB 25	63.8	31.9	11.1	22.3	8.6	0.8	23.9	BDL	BDL	BDL	BDL	BDL
MAR 25	62.4	32.8	12.5	21.2	9.2	0.8	23.6	BDL	BDL	BDL	BDL	BDL
Average	62.2	31.6	12.1	21.5	9.5	0.8	23.9	BDL	BDL	BDL	BDL	BDL
NAAQ Standard	100	60	80	80	180	4	400	5	1	20	1	6
Testing method	Gravimetric	Gravimetric	Improve d West and Geake method	Modified Jacob & Hochheiser (Na- Arsenite)	Chemical Method	NDIR Spectro scopy	Indo phenol blue method	Absorption & Desorption followed by GC analysis	Solvent extraction followed by Gas Chromatograp hy analysis	AAS method after sampling	AAS method after sampling	AAS method after sampling







Ref: Envlab/25-26/TR-08364 Date:04.04.2025

### **SIX MONTH COMPLIANCE REPORT AAQ MONITORING REPORT FOR OCT 2024 TO MAR 2025 (CORE ZONE)**

5. Name of Industry	:	M/s Ferro Alloys Plant Baleswar, (M/s TATA Steel Limited); Baleswar.
6. Sampling Location	:	Monitoring Station ID:AAQMS-3 (Near Main gate)
7. Monitoring Instruments	:	RDS(APM 460 BL), FPS(APM 550) Envirotech, CO Monitor, VOC Sampler
8. Sample collected by	:	VCSPL representative in presence of TATA representative.

						PARAME	ΓERS					
Date	PM <sub>10</sub> (μg/m³)	PM <sub>2.5</sub> (μg/m³)	SO <sub>2</sub> (μg/m³)	NO <sub>x</sub> (μg/m³)	Ο <sub>3</sub> (μg/m³)	CO (mg/m³)	NH <sub>3</sub> (μg/m³)	C <sub>6</sub> H <sub>6</sub> (μg/m³)	BaP (ng/m³)	Ni (ng/m³)	Pb (μg/m³)	As (ng/m³)
OCT 24	57.2	28.0	8.7	13.8	8.9	0.6	22.9	BDL	BDL	BDL	BDL	BDL
NOV 24	57.5	27.6	9.4	14.8	8.6	0.5	22.9	BDL	BDL	BDL	BDL	BDL
DEC 24	58.6	28.4	9.5	16.4	8.5	0.6	22.9	BDL	BDL	BDL	BDL	BDL
JAN 25	56.9	26.5	10.6	16.5	8.9	0.6	23.1	BDL	BDL	BDL	BDL	BDL
FEB 25	57.1	27.7	8.9	17.6	8.4	0.6	22.9	BDL	BDL	BDL	BDL	BDL
MAR 25	58.0	29.0	9.3	17.7	8.1	0.6	22.7	BDL	BDL	BDL	BDL	BDL
Average	57.6	27.9	9.4	16.1	8.6	0.6	22.9	BDL	BDL	BDL	BDL	BDL
NAAQ Standard	100	60	80	80	180	4	400	5	1	20	1	6
Testing method	Gravimetri c	Gravimetric	Improved West and Geake method	Modified Jacob & Hochheiser (Na-Arsenite)	Chemical Method	NDIR Spectro scopy	Indo phenol blue method	Absorption & Desorption followed by GC analysis	Solvent extraction followed by Gas Chromatogr aphy analysis	AAS method after sampling	AAS method after sampling	AAS method after sampling

**BDL Values:**  $PM_{10} < 20 \mu g/m^3$ ,  $PM_{25} < 10 \mu$ 







Ref: Envlab/25-26/TR-08365 Date:04.04.2025

### **SIX MONTH COMPLIANCE REPORT** AAQ MONITORING REPORT FOR OCT 2024 TO MAR 2025 (CORE ZONE)

1. Name of Industry	:	M/s Ferro Alloys Plant Baleswar, (M/s TATA Steel Limited); Baleswar.
2. Sampling Location	:	Monitoring Station ID:AAQMS-4 (Near Admin Building)
3. Monitoring Instruments	:	RDS(APM 460 BL), FPS(APM 550) Envirotech, CO Monitor, VOC Sampler
4. Sample collected by	:	VCSPL representative in presence of TATA representative.

		PARAMETERS											
Date	PM <sub>10</sub> (μg/m³)	PM <sub>2.5</sub> (μg/m <sup>3</sup> )	SO <sub>2</sub> (μg/m³)	NO <sub>x</sub> (μg/m³)	Ο <sub>3</sub> (μg/m³)	CO (mg/m³)	NH <sub>3</sub> (μg/m <sup>3</sup> )	C <sub>6</sub> H <sub>6</sub> (μg/m³)	BaP (ng/m³)	Ni (ng/m³)	Pb (μg/m³)	As (ng/m³)	
OCT 24	56.7	27.6	9.4	14.4	9.3	0.6	22.7	BDL	BDL	BDL	BDL	BDL	
NOV 24	57.6	28.2	10.1	15.6	9.9	0.6	23.5	BDL	BDL	BDL	BDL	BDL	
DEC 24	56.5	27.4	9.5	15.5	8.4	0.6	22.8	BDL	BDL	BDL	BDL	BDL	
JAN 25	55.6	26.0	9.6	15.7	8.1	0.5	22.6	BDL	BDL	BDL	BDL	BDL	
FEB 25	58.1	27.6	9.4	16.6	8.4	0.6	22.4	BDL	BDL	BDL	BDL	BDL	
MAR 25	59.5	30.0	9.4	15.9	7.8	0.6	22.8	BDL	BDL	BDL	BDL	BDL	
Average	57.3	27.8	9.6	15.6	8.7	0.6	22.8	BDL	BDL	BDL	BDL	BDL	
NAAQ Standard	100	60	80	80	180	4	400	5	1	20	1	6	
Testing method	Gravimetri c	Gravimetric	Improved West and Geake method	Modified Jacob & Hochheiser (Na-Arsenite)	Chemical Method	NDIR Spectro scopy	Indo phenol blue method	Absorption & Desorption followed by GC analysis	Solvent extraction followed by Gas Chromatogr aphy analysis	AAS method after sampling	AAS method after sampling	AAS method after sampling	

BDL Values:  $PM_{10} < 20 \mu g/m^3$ ,  $PM_{2.5} < 10 \mu g/m^3$ ,  $PM_{2.5}$ 



