

Ref. No: TSSEZL/ ENV/MoEF/1302/2023

Dated: 9th April' 2023

To,
Addl. Principal Chief Conservator of Forests (C),
Ministry of Environment, Forest and Climate Change,
Regional Office (EZ), A/3, Chandrasekharpur,
Bhubaneswar-751023
e-mail: roez.bsr-mef@nic.in

Sub: Submission of Half yearly compliance status report of Environment Clearance conditions for the period of April' 2023 – September' 2023 for Development of Multi Product SEZ/Industrial Park by M/s. Tata Steel Special Economic Zone at Gopalpur, Ganjam, Odisha.

Ref: Environmental clearance vide MOEF letter No: F- No. 21-136/2015-IA-III dated 20th September' 2018 and letter no F- No. 21-136/2015-IA-III dated 28th December'2018.

Dear Sir,

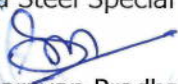
With reference to the subject referred above, we are hereby submitting the half yearly Environmental & CRZ Clearance compliance status report for development of multi product SEZ/Industrial Park by Tata Steel Special Economic Zone in soft format through e-mail (roez.bsr-mef@nic.in) for your kind perusal.

We look forward for your further guidance which shall certainly help us in our endeavor for further improving upon our environmental management practices.

Thanking You,

Yours faithfully,

For Tata Steel Special Economic Zone Limited


Satya Narayan Pradhan
Asst. Manager - (Safety, Health & Environment)

Enclosure: As above.

Copy for kind information to:

- The Member Secretary, Central Pollution Control Board, Southern Enclave, Block- 502, 5th & 6th Floor, 1582, Rajdanga Main Road, Kolkata-700101, West Bengal.
- The Member Secretary, State Pollution Control Board, Odisha, Paribesh Bhawan, A/118, Nilakantha Nagar, Unit-VIII, Bhubaneswar – 751012.
- The Regional Officer, State Pollution Control Board, Berhampur, Ganjam, Odisha.

TATA STEEL SPECIAL ECONOMIC ZONE LTD

Half-Yearly Compliance Report

On

Environmental & CRZ Clearance Conditions

**(MoEF Letter Ref No: -21-136/2015-IA-III, dated 20th
September'2018 & F- No. 21-136/2015-IA-III dated 28th
December'2018)**

Period: April'2023 – September '2023

Submitted By:

Tata Steel Special Economic Zone Ltd

M/s. Tata Steel Limited

2 B, Fortune Tower, 2nd Floor,

Chandrasekharpur

Bhubaneswar -751023

(Odisha)

List of Annexures

Sl. No	Title of the Annexure	Annexure No.
1	Environment Monitoring Results of last Six months (April' 2023–September' 2023).	I
2	CSR Activities & expenditure details.	II

Compliance to the Environmental & CRZ Clearance Letter No: -21-136/2015-IA-III dated 20.09.2018 in respect of Development of Multi-product SEZ/Industrial Park at Gopalpur, Ganjam, Odisha by M/s Tata Steel Special Economic Zone Limited.

PART A-SPECIFIC CONDITIONS:

I. Construction Phase

Sl	Specific Condition	Compliance Status (April '2023 – September'2023)
(i)	The project proponent shall ensure that the project is in consonance with the new Coastal Zone Management Plan prepared by the State Government under the provisions of CRZ Notification, 2011.	The project has been approved based on the new coastal zone management plan. All the applicable provisions of CRZ notification,2011 shall be complied.
(ii)	All the recommendations of Odisha Coastal Zone Management Authority (OCZMA) vide letter no. 71/OCZMA dated 31.08.2017 shall be complied in letter and spirit.	Compliance shall be secured by the project proponent for all the recommendations of Odisha Coastal Zone Management Authority (OCZMA) as prescribed.
(iii)	Screens and trash bars shall be provided to avoid entry of fishes and fish larvae into the system.	The construction of the Desalination Plant is yet to commence. Once the plant is constructed, this provision shall be complied.
(iv)	There shall be no disturbance to the sand dunes.	Project will not make disturbance to the sand dunes.
(v)	No construction works other than those permitted in CRZ Notification shall be carried out in CRZ area.	Noted, Compliance shall be ensured.
(vi)	Though the sumps and pump house are located beyond CRZ area, in view of its proximity to sea necessary prior permission shall be obtained for construction of sumps from the competent authority. Copy of permission shall be submitted to the concerned Regional Office of the Ministry prior to the commencement of work.	As on date, the sumps and pump house are not located beyond CRZ area. In future, necessary compliances shall be ensured.
(vii)	No use of ground water for proposed multi - product SEZ/industrial park	Noted, Compliance shall be ensured.
(viii)	2% of the project cost shall be apportioned for marine and coastal biodiversity protection and conservation measures, to be spent by the project proponent.	TSSEZL will spend 2% of the project cost for marine and coastal biodiversity protection and conservation measures once the Desalination Plant and Common Effluent Treatment Plant is constructed and made operational.
(ix)	'Consent to Establish' shall be obtained from State Pollution Control Board under the Air (Prevention and Control of Pollution) Act, 1981 and the Water (Prevention and Control of Pollution) Act, 1974.	Complied. CTE has been obtained from OSPCB for Phase I developmental activity on dated: 29.03.2019 and Amended CTE no 3779/IND-II-CTE-6254 ON 17.03.2023.



SI	Specific Condition	Compliance Status (April '2023 – September'2023)
(x)	The project proponent shall report to the State Pollution Control Board about the compliance of the prescribed standards for all discharges from the Industrial Area into the sea.	At present, there is no discharge from the Industrial Park to the outside area or the sea. All wastewater discharge; when generated, shall be as per wastewater discharge standards of OSPCB. It will be monitored periodically, and the results will be reported to CPCB/OSPCB as per stipulated in the condition of EC.
(xi)	All the provisions of the CRZ Notification, 2011 shall be strictly complied with, and in case of any change in scope of work, necessary recommendations from the OCZMA shall be obtained for further consideration by the concerned regulatory authority.	At present, there is no change in the scope of the work of the project. All provision of the CRZ Notification, 2011 will be strictly complied with & in case of any change in the scope in future, necessary recommendations from OCZMA shall be obtained.
(xii)	Necessary authorization required under the Hazardous and Other Wastes (Management and Trans-Boundary Movement) Rules, 2016, Solid Waste Management Rules, 2016 shall be obtained and the provisions contained in the Rules shall be strictly adhered to.	Presently, there is no generation of hazardous and other wastes from the project site. Necessary authorizations will be obtained envisaging the generations of Hazardous and solid waste from the project in due course.
(xiii)	Air pollution and the solid waste management aspects need to be properly addressed ensuring compliance of the Construction and Demolition Waste Management Rules, 2016.	Complied. For air pollution prevention, Control, and management: Natural elevations are being maintained by proper planning and engineering assessments. Plantation at designated places along plot boundary has been made to control air pollution right from the construction phase. Optimal quantity of accumulated rainwater is being used for construction activities. PUC- certified vehicles are being used. Regular Environmental monitoring of the pollution parameters by NABL and MoEF &CC accredited lab. Env. Monitoring is being conducted and reported to OSPCB regularly. Environmental Monitoring Report Enclosed as Annexure -I
(xiv)	This environmental clearance is only for the said Industrial Area. Any other activity within the Industrial Area would require separate environmental clearance, as applicable under EIA Notification, 2006 as amended from time to time. For all the individual units, environmental clearances, as applicable, shall be obtained from the respective regulatory authorities.	Shall be complied as per the requirements of individual member industrial units with respect to EIA notification 2006. Separate EC will be obtained by the individual industries as per requirements.
(xv)	To achieve the Zero Liquid Discharge, wastewater generated from different industrial operations shall be properly collected, treated to the prescribed standards,	Yes, the existing companies in the site are operating on a Zero Liquid Discharge (ZLD) Concept. Hence, recycling of waste has not been taken up by the TSSEZL as of now. However, TSSEZL has plans to set



SI	Specific Condition	Compliance Status (April '2023 – September'2023)
	and then recycled or reused for the identified uses	up common facilities for waste treatment, recycle and disposal.
(xvi)	The quantity of freshwater usage, water recycling and rainwater harvesting shall be measured/recorded to ensure the water balance as projected by the project proponent. The record shall be submitted to the concerned Regional Office of the Ministry along with six monthly monitoring reports.	One storm water reservoir has already been constructed inside the project area and two more storm water reservoirs are being excavated inside the project area for catering to the need of the upcoming industries. At present, very small chunk of the harvested storm water is being used for construction/operation purpose. The monitoring & measurement of usage of water by member industries and reporting the same to Regional Office of MOEF shall be made upon commencement of supply from the said reservoirs in future.
(xvii)	Special purpose vehicle shall be established for implementation, monitoring and compliance of the environmental safeguards	Tata Steel Special Economic Zone itself is the Special Purpose vehicle for implementation, monitoring and compliance of the safeguards. Environmental review and monitoring are being performed by the EMC on regular basis.
(xviii)	Solid wastes shall be collected, treated disposed in accordance with the Solid Waste Management Rules, 2016. No municipal waste shall be disposed off outside, the premises.	Compliance shall be ensured.
(xix)	All the recommendation of the EMP shall be complied with in letter and spirit.	Noted, Compliance shall be ensured.
(xx)	The member units shall provide storage tanks for storage of effluent for monitoring the characteristics of effluent before taking into the CETP for further treatment.	No effluent generation inside the Industrial Park. The Common Effluent Treatment Plant (CETP) is yet to be constructed and made operational
(xxi)	Proper meters with recording facilities shall be provided to monitor the effluent quality and quantity sent from member industries to CETP and from CETP to the final disposal/re-use on a continuous basis.	Not applicable as the Common Effluent Treatment Plant (CETP) is yet to be constructed and made operational.
(xxii)	Member industries shall treat the effluent to meet the prescribed CETP inlet norms.	Not applicable as the Common Effluent Treatment Plant (CETP) is yet to be constructed and made operational.
(xxiii)	The project proponent shall establish an environmental monitoring cell with all the potential polluting units as members to review the environmental monitoring data and suggest for improvements.	Environment Monitoring Cell is in place. Environmental monitoring data and suggestions are being reviewed periodically.
(xxiv)	Internal Road widths within the industrial area shall be minimum 18 m ROW.	Complied. All internal roads are & shall be with RoW of >25 m width as per the approved master plan of the project.



SI	Specific Condition	Compliance Status (April '2023 – September'2023)
(xxv)	Parking space to accommodate trucks, cars, two wheelers and bicycles shall be provided as per the norms	Being Complied.
(xxvi)	Any hazardous waste generated during development/ construction phase, shall be disposed of as per applicable rules and norms with necessary approvals of the State.	No hazardous wastes have been generated during the construction.
(xxvii)	The D.G. sets to be used during development/construction phase shall be low sulphur diesel type and shall conform to Environment (Protection) Rules prescribed for air and noise emission standards	No DG sets are being used at present for construction activities.
(xxviii)	Vehicles hired for bringing construction material to the site shall be in good condition and should have a pollution check certificate and shall conform to applicable air and noise emission standards and shall be operated only during non-peak hours.	Complied. Only PUC-certified vehicles are being used in construction activities, water-sprinkled for dust control on unpaved roads, and speed-limit controlled to minimize fugitive dust, good condition vehicles and low or no-horn use maintained for less noise levels, vehicle movement minimized or restricted, periodical monitoring and checking of vehicles as per OSPCB norms.
(xxix)	Ambient noise levels shall conform to the prescribed standards both during day and night. Incremental pollution loads on the ambient air and noise quality should be closely monitored during development/ construction phase. Adequate measures shall be made to reduce ambient air and noise level during construction phase, so as to conform to the stipulated standards by CPCB/SPCB	Complied. Ambient noise level monitoring is being carried out by NABL, MoEF & CC accredited environmental consultant on regular basis and being reported to the statutory authorities as per the requirement of the statutes. Enclosed as Annexure-I. Adequate measures have been taken to reduce ambient air and noise level during construction phase.
(xxx)	Fly ash should be used as building material in the construction as per the provisions of Fly Ash Notification of September 1999 and amended as on 27th August 2003 and 25th January 2016.	Complied Fly ash are being used in construction activities along with ready-mix concrete and fly ash-mix bricks or blocks, as building material for construction.
(xxxi)	Storm water control and its re-use as per CGWB and BIS standards for various applications.	One retention pond has been constructed with capacity of 6 lakh cum and two more are under construction for storage of storm water and its re-use for various applications.
(xxxii)	Water demand during development/construction shall be reduced by use of pre-mixed concrete, curing agents and other best practices referred.	Being Complied.



SI	Specific Condition	Compliance Status (April '2023 – September'2023)
(xxxiii)	Permission to draw ground water shall be obtained from the competent Authority prior to construction/operation of the project.	Complied.
(xxxiv)	Fixtures for showers, toilet flushing, and drinking shall be of low flow either by use of aerators or pressure reducing devices or sensor-based control.	Water conservation measures like shower-fixtures, use of tap-aerators, pressure reducing or sensor-based control devices for water flow controllers shall be used. Also, segregation of used water, practicing cascade use and recycling treated water.
(xxxv)	Regular supervision of the above and other measures for monitoring shall be in place all through the development/ construction phase, so as to avoid disturbance to the surroundings.	Being Complied.
(xxxvi)	The responses/commitments made to the issues raised during public hearing shall be complied with in letter and spirit. A hard copy of the action taken shall be submitted to the Ministry.	The issues raised in the public hearing are being addressed in phased manner and being reported to the relevant statutory authorities in accordance with the conditions of the Environmental Clearance.
(xxxvii)	Fund Allocation for corporate Environment Responsibility (CER) shall be made as per ministry's O.M No. 22-65/2017 - IA.III dtd. 1st May 2018 for various activities therein. The detailed report shall be submitted to this Ministry and its concerned regional office within 3 months.	Corporate social responsibility (CSR) is being implemented by M/s. TSSEZL through its CSR and CER arm of Tata Steel Foundation (TSF), for benefit of surrounding localities and its living people in the field of Environment, Health, Education, Skill Development, Agriculture, Drinking Water, Special Commitments (Tata Medica Hospital, Gopalpur, COVID – 19, Entrepreneurship /Empowerment, Ethnicity, Infrastructure development etc. Details expenditure enclosed as annexure – II.
(xxxviii)	Corporate Environment Responsibility:	Corporate social responsibility (CSR) is being implemented by M/s. TSSEZL through its CSR arm TSF, for benefit of surrounding localities and its living people, for improvement of physical infrastructure like development of roads and street lighting, water supply distribution system, agriculture and allied interventions, skill development, entrepreneurship development etc. Detail's report enclosed as annexure – II
a)	The company shall have a well laid down Environment Policy approved by the Board of Directors.	Complied,
b)	The Environment Policy shall prescribe for standard operating process/procedures to bring into focus any infringements/deviation/violation of the environmental or forest norms/conditions.	Complied.
c)	The hierarchical system or administrative order of the company to deal with environmental issues and for ensuring	Complied.



Sl	Specific Condition	Compliance Status (April '2023 – September'2023)
	compliance with the environmental clearance conditions shall be furnished.	
d)	To have proper checks and balances, the company shall have a well laid down system of reporting of non-compliances/violations of environmental norms to the Board of Directors of the company and or shareholders or stakeholders at large.	Complied.
	II- Operation Phase	
I	Periodic monitoring of coastal water shall be carried out at outfall location.	No outfall location has been constructed as on date. Will be complied in future once the desalination plant is constructed.
li	No use of ground water for proposed multi - product SEZ/industrial park.	Noted, Compliance shall be ensured.
lii	Identify and enhance skill development activities for the local community which would cater to the future needs of the of Industrial Park and increase skill levels of local people.	NTTF training institute is already established for skill development of local community. Skill development programmes to local youth is being conducted as part of Corporate Social Responsibility (CSR).
lv	Preparation of scheme for implementation of habitat improvement and biodiversity conservation plan and implementation schedule with the help of Salim Ali Centre for Ornithology and Natural History, Coimbatore (SACON), and same to be submitted to MoEF&CC and its Regional Office within six months. Sufficient fund provision to be made to implement the same.	The suggested measures are under implementation. Biodiversity study was conducted, and report has already been submitted to MoEF&CC.
V	The tree plantation programme should be made in supervision of experts who can guide from nursery up to the minimum 5 years maintenance period. The species composition should be made with local and fruit species and planted suitably in strip or lonely as per the land availability with drip water/irrigation facility. The natural water body and creek should be protected and undisturbed except taking conservation activities.	Shall be complied as per the approved plan of the project in the designated areas. Waterbodies will be protected with adequate protective measures; plantation will be developed all along and/or surrounding waterbodies such as creek, wetlands.
Vi	Implementation of Marine Environmental Management Plan in Toto.	Compliance shall be ensured.
vii	All the topsoil excavated during development/construction activities should be stored for use in horticulture/landscape development within the project site.	Being Complied.
viii	Disposal of muck during development/construction phase should not	Being Complied.



Sl	Specific Condition	Compliance Status (April '2023 – September'2023)
	create any adverse effect on the neighbouring communities and be disposed taking the necessary precautions for general safety and health aspects of people, only in approved sites with the approval of competent authority.	
Ix	The solid waste generated shall be properly collected and segregated in accordance with the Solid Waste Management Rules, 2016. Wet garbage shall be composted, and dry/inert solid waste should be disposed of to the approved sites for land filling after recovering recyclable material.	Waste management plan is being and shall be implemented, their collection, handling and disposal, solid waste, municipal waste, construction and demolition waste, hazardous and toxic waste, their compliance with Municipal Solid Waste Management Rules-2016 will be implemented keeping pace with the progress of the project.
X	The height of stack of DG sets shall be equal to the height needed for the combined capacity of all proposed DG sets. The location of the DG sets may be decided with in consultation with State Pollution Control Board.	Compliance will be ensured upon deployment of DG sets as per stipulation.
Xi	Noise shall be controlled to ensure that it does not exceed the prescribed standards. During nighttime, the noise levels measured at the boundary of the building shall be restricted to the permissible levels to comply with the prevalent regulations.	Ambient noise level monitoring is being conducted periodically (Monitoring Report Enclosed as annexure – I) necessary corrective and preventive measures including administrative and engineering solutions are being implemented to keep the generation and exposure of the noise within the stipulated limit as per the applicable standard.
xii	The green belt of the adequate width and density preferably with local species along the periphery of the plot shall be raised so as to provide protection against particulates and noise.	Noted, Compliance shall be ensured.
xiii	Weep holes in the compound walls shall be provided to ensure natural drainage of rainwater in the catchment area during the monsoon period.	Complied.
xiv	Rainwater harvesting for roof run-off and surface run- off, as plan submitted shall be implemented. Before recharging the surface run off, pre-treatment must be done to remove suspended matter, oil and grease. The borewell for rainwater recharging shall be kept at least 4 mts above the highest ground water table.	Noted Compliance shall be ensured.
Xv	The ground water level and its quality shall be monitored regularly in consultation with Central Ground Water Authority.	Noted, Compliance shall be ensured.
xvi	Traffic congestion near the entry and exit points from the roads adjoining the proposed	Noted, Compliance shall be ensured.



SI	Specific Condition	Compliance Status (April '2023 – September'2023)
	project site must be avoided. Parking, loading and unloading shall be fully internalized and no public space shall be utilized.	
xvii	Energy conservation measures like installation of LEDs for lighting the areas outside the building shall be integral part of the project design and shall be in place before project commissioning. Used LEDs shall be properly collected and disposed off /sent for recycling as per the prevailing guidelines/rules of the regulatory authority to avoid mercury contamination. Use of solar panels may be done to the extent possible.	Noted, Compliance shall be ensured. Necessary energy conservation measures are being and will be continued to be undertaken for optimal energy conservation. Use of LED light, solar energy and construction of energy efficient building will be adopted for conservation of natural resources like energy, water, and forestry resource.
xviii	The buildings shall have adequate distance between them to allow movement of fresh air and passage of natural light, air, and ventilation.	Noted, Compliance shall be ensured. Buildings will be constructed and their spacing between shall be in accordance with ECBC guidelines .

PART-B: GENERAL CONDITIONS

SI.No.	Stipulated Condition	Compliance Status (April'2023--September'2023)
i	The responsibility to comply with the EC conditions mentioned in this letter is solely of the project proponent.	Noted, Compliance shall be ensured.
li	The environmental safeguards contained in the EIA report shall be implemented in letter and spirit.	Noted, Compliance shall be ensured.
lii	Provision shall be made for supply of kerosene or cooking gas and pressure cooker to the labourers during construction phase.	Being Complied.
lv	Six Monthly monitoring reports shall be submitted to the Ministry and concerned Regional Office of the Ministry.	Being Complied.
V	A copy of the environmental clearance letter shall also be displayed on the website of the concerned State Pollution Control Board. The EC letter shall also be displayed at the Regional Office, District Industries Center and Collector's Office/Tehsildar's Office for 30 days.	Complied.
Vi	The project proponent shall set up a separate Environmental Management Cell for effective implementation of the stipulated environmental safeguards under the supervision of a Senior Executive.	Environment Management cell is in place.
vii	The funds earmarked for Environment Management Plan shall be included in the	Noted, Compliance shall be ensured.



Sl.No.	Stipulated Condition	Compliance Status (April'2023--September'2023)
	budget and this shall not be diverted for any other purpose.	
C	OTHER CONDITIONS	
5	The above stipulations would be enforced among others under the provisions of Water (Prevention and Control of Pollution) Act, 1974, the Air (Prevention and control of Pollution) Act 1981, the Environment Protection Act 1986, the Public Liability (Insurance) Act 1991 and EIA Notification 2006.	Noted
6	Officials from the Regional Office of the Ministry who would be monitoring the implementation of environmental safeguards should be given full cooperation, facilities, and documents/data by the project proponents during their inspection. A complete set of all the documents submitted to MoEF&CC should be forwarded to the CCF, Regional Office of the Ministry.	Noted and Compliance shall be ensured.
7	In case of any change(s) in the scope of the project, the project would require a fresh appraisal by this Ministry.	Noted
8	The Ministry reserves the right to add additional safeguard measures subsequently, if found necessary, and to take action including revoking of the environmental clearance under the provisions of the Environmental (Protection) Act 1986, to ensure effective implementation of the suggested safeguard measures in a time bound and satisfactory manner.	Noted
9	All other statutory clearances such as the approvals for storage of diesel from Chief Controller of Explosives, Fire Department, Civil Aviation Department, the Forest Conservation Act, 1980 and the Wildlife (Protection) Act, 1972 etc. shall be obtained as applicable by project proponents from the respective competent authorities.	Noted, Necessary approvals from concerned authorities are being obtained as applicable.
10	The project proponent shall advertise in at least two local Newspapers widely circulated in the region, one of which shall be in the vernacular language informing that the project has been accorded	Complied.



Sl.No.	Stipulated Condition	Compliance Status (April'2023--September'2023)
	Environmental & CRZ Clearance and copies of the clearance letters are available with the State Pollution Control Board and may also be seen on the website of the Ministry of Environment, Forests & Climate Change at http://www.envfor.nic.in . The advertisement shall be made within seven days from the date of receipt of the clearance letter and a copy of the same shall be forwarded to the concerned Regional Office of this Ministry.	
11	This clearance is subject to final order of the Hon'ble Supreme Court of India in the matter of Goa Foundation Vs Union of India in Writ petition (Civil) No. 460 of 2004 as may be applicable to this project.	Noted.
12	Any appeal against this clearance shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under section 16 of the National Green Tribunal Act, 2010.	Noted.
13	A copy of the Clearance letter shall be sent by the proponent to concerned Panchayat, Zila Parishad/Municipal Corporation, Urban Local Body and the Local NGO, if any, from whom suggestions/representations, if any, were received while processing the proposal. The clearance letter shall also be put on the website of the company by the proponent.	Complied. Copy of the clearance Letter has been submitted to all concerned.
14	The proponent shall upload the status of compliance of the stipulated EC conditions, including the results of monitored data on their website and shall update the same periodically. It shall simultaneously be sent to the Regional Office of the Ministry, the respective Zonal Offices of CPCB and the SPCB. The criteria pollutant levels namely; PM10, PM 2.5, SO2, NO2 (ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the project shall be monitored and displayed at a convenient location near the main gate of the company in the public domain.	Being Complied.
15	The environmental statement for each financial year ending 31st March in Form - V as is mandated to be submitted by the project proponent to the concerned State Pollution Control Board as prescribed under the Environment Protection Rules, 1986, as	Noted, Compliance shall be ensured.



Sl.No.	Stipulated Condition	Compliance Status (April'2023--September'2023)
	amended subsequently, shall also be put on the website of the company along with the status of compliance of EC conditions and shall also be sent to the respective Regional Offices of the Ministry/CPCB/SPCB by e-mail.	
16	The Ministry may revoke or suspend the clearance, if implementation of any of the above condition is not satisfactory. The Ministry reserves the right to stipulate additional conditions, if found necessary and project proponent in a time bound manner will implement the stipulated additional conditions.	Noted
17	This issues with the approval of the Hon'ble Minister of Environment, Forest and Climate Change, New Delhi	Noted



(Safety, Health & Environment)
Tata Steel Special Economic Zone Limited,

Date: 9th Oct' 2023



Surface Water Analysis Report

Down Stream of Khari Nalla, (SW2)		MONTH						RESULT		
Test Parameters	Unit	Apr-23	May-23	Jun-23	Jul-23	Aug-23	Sep-23	MAX	MIN	AVG
Colour, Max.	Hazen	76.1	90	65	80	50	70	102	50	96.1
pH Value @ 25°C	--	7.34	7.38	7.65	7.44	7.32	7.78	7.78	7.32	7.4
Chloride as Cl, Max.	mg/l	62.0	60.2	34	41.9	49.9	30.0	62	30	46.3
Dissolved Solids, Max.	mg/l	4.4	4.2	276	510	580	440	580	4.2	302.4
Dissolved Oxygen, Min.	mg/l	5.2	5.0	6.9	6.1	6	6.7	6.9	5	5.9
BOD for 3 days@ 27 ⁰ C, Max.	mg/l	2.1	2	<2.0	<2.0	<2.0	2.8	2.8	<2.0	1.1
Sulphate as SO ₄ , Max.	mg/l	16.9	16.7	5.9	26.6	32.8	<2.0	26.6	<2.0	16.4
Nitrate as NO ₃ , Max.	mg/l	3.1	3	1.8	2.9	3.8	17.4	3.8	1.8	5.3
Fluoride as F, Max.	mg/l	0.21	0.19	0.6	0.12	0.18	2.9	0.19	0.12	0.7
Oil & Grease, Max.	mg/l	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cyanide as CN, Max.	mg/l	ND	ND	ND	ND	ND	ND	ND	ND	ND
Copper as Cu, Max.	mg/l	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
Iron as Fe, Max.	mg/l	0.9	0.07	0.14	0.14	0.4	0.21	0.21	0.1	0.14
Lead as Pb, Max.	mg/l	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Zinc as Zn, Max.	mg/l	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Arsenic as As, Max.	mg/l	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Selenium as Se, Max.	mg/l	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Cadmium as Cd, Max.	mg/l	ND	ND	ND	ND	ND	ND	ND	ND	ND
Hexavalent Chromium as Cr ⁺⁶ , Max.	mg/l	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Phenolic compound as C ₆ H ₅ OH, Max.	mg/l	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Coliform, Max.	MPN/100 ml	425	536	470	442	420	470	470	420	382



Ambient Air Quality Analysis Report

Location: Near TSSEZL Project Office

	PM ₁₀	PM _{2.5}	SO ₂	NO _x	CO	NH ₃	O ₃	Pb	Ni	As	Benzene	BaP
Months	(µg/m ³)	(µg/m ³)	(µg/m ³)	(µg/m ³)	(mg/m ³)	(µg/m ³)	(µg/m ³)	(µg/m ³)	(ng/m ³)	(ng/m ³)	(µg/m ³)	(ng/m ³)
Apr-23	69.5	36.1	12.1	23.3	0.4	33.9	12.6	<0.09	<0.4	<0.42	<4.1	<0.08
May-23	69.1	36	12	23.4	0.4	32.8	12.8	<0.09	<0.4	<0.42	<4.1	<0.08
Jun-23	66.33	37.16	12.97	17.94	0.4	<20	<10	<0.01	<0.6	<0.44	<5	<1
Jul-23	61.84	33.14	10.4	20.4	0.5	<20	<10	<0.01	<0.6	<0.44	<5	<1
Aug-23	63.76	33.07	10.94	14.7	0.44	<20	<10	<0.01	<0.6	<0.44	<5	<1
Sep-23	64.78	33.58	10.29	14.68	0.45	<20	<10	<0.01	<0.6	<0.44	<5	<1
MAX	69.5	37.16	12.97	23.4	0.5	33.9	12.6	<0.09	<0.4	<0.42	<4.1	<0.08
MIN	61.84	33.14	10.4	14.7	0.4	32.8	<10	<0.09	<0.4	<0.42	<4.1	<0.08
AVG	65.8	28.8	11.5	19.7	0.5	11.1	4.2	<0.09	<0.4	<0.42	<4.1	<0.08

Location: Near Anadrone Office

	PM ₁₀	PM _{2.5}	SO ₂	NO _x	CO	NH ₃	O ₃	Pb	Ni	As	Benzene	BaP
Months	(µg/m ³)	(µg/m ³)	(µg/m ³)	(µg/m ³)	(mg/m ³)	(µg/m ³)	(µg/m ³)	(µg/m ³)	(ng/m ³)	(ng/m ³)	(µg/m ³)	(ng/m ³)
Apr-23	71.5	37.1	12.9	24.4	0.5	36.2	13.8	<0.09	<0.5	<0.44	<4.1	<0.08
May-23	70.4	36.9	12.6	24.2	0.5	35.5	12.9	<0.09	<0.5	<0.44	<4.1	<0.08
Jun-23	66.33	37.16	12.97	17.94	0.44	<20	<10	<0.01	<0.6	<0.44	<5	<1
Jul-23	62.1	33.29	10.86	14.67	0.5	<20	<10	<0.01	<0.6	<0.44	<5	<1
Aug-23	64.78	33.76	11.56	14.79	0.5	<20	<10	<0.01	<0.6	<0.44	<5	<1
Sep-23	64.78	33.58	10.29	14.68	0.45	<20	<10	<0.01	<0.6	<0.44	<5	<1
MAX	71.5	37.16	12.97	24.4	0.5	36.2	13.8	<0.09	<0.6	<0.44	<4.1	<0.08
MIN	62.1	33.29	10.29	14.67	0.44	35.5	12.9	<0.02	<0.5	<0.44	<4.1	<0.08
AVG	66.6	35.2	11.8	18.4	0.4	11.95	4.45	<0.09	<0.5	<0.44	<4.1	<0.08

Location: Near TSSEZL Main Gate (Chama Khandi)

	PM ₁₀	PM _{2.5}	SO ₂	NO _x	CO	NH ₃	O ₃	Pb	Ni	As	Benzene	BaP
Months	(µg/m ³)	(µg/m ³)	(µg/m ³)	(µg/m ³)	(mg/m ³)	(µg/m ³)	(µg/m ³)	(µg/m ³)	(ng/m ³)	(ng/m ³)	(µg/m ³)	(ng/m ³)
Apr-23	74.9	38.4	13.7	24.9	0.5	38.7	14.9	<0.09	<0.5	<0.46	<4.6	<0.08
May-23	72.1	37.6	12.9	24.8	0.5	36.5	13.8	<0.09	<0.5	<0.46	<4.6	<0.08
Jun-23	61.7	31.65	10.09	15.02	0.41	<20	<10	<0.01	<0.6	<0.44	<5	<1
Jul-23	57.91	28.74	8.15	12.03	0.35	<20	<10	<0.01	<0.6	<0.44	<5	<1
Aug-23	61.67	31.84	8.48	12.68	0.37	<20	<10	<0.01	<0.6	<0.44	<5	<1
Sep-23	69.4	35.6	11.7	22	0.5	<20	<10	<0.01	<0.6	<0.44	<5	<1
MAX	74.9	38.4	13.7	24.9	0.5	<38.7	<14.9	<0.09	<0.6	<0.44	<5	<1
MIN	57.91	31.65	8.15	13.02	0.35	<19.4	<13.8	<0.01	<0.5	<0.44	<4.6	<0.08
AVG	66.3	33.8	10.8	18.6	0.5	12.5	4.7	<0.09	<0.5	<0.44	<4.6	<0.08



Surface Water Analysis Report

Upstream of Khari Nalla(SW1)		MONTH						Result		
Test Parameters	Unit	Apr-23	May-23	Jun-23	Jul-23	Aug-23	Sep-23	MAX	MIN	AVG
Colour, Max.	Hazen	52	48	65	70	40	30	70	30	50.8
pH Value @ 25°C	--	7.82	7.62	7.48	7.32	7.32	7.11	7.82	7.11	7.44
Chloride as Cl, Max.	mg/l	72.0	68.0	69	36.9	39.9	33.9	72	33.9	53.2
Dissolved Solids, Max.	mg/l	542	538	276	284	290	180	542	180	351.6
Dissolved Oxygen, Min.	mg/l	5.6	5.4	6.9	6.5	6.2	6	6.5	5.4	6
BOD for 3 days@ 27 ⁰ C, Max.	mg/l	2.4	2.2	<2.0	ND	<2.0	<2.0	2.4	<2.0	0.7
Sulphate as SO ₄ , Max.	mg/l	22.2	22.1	5.9	22.8	24.6	20.8	22.8	5.9	19.7
Nitrate as NO ₃ , Max.	mg/l	3.4	3.2	1.8	2.8	3.2	1.8	3.4	1.8	2.7
Fluoride as F, Max.	mg/l	0.29	0.27	0.06	0.1	0.12	0.14	0.29	0.1	0.16
Oil & Grease, Max.	mg/l	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cyanide as CN, Max.	mg/l	ND	ND	ND	ND	ND	ND	ND	ND	ND
Copper as Cu, Max.	mg/l	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
Iron as Fe, Max.	mg/l	0.22	0.2	0.18	0.22	0.12	0.17	0.25	0.14	0.17
Lead as Pb, Max.	mg/l	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Zinc as Zn, Max.	mg/l	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Arsenic as As, Max.	mg/l	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Selenium as Se, Max.	mg/l	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Cadmium as Cd, Max.	mg/l	ND	ND	ND	ND	ND	ND	ND	ND	ND
Hexavalent Chromium as Cr ⁺⁶ , Max.	mg/l	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Phenolic compound as C ₆ H ₅ OH, Max.	mg/l	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Coliform, Max.	MPN/100 ml	785	810	470	342	310	210	785	210	337

	TATA STEEL SPECIAL ECONOMIC ZONE LIMITED	GOPALPUR INDUSTRIAL PARK
Noise Monitoring Report		
Location: Near TSSEZL Anadrone		
Months	DAY TIME dB(A)	NIGHT TIME dB(A)
Apr-23	59	43.6
May-23	59.3	43.3
Jun-23	62.1	58.9
Jul-23	61.1	55.7
Aug-23	61.4	55.2
Sep-23	60.5	56.3
MAX	62.1	56.3
MIN	59.3	43.3
AVG	60.5	52.6
Near TSSEZL Main Gate Office		
	DAY TIME LEQ	NIGHT TIME LEQ
Months		
Apr-23	63.6	55.8
May-23	63.2	55.4
Jun-23	66.6	57.4
Jul-23	66.5	58.3
Aug-23	66.4	58.5
Sep-23	66.5	57.4
MAX	64.9	56.1
MIN	48.9	40.2
AVG	65.4	57.1



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and ISO/IEC 17025:2017 (NABL), ISO 9001:2015, ISO 45001 : 2018 and ISO 14001 : 2015 Certified Company

AMBIENT AIR QUALITY MONITORING TEST REPORT

Report No:-	GESEC/PRO/AAQM/2023-24/04/575
Issued to	M/s. Tata Steel Special Economic Zone Ltd, Gopalpur.
Sample Description	Ambient Air Quality
Sample Drawn Period/Time	Monthly
Sample Drawn by	GESEC
Sampling Location	Near TS SEZL Project Office
Issued Date	03.05.2023
Instrument Used	Respirable Dust Sampler, Fine Dust Sampler, Gaseous Attachment
P.O NO	TSSEZL/2022/30002204232

ANALYSIS RESULT

Date	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)	SO ₂ (µg/m ³)	NO _x (µg/m ³)	CO (µg/m ³)
03.04.2023	68.4	35.4	11.7	22.1	0.4
06.04.2023	70.5	36.8	12.7	23.8	0.5
10.04.2023	72.6	38.2	12.6	24.1	0.5
13.04.2023	69.4	35.9	12.4	24.6	0.5
17.04.2023	71.7	37.6	12.7	23.9	0.5
20.04.2023	69.9	36.1	12.4	24.3	0.5
24.04.2023	67.5	35.2	11.3	21.8	0.4
27.04.2023	65.6	34.6	10.8	21.4	0.4
Avg	69.5	36.2	12.1	23.3	0.5
NAAQ* Standard	100	60	80	80	4
Methods of Analysis	IS: 5182 (Part-23)	Gravimetric Method as per CPCB method	IS: 5182 (Part-2)	IS: 5182 (Part-6)	IS: 5182 (Part-10)

N.B.-*NAAQ-National Ambient Air Quality Standard as per 18th Nov, 2009 Gatt. Notification.

[Signature]

Authorized Signatory



Seal of Laboratory

Notes:

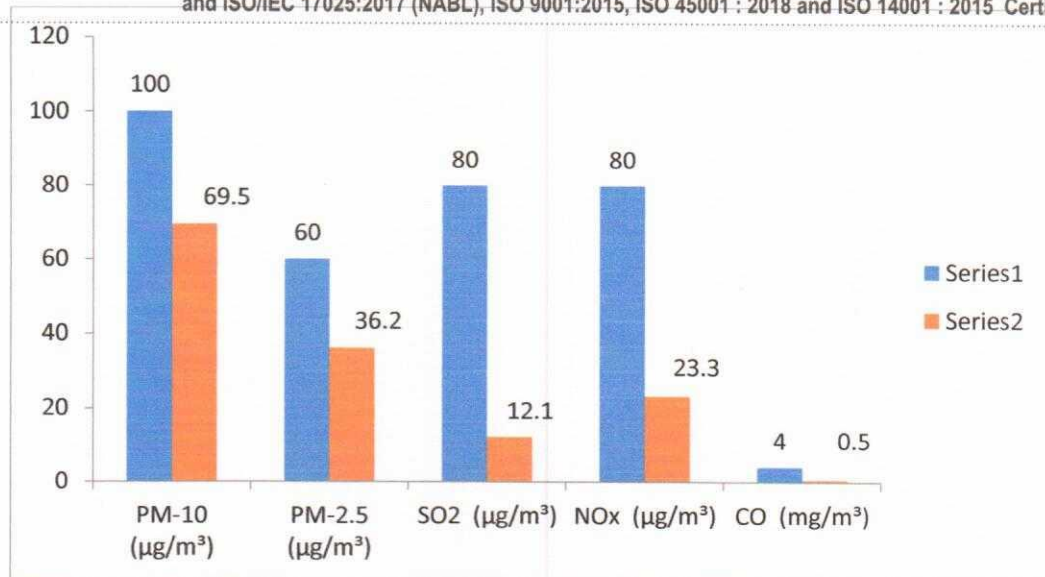
- ☐ The result given above related to the tested sample, as received. The customer asked for the above test only.
- ☐ This Test Report shall not be reproduced wholly or in part without prior written consent of the laboratory.
- ☐ The samples received shall be destroyed after two weeks from the date of issue of the Test Report unless specified otherwise.
- ☐ This Test Report shall not be used in any advertising media or as evidence in the court of Law without prior written consent of the laboratory.

Terms and conditions

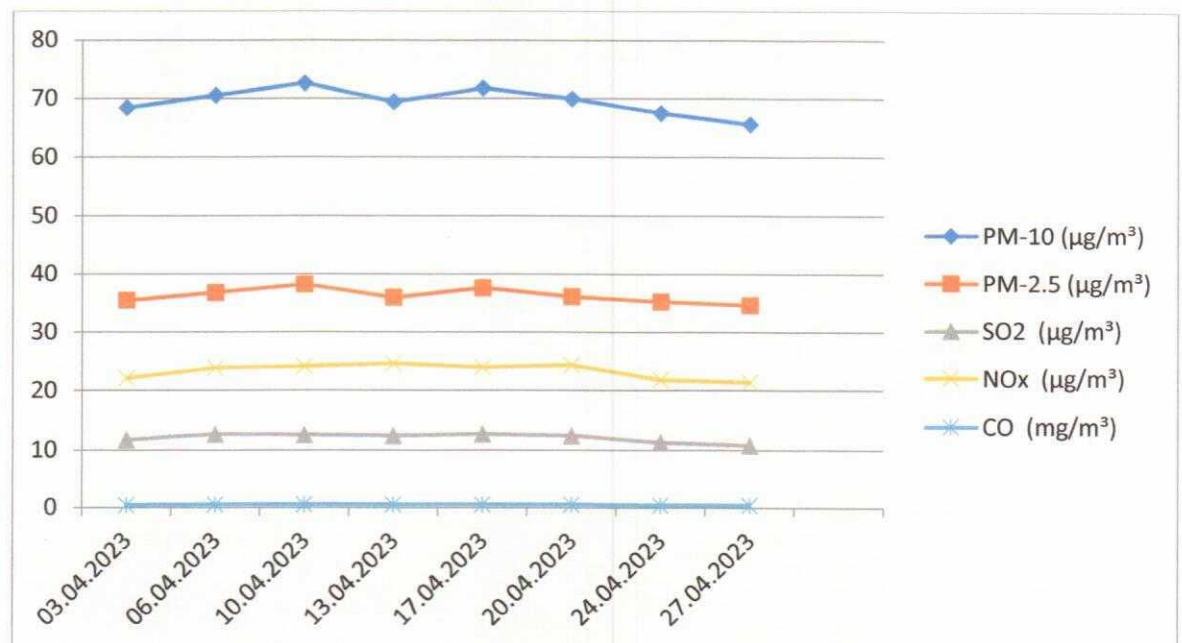
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4. Samples will be retained for a period of seven (7) days after completion of analysis. Longer retention periods can be arranged, on request of the customer.
5. We strictly maintain the confidentiality of all test result of sample(s) collected by us/ supplied by customer and not revel to third party unless required by the statutory or legal requirement.
6. MoEF approved Lab by Govt. of India. From date. 16/02/2022 to 29/02/2024.



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NB-Series 1-Stands for Standard, Series 2-Stands for Result



This Graph is belongs to Station-01(Near TSSEZL Project Office) For the Month of April -23

Terms and conditions

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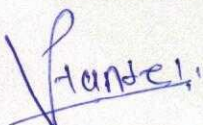
AMBIENT AIR QUALITY MONITORING TEST REPORT

Report No:-	GESEC/PRO/AAQM/2023-24/04/576
Issued to	M/s. Tata Steel Special Economic Zone Ltd, Gopalpur.
Sample Description	Ambient Air Quality
Sample Drawn Period/Time	Monthly
Sample Drawn by	GESEC
Sampling Location	Near Anadrone Office
Issued Date	03.05.2023
Instrument Used	Respirable Dust Sampler, Fine Dust Sampler, Gaseous Attachment
P.O NO	TSSEZL/2022/30002204232

ANALYSIS RESULT

Date	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)	SO ₂ (µg/m ³)	NO _x (µg/m ³)	CO (µg/m ³)
03.04.2023	70.4	37.3	12.8	24.2	0.5
06.04.2023	72.6	37.5	13.4	24.5	0.5
10.04.2023	74.5	38.2	13.6	24.8	0.5
13.04.2023	71.3	37.5	12.7	24.4	0.5
17.04.2023	73.6	37.8	13.5	24.8	0.5
20.04.2023	71.8	37.2	12.6	24.6	0.5
24.04.2023	69.4	35.7	12.3	24.3	0.5
27.04.2023	68.7	35.4	12.5	23.5	0.5
Avg	71.5	37.1	12.9	24.4	0.5
NAAQ* Standard	100	60	80	80	4
Methods of Analysis	IS: 5182 (Part-23)	Gravimetric Method as per CPCB method	IS: 5182 (Part-2)	IS: 5182 (Part-6)	IS: 5182 (Part-10)

N.B.-*NAAQ-National Ambient Air Quality Standard as per 18th Nov, 2009 Gatt. Notification.


Authorized Signatory

**Seal of Laboratory****Notes:**

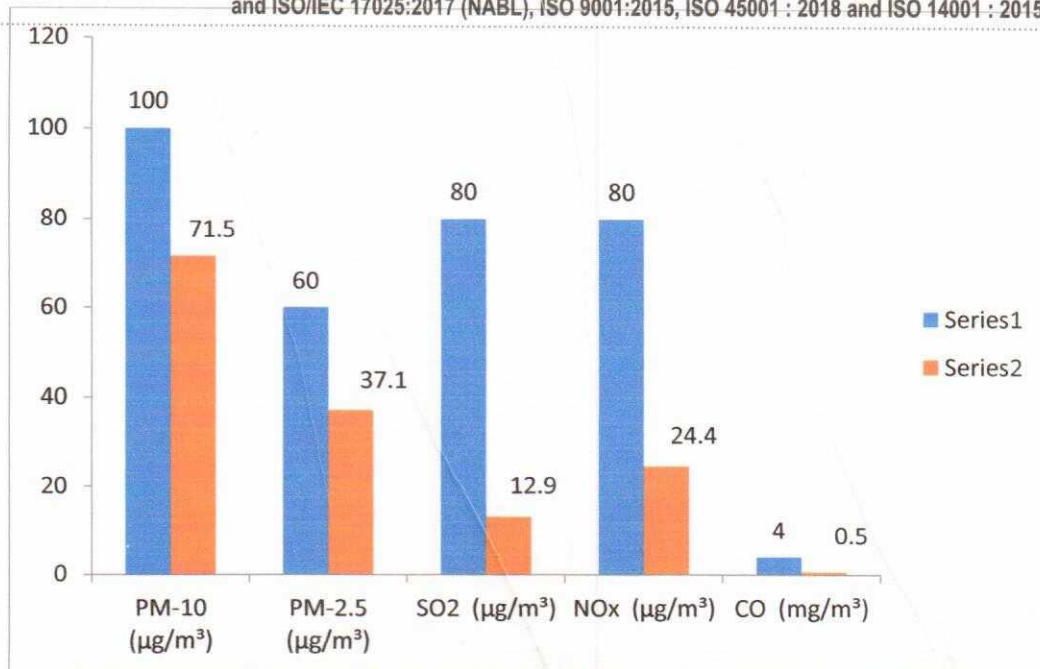
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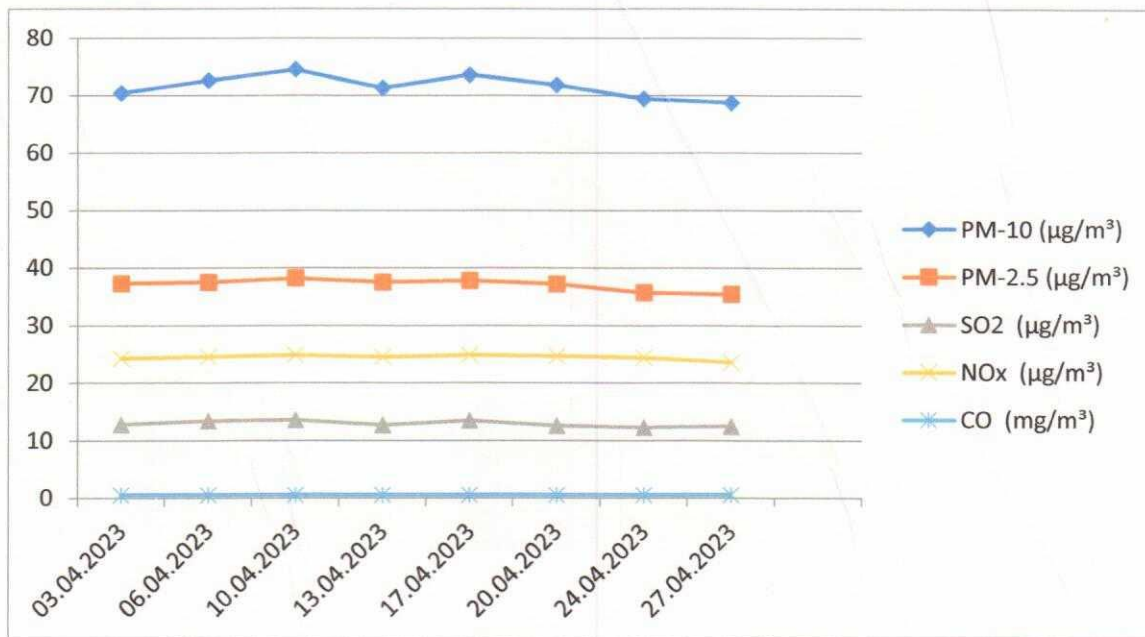
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6. MoEF approved Lab by Govt. of India. From date. 16/02/2022 to 29/02/2024.



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NB-Series 1–Stands for Standard, Series 2–Stands for Result



This Graph is belongs to Station-02 (Near Anadrone Office) For the Month of April -23

Terms and conditions

1. The report is refer only to the sample tested and not applies to the bulk.
2. The results shown in this test report may differ based on various factors including temperature, humidity, pressure, retention time etc.
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6. MoEF approved Lab by Govt. of India. From date. 16/02/2022 to 29/02/2024.





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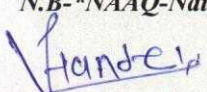
AMBIENT AIR QUALITY MONITORING TEST REPORT

Report No:-	GESEC/PRO/AAQM/2023-24/04/577
Issued to	M/s. Tata Steel Special Economic Zone Ltd, Gopalpur.
Sample Description	Ambient Air Quality
Sample Drawn Period/Time	Monthly
Sample Drawn by	GESEC
Sampling Location	Near Main Gate (Chama Khandi)
Issued Date	03.05.2023
Instrument Used	Respirable Dust Sampler, Fine Dust Sampler, Gaseous Attachment
P.O NO	TSSEZL/2022/30002204232

ANALYSIS RESULT

Date	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)	SO ₂ (µg/m ³)	NO _x (µg/m ³)	CO (µg/m ³)
03.04.2023	73.5	37.9	13.3	24.6	0.5
06.04.2023	76.8	38.1	13.6	24.7	0.5
10.04.2023	78.2	40.5	14.7	25.6	0.5
13.04.2023	77.5	40.2	14.6	25.4	0.5
17.04.2023	74.4	38.3	13.6	25.5	0.5
20.04.2023	76.7	38.1	13.7	24.6	0.5
24.04.2023	72.3	37.5	13.2	24.3	0.5
27.04.2023	69.8	36.2	12.5	24.6	0.5
Avg	74.9	38.4	13.7	24.9	0.5
NAAQ* Standard	100	60	80	80	4
Methods of Analysis	IS: 5182 (Part-23)	Gravimetric Method as per CPCB method	IS: 5182 (Part-2)	IS: 5182 (Part-6)	IS: 5182 (Part-10)

N.B.-*NAAQ-National Ambient Air Quality Standard as per 18th Nov, 2009 Gatt. Notification.


Authorized Signatory


Seal of Laboratory

Notes:

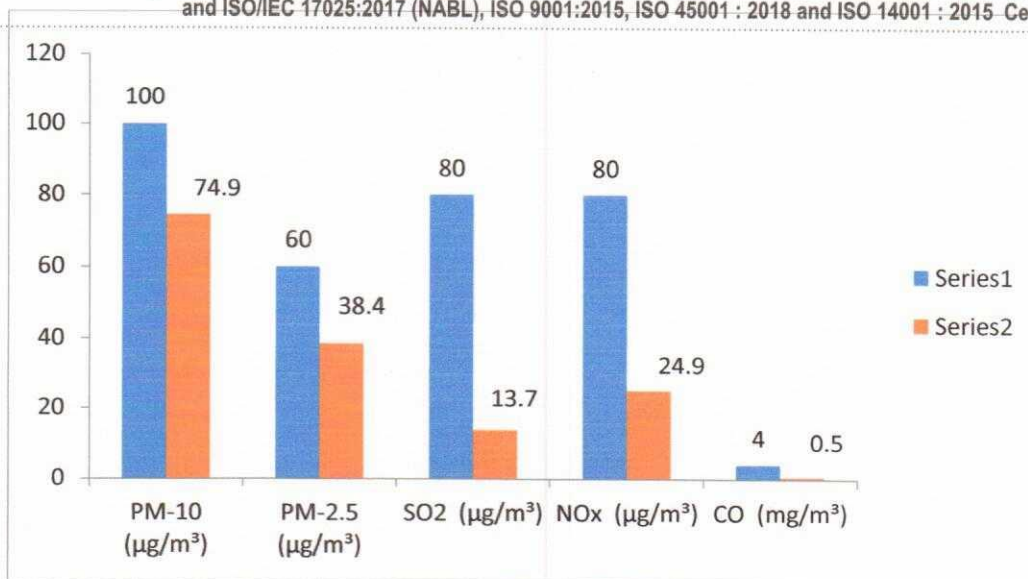
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Terms and conditions

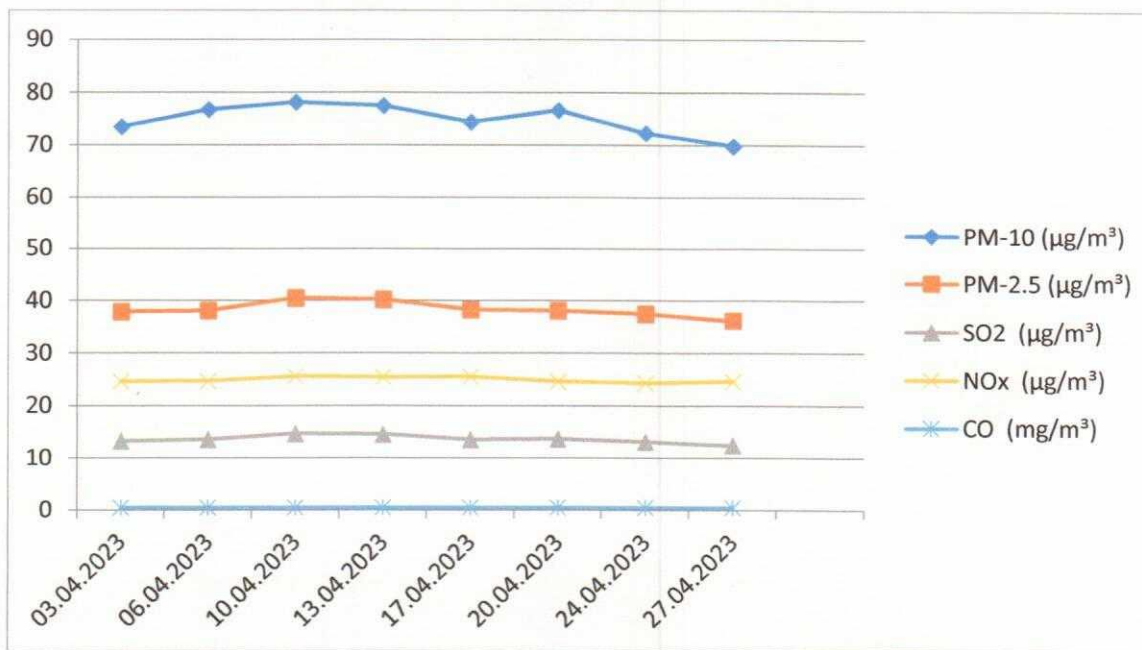
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- MoEF approved Lab by Govt. of India. From date. 16/02/2022 to 29/02/2024.



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NB-Series 1—Stands for Standard, Series 2—Stands for Resu



This Graph is belongs to Station-03 (Near Main Gate, Chama Khandi) For the Month of April -23

Terms and conditions

1. The report is refer only to the sample tested and not applies to the bulk.
2. The results shown in this test report may differ based on various factors including temperature, humidity, pressure, retention time etc.
3. The test report cannot be reproduced wholly or in part and cannot be used for promotional or publicity purpose without the written consent of laboratory, GESEC.
4. Samples will be retained for a period of seven (7) days after completion of analysis. Longer retention periods can be arranged, on request of the customer.
5. We strictly maintain the confidentiality of all test result of sample(s) collected by us/ supplied by customer and not revel to third party unless required by the statutory or legal requirement.
6. MoEF approved Lab by Govt. of India. From date. 16/02/2022 to 29/02/2024.



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SPECIAL AIR QUALITY MONITORING TEST REPORT

Report No:-	GESEC/PRO/AAQM/2023-24/04/578
Issued to	M/s. Tata Steel Special Economic Zone Ltd, Gopalpur.
Sample Description	Ambient Air Quality
Sample Drawn Period/Time	Monthly (Special)
Date of Sampling	24.04.2023
Sample Drawn by	Ardra Consulting Services Pvt, Ltd,
Sampling Location	Near TSSEZL Project Office
Issued Date	03.05.2023
Instrument Used	Respirable Dust Sampler, Fine Dust Sampler, Gaseous Attachment
P.O NO	TSSEZL/2022/30002204232

Ambient Air Analysis Result

Sr. No.	Parameter	Result	Unit(s)	NAAQ Standards
1.	Ambient Temperature	34	°C	
2.	Relative Humidity	52	% RH	
3.	Sulphur Dioxide(SO ₂)	11.3	µg/M ³	≤ 80
4.	Oxides of Nitrogen(NO ₂)	21.8	µg/M ³	≤ 80
5.	Particulate Matter PM ₁₀	67.5	µg/M ³	≤ 100
6.	Particulate Matter PM _{2.5}	35.2	µg/M ³	≤ 60
7.	Carbon Monoxide (CO)	0.4	mg/M ³	≤ 04
8.	Ozone(O ₃)	12.6	µg/M ³	≤ 180
9.	Lead (Pb)	<0.09	µg/M ³	≤ 1.0
10.	Ammonia(NH ₃)	33.9	µg/M ³	≤ 400
11.	Benzene(C ₆ H ₆)	<4.1	µg/M ³	≤ 05
12.	Benzo(a)Pyrene(BaP)	<0.08	ng/M ³	≤ 01
13.	Arsenic(As)	<0.42	ng/M ³	≤ 06
14.	Nickel(Ni)	<0.4	ng/M ³	≤ 20

Remark-

- All above results are within National Ambient Air Quality standards.
- BDL – Below Detectable Limit.

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and ISO/IEC 17025:2017 (NABL), ISO 9001:2015, ISO 45001 : 2018 and ISO 14001 : 2015 Certified Company

SPECIAL AIR QUALITY MONITORING TEST REPORT

Report No:-	GESEC/PRO/AAQM/2023-24/04/579
Issued to	M/s. Tata Steel Special Economic Zone Ltd, Gopalpur.
Sample Description	Ambient Air Quality
Sample Drawn Period/Time	Monthly (Special)
Date of Sampling	24.04.2023
Sample Drawn by	Ardra Consulting Services Pvt, Ltd
Sampling Location	Near Anadrone Office
Issued Date	03.05.2023
Instrument Used	Respirable Dust Sampler, Fine Dust Sampler, Gaseous Attachment
P.O NO	TSSEZL/2022/30002204232

Ambient Air Analysis Result

Sr. No.	Parameter	Result	Unit(s)	NAAQ Standards
1.	Ambient Temperature	34	°C	
2.	Relative Humidity	52	% RH	
3.	Sulphur Dioxide(SO ₂)	12.3	µg/M ³	≤ 80
4.	Oxides of Nitrogen(NO ₂)	24.3	µg/M ³	≤ 80
5.	Particulate Matter PM ₁₀	69.4	µg/M ³	≤ 100
6.	Particulate Matter PM _{2.5}	35.7	µg/M ³	≤ 60
7.	Carbon Monoxide (CO)	0.5	mg/M ³	≤ 04
8.	Ozone(O ₃)	13.8	µg/M ³	≤ 180
9.	Lead (Pb)	<0.09	µg/M ³	≤ 1.0
10.	Ammonia(NH ₃)	36.2	µg/M ³	≤ 400
11.	Benzene(C ₆ H ₆)	<4.1	µg/M ³	≤ 05
12.	Benzo(a)Pyrene(BaP)	<0.08	ng/M ³	≤ 01
13.	Arsenic(As)	<0.44	ng/M ³	≤ 06
14.	Nickel(Ni)	<0.5	ng/M ³	≤ 20

Remark-

- All above results are within National Ambient Air Quality standards.
- BDL – Below Detectable Limit.

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**GREEN ENVIROSAFE**

Engineers & Consultant Pvt Ltd.

A-7/2/C-11, Capital City, Talwade - Chakan Road, Chakan MIDC, PH-IV, Village Nighoje, Tal. Khed,

Dist. Pune-410501. Mob+ 9545084620, 8421365421 CIN No. : U74900PN2013PTC149666

E-mail : envirosafetyeng@gmail.com, gesec12@gmail.com | www.greenenvirosafe.co.in

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SPECIAL AIR QUALITY MONITORING TEST REPORT

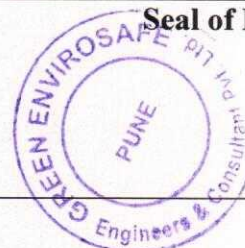
Report No:-	GESEC/PRO/AAQM/2023-24/04/580
Issued to	M/s. Tata Steel Special Economic Zone Ltd, Gopalpur.
Sample Description	Ambient Air Quality
Sample Drawn Period/Time	Monthly (Special)
Date of Sampling	24.04.2023
Sample Drawn by	Ardra Consulting Services Pvt, Ltd
Sampling Location	Near Main Gate (Chama Khandi)
Issued Date	03.05.2023
Instrument Used	Respirable Dust Sampler, Fine Dust Sampler, Gaseous Attachment
P.O NO	TSSEZL/2022/30002204232

Ambient Air Analysis Result

Sr. No.	Parameter	Result	Unit(s)	NAAQ Standards
1.	Ambient Temperature	36	°C	
2.	Relative Humidity	50	% RH	
3.	Sulphur Dioxide(SO ₂)	13.2	µg/M ³	≤ 80
4.	Oxides of Nitrogen(NO ₂)	24.3	µg/M ³	≤ 80
5.	Particulate Matter PM ₁₀	72.3	µg/M ³	≤ 100
6.	Particulate Matter PM _{2.5}	37.5	µg/M ³	≤ 60
7.	Carbon Monoxide (CO)	0.5	mg/M ³	≤ 04
8.	Ozone(O ₃)	14.9	µg/M ³	≤ 180
9.	Lead (Pb)	<0.09	µg/M ³	≤ 1.0
10.	Ammonia(NH ₃)	38.7	µg/M ³	≤ 400
11.	Benzene(C ₆ H ₆)	<4.6	µg/M ³	≤ 05
12.	Benzo(a)Pyrene(BaP)	<0.08	ng/M ³	≤ 01
13.	Arsenic(As)	<0.46	ng/M ³	≤ 06
14.	Nickel(Ni)	<0.5	ng/M ³	≤ 20

Remark-

- All above results are within National Ambient Air Quality standards.
- BDL – Below Detectable Limit.

AUTHORIZED SIGNATORY
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SURFACE WATER QUALITY TEST REPORT**TEST CERTIFICATE**

Report No:- GESEC/PRO/W/2023-24/04/581

Client Name and Address:**TATA STEEL SPECIAL ECONOMIC ZONE LTD****Gopalpur Industrial Park-DTA****Chamakhandi, Chhatrapur, Dist-Ganjam****Odisha-761020****Date of Sampling**

24.04.2023

Start Date of Analysis

26.04.2023

End Date of Analysis

29.04.2023

Sample Details

Surface water (US)

Nature of sample

Liquid

Sample Collected By

Ardra Consulting Services Pvt, Ltd

P.O NO

TSSEZL/2022/30002204232

WATER ANALYSIS RESULT

Sr. No.	Parameter	Result	Limits as per Is 2296:2012	Unit(s)	Standard Method
Physical Parameter					
1	Colour	52	300	Hazen	IS 3025: (Part 4)- 1983; (RA-2017)
2	pH	7.82	6.5-8.5	--	APHA 23rd ED 4500- H+B:2014
3	Chlorides as Cl	72	600	mg/l	APHA 23rd Ed 4500- Cl-B:2017
4	Total Dissolved Solids	542	1500	mg/l	APHA 23rd ED 2540-C: 2017
5	Dissolved Oxygen	5.6	4 (min)	mg/l	APHA 23rd ED 4500-OC :2017
6	BOD 3 days 27 °C	2.4	3	mg/l	IS 3025: Part 44- 1993; (RA-2014)
7	Sulphates as SO ₄	22.2	400	mg/l	APHA 23rd ED 4500-SO ₄ -E: 2017
8	Nitrates as NO ₃	3.4	50	mg/l	APHA 23rd ED 4500-NO ₃ -B: 2017
9	Fluoride as F	0.29	1.5	mg/l	APHA 23rd ED 4500-F-D: 2017
10	Total Oil & Grease	ND	0.1	mg/l	APHA 23rd ED 5520-B: 2017
11	Cyanide as CN	ND	0.05	mg/l	IS 3025 (Part 27); 1986
12	Copper as Cu	<0.03	1.5	mg/l	APHA 3111B.23rd Ed 2017 (AAS)
13	Iron as Fe	0.22	50	mg/l	APHA 3111B.23rd Ed 2017 (AAS)
14	Lead as Pb	<0.01	0.1	mg/l	APHA 3111B.23rd Ed 2017 (AAS)
15	Zinc as Zn	<0.05	15	mg/l	APBA 3111B.23rd Ed 2017 (AAS)
16	Arsenic as As	<0.001	0.2	mg/l	APHA 3111B.23rd Ed 2017 (AAS)
17	Selenium as Se	<0.001	0.05	mg/l	APHA 3111B.23rd Ed 2017 (AAS)
18	Cadmium as Cd	ND	0.01	mg/l	APHA 3111B.23rd Ed 2017 (AAS)
19	Chromium as Cr ⁶⁺	<0.05	0.05	mg/l	APHA 4500 Cr B 23rd Ed. 2017 (AAS)
20	Phenolic Compounds	ND	0.005	mg/l	IS : 3025 (Part 23)
21	Total Coliform	785	5000	MPN/100 ml	IS : 1622(rev.2014)

Remark(s): All above results of Water Sample is chemically potable and bacteriologically with respect to above parameters.**BDL – Below Detectable Limit.****AUTHORIZED SIGNATORY****ANALYZED BY-****Terms and conditions**

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SURFACE WATER QUALITY TEST REPORT

TEST CERTIFICATE

Report No:- GESEC/PRO/W/2023-24/04/582

Client Name and Address:

**TATA STEEL SPECIAL ECONOMIC
ZONE LTD**

Gopalpur Industrial Park-DTA

Chamakhandi, Chhatrapur, Dist-Ganjam

Odisha-761020

Date of Sampling

24.04.2023

Start Date of Analysis

26.04.2023

End Date of Analysis

29.04.2023

Sample Details

Surface water (DS)

Nature of sample

Liquid

Sample Collected By

Ardra Consulting Services Pvt, Ltd

P.O NO

TSSEZL/2022/30002204232

WATER ANALYSIS RESULT

Sr. No.	Parameter	Result	Limits as per Is 2296:2012	Unit(s)	Standard Method
Physical Parameter					
1	Colour	102	300	Hazen	IS 3025: (Part 4)- 1983;(RA-2017)
2	pH	7.34	6.5-8.5	--	APHA 23rd ED 4500- H+B:2014
3	Chlorides as Cl	62	600	mg/l	APHA 23rd Ed 4500- Cl-B:2017
4	Total Dissolved Solids	4.4	1500	mg/l	APHA 23rd ED 2540-C: 2017
5	Dissolved Oxygen	5.2	4	mg/l	APHA 23rd ED 4500-OC :2017
6	BOD 3 days 27 °C	2.1	3	mg/l	IS 3025: Part 44- 1993;(RA-2014)
7	Sulphates as SO4	16.9	400	mg/l	APHA 23rd ED 4500-SO42-E: 2017
8	Nitrates as NO ₃	3.1	50	mg/l	APHA 23rd ED 4500-NO3-B: 2017
9	Fluoride as F	0.21	1.5	mg/l	APHA 23rd ED 4500-F-D: 2017
10	Total Oil & Grease	ND	0.1	mg/l	APHA 23rd ED 5520-B: 2017
11	Cyanide as CN	ND	0.05	mg/l	IS 3025 (Part 27); 1986
12	Copper as Cu	<0.03	1.5	mg/l	APHA 3111B.23rd Ed 2017 (AAS)
13	Iron as Fe	0.09	50	mg/l	APHA 23rd ED 3500-Fe-B:20 17
14	Lead as Pb	<0.01	0.1	mg/l	APHA 3111B.23rd Ed 2017 (AAS)
15	Zinc as Zn	<0.05	15	mg/l	APBA 31 I IB,23rd Ed 2017 (AAS)
16	Arsenic asAs	<0.001	0.2	mg/l	APHA 3111B.23rd Ed 2017 (AAS)
17	Selenium as Se	<0.001	0.05	mg/l	APHA 3111B,23rd Ed 2017 (AAS)
18	Cadmium as Cd	ND	0.01	mg/l	APHA 3111B.23rd Ed 2017 (AAS)
19	Chromium as Cr6+	<0.05	0.05	mg/l	APHA 23rd ED 3500-Cr-B: 20 17
20	Phenolic Compounds	ND	0.005	mg/l	APHA 23rd ED 3500
21	Total Coliform	425	5000	MPN/100 ml	IS 1622:1981

Remark(s): All above results of Water Sample is chemically potable and bacteriologically with respect to above parameters.

BDL – Below Detectable Limit.

AUTHORIZED SIGNATORY

[Signature]



ANALYZED BY-

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NOISELEVEL MONITORING REPORT

TEST CERTIFICATE							
Report No:- GESEC/PRO/ANLM/2023-24/04/583							
Client Name and Address: TATA STEEL SPECIAL ECONOMIC ZONE LTD Gopalpur Industrial Park-DTA Chamakhandi, Chhatrapur, Dist-Ganjam Odisha-761020				Date of Sampling		24.04.2023	
				Sample Details		Noise For 24 Hours	
				Sample location		Near Anadrone Office	
Sample Collected By				Ardra Consulting Services Pvt, Ltd			
P.O NO:				TSSEZL/2022/30002204232			
Noise Monitoring Result							
Date	Timing	Result dB(A)	Date	Timing	Result dB(A)	Unit	CPCB Standards dB(A)
24.04.2023	06.00	56.2	24.04.2023	18.00	64.5	dB(A)	75/70
24.04.2023	07.00	52.4	24.04.2023	19.00	65.2	dB(A)	
24.04.2023	08.00	54.6	24.04.2023	20.00	54.6	dB(A)	
24.04.2023	09.00	63.1	24.04.2023	21.00	62.4	dB(A)	
24.04.2023	10.00	59.7	24.04.2023	22.00	63.6	dB(A)	
24.04.2023	11.00	56.2	24.04.2023	23.00	53.8	dB(A)	
24.04.2023	12.00	54.3	25.04.2023	24.00	43.1	dB(A)	
24.04.2023	13.00	57.1	25.04.2023	01.00	36.5	dB(A)	
24.04.2023	14.00	58.9	25.04.2023	02.00	35.3	dB(A)	
24.04.2023	15.00	60.4	25.04.2023	03.00	33.5	dB(A)	
24.04.2023	16.00	61.3	25.04.2023	04.00	33.8	dB(A)	
24.04.2023	17.00	62.4	25.04.2023	05.00	49.2	dB(A)	
Day Time Leq		59.0					
Night Time Leq		43.6					
Remark- ➤ All above Noise level results are within Central Pollution Control Board Standards limit. ➤ Day/Night -75/70 dB..(A)							
AUTHORIZED SIGNATORY 				ANALYZED BY- 			



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NOISELEVEL MONITORING REPORT**TEST CERTIFICATE**

Report No:- GESEC/PRO/ANLM/2023-24/04/584

Client Name and Address:**TATA STEEL SPECIAL ECONOMIC
ZONE LTD****Gopalpur Industrial Park-DTA
Chamakhandi, Chhatrapur, Dist-Ganjam
Odisha-761020****Date of Sampling**

24.04.2023

Sample Details

Noise For 24 Hours

Sample locationNear Main Gate
(Chama Khandi)**Sample Collected By**

Ardra Consulting Services Pvt, Ltd

P.O NO**TSSEZL/2022/30002204232****Noise Monitoring Result**

Date	Timing	Result dB(A)	Date	Timing	Result dB(A)	Unit	CPCB Standards dB(A)
24.04.2023	06.00	63.4	24.04.2023	18.00	67.2	dB(A)	75/70
24.04.2023	07.00	63.8	24.04.2023	19.00	66.7	dB(A)	
24.04.2023	08.00	65.4	24.04.2023	20.00	58.9	dB(A)	
24.04.2023	09.00	67.3	24.04.2023	21.00	60.2	dB(A)	
24.04.2023	10.00	66.2	24.04.2023	22.00	65.7	dB(A)	
24.04.2023	11.00	57.6	24.04.2023	23.00	62.4	dB(A)	
24.04.2023	12.00	59.8	25.04.2023	24.00	55.9	dB(A)	
24.04.2023	13.00	61.2	25.04.2023	01.00	53.4	dB(A)	
24.04.2023	14.00	65.6	25.04.2023	02.00	51.1	dB(A)	
24.04.2023	15.00	62.4	25.04.2023	03.00	49.5	dB(A)	
24.04.2023	16.00	65.3	25.04.2023	04.00	53.4	dB(A)	
24.04.2023	17.00	66.2	25.04.2023	05.00	55.2	dB(A)	
Day Time Leq		63.6					
Night Time Leq		55.8					

Remark-

- All above Noise level results are within Central Pollution Control Board Standards limit.
- Day/Night -75/70 dB.(A)

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AMBIENTAIR QUALITY MONITORING TEST REPORT

Report No:-	GESEC/PRO/AAQM/2023-24/05/564
Issued to	M/s. Tata Steel Special Economic Zone Ltd, Gopalpur.
Sample Description	Ambient Air Quality
Sample Drawn Period/Time	Monthly
Sample Drawn by	Ardra Consulting Services Pvt, Ltd,
Sampling Location	Near TS SEZL Project Office
Issued Date	03.06.2023
Instrument Used	Respirable Dust Sampler, Fine Dust Sampler, Gaseous Attachment
P.O NO	TSSEZL/2022/30002204232

ANALYSIS RESULT

Date	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)	SO ₂ (µg/m ³)	NO _x (µg/m ³)	CO (µg/m ³)
02.05.2023	68.9	36.2	12.3	24.6	0.4
04.05.2023	69.4	35.2	12.1	24.3	0.4
10.05.2023	67.4	35.4	11.4	21.6	0.4
12.05.2023	67.8	35.2	11.1	21.3	0.4
15.05.2023	70.9	36.9	12.8	23.7	0.5
18.05.2023	69.3	36.1	11.9	24.1	0.5
22.05.2023	68.6	35.4	11.5	22.3	0.4
25.05.2023	69.5	36.4	12.2	23.9	0.5
29.05.2023	70.3	36.9	12.9	24.8	0.5
Avg	69.1	36.0	12.0	23.4	0.4
NAAQ* Standard	100	60	80	80	4
Methods of Analysis	IS: 5182 (Part-23)	Gravimetric Method as per CPCB method	IS: 5182 (Part-2)	IS: 5182 (Part-6)	IS: 5182 (Part-10)

N.B.-*NAAQ-National Ambient Air Quality Standard as per 18th Nov, 2009 Gatt. Notification.


Authorized Signatory



Seal of Laboratory

Notes:

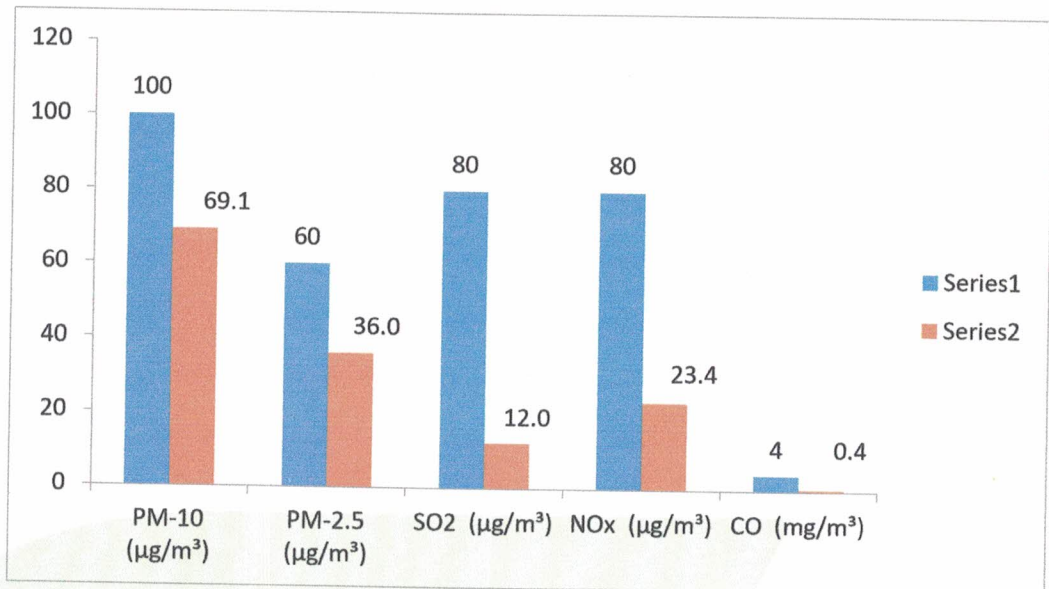
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Terms and conditions

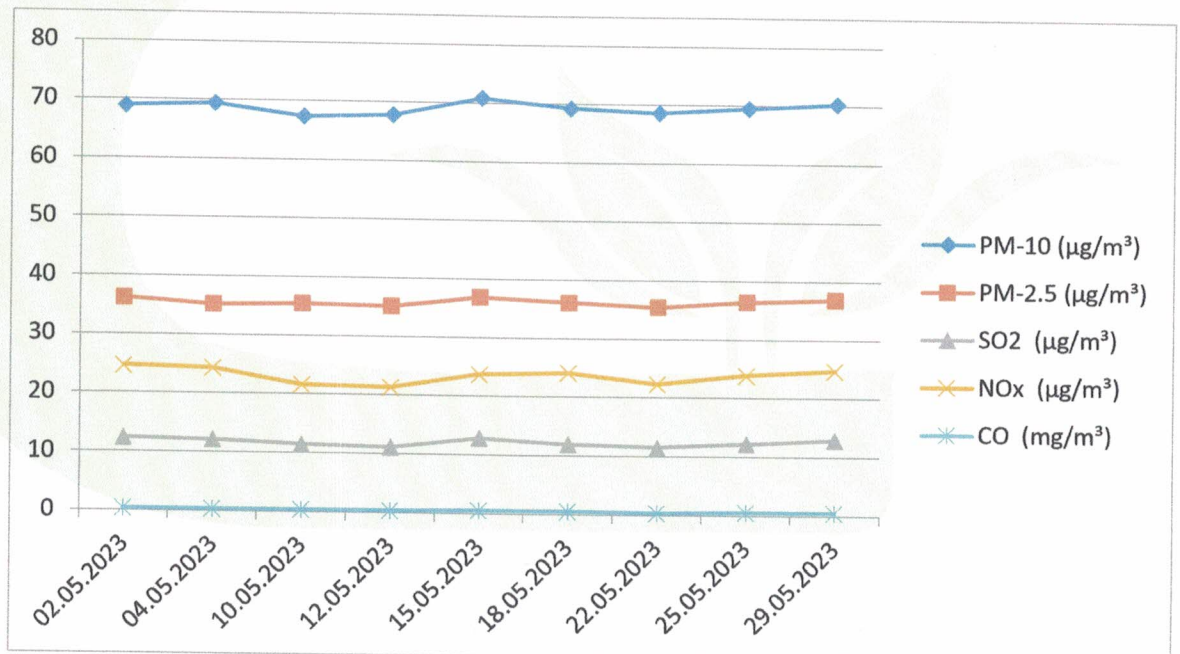
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NB-Series 1—Stands for Standard, Series 2—Stands for Result



This Graph is belongs to Station-01(Near TSSEZL Project Office) For the Month of May -23



Terms and conditions

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Dist. Pune-410501. Mob+ 9545084620, 8421365421 CIN No. : U74900PN2013PTC149666
E-mail : envirosafetyeng@gmail.com, gesec12@gmail.com | www.greenenvirosafe.co.in

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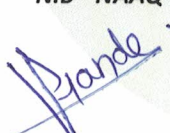
AMBIENTAIR QUALITY MONITORING TEST REPORT

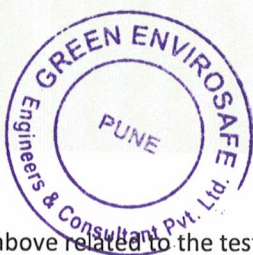
Report No:-	GESEC/PRO/AAQM/2023-24/05/565
Issued to	M/s. Tata Steel Special Economic Zone Ltd, Gopalpur.
Sample Description	Ambient Air Quality
Sample Drawn Period/Time	Monthly
Sample Drawn by	Ardra Consulting Services Pvt, Ltd,
Sampling Location	Near Anadrone Office
Issued Date	03.06.2023
Instrument Used	Respirable Dust Sampler, Fine Dust Sampler, Gaseous Attachment
P.O NO	TSSEZL/2022/30002204232

ANALYSIS RESULT

Date	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)	SO ₂ (µg/m ³)	NO _x (µg/m ³)	CO (µg/m ³)
02.05.2023	68.7	35.9	12.2	23.8	0.4
04.05.2023	70.2	37.4	12.7	24.3	0.5
10.05.2023	69.4	35.8	12.4	24.1	0.4
12.05.2023	68.9	35.4	11.3	22.4	0.4
15.05.2023	71.2	37.6	12.8	24.6	0.5
18.05.2023	72.5	37.9	13.3	24.8	0.5
22.05.2023	69.7	36.1	12.2	24.5	0.5
25.05.2023	70.8	37.5	12.5	24.7	0.5
29.05.2023	72.4	38.3	13.7	24.9	0.5
Avg	70.4	36.9	12.6	24.2	0.5
NAAQ* Standard	100	60	80	80	4
Methods of Analysis	IS: 5182 (Part-23)	Gravimetric Method as per CPCB method	IS: 5182 (Part-2)	IS: 5182 (Part-6)	IS: 5182 (Part-10)

N.B.-*NAAQ-National Ambient Air Quality Standard as per 18th Nov, 2009 Gatt. Notification.


Authorized Signatory



Seal of Laboratory

Notes:

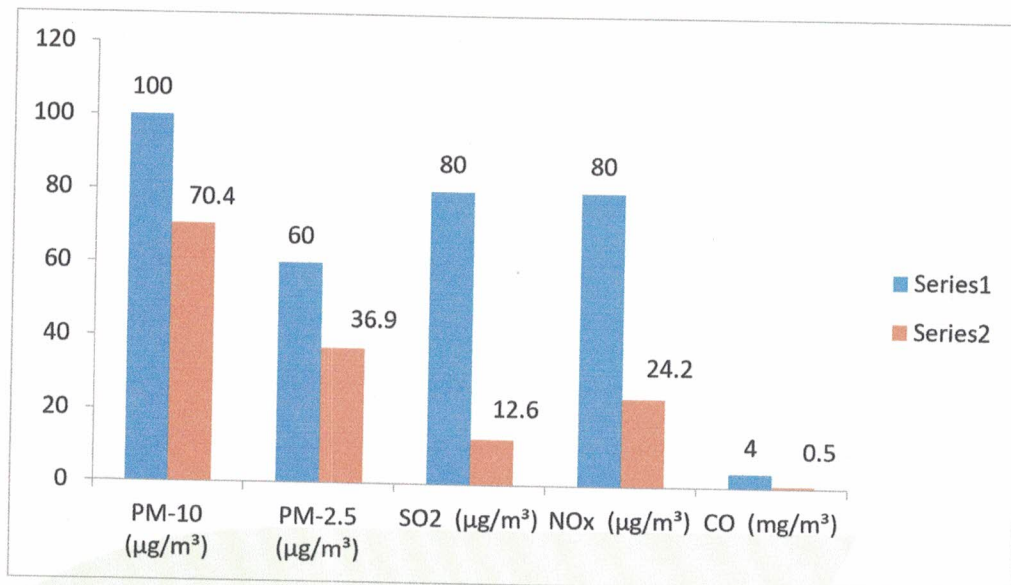
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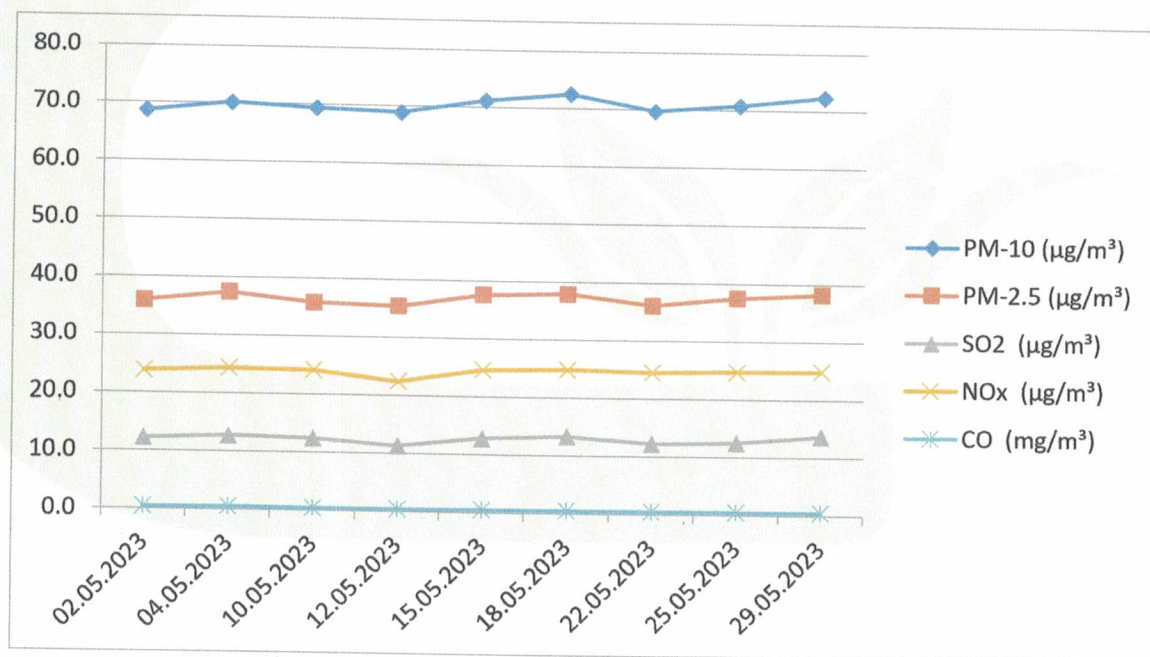
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NB-Series 1–Stands for Standard, Series 2–Stands for Result



This Graph is belongs to Station-02 (Near Anadrone Office) For the Month of May -23



Terms and conditions

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AMBIENT AIR QUALITY MONITORING TEST REPORT

Report No:-	GESEC/PRO/AAQM/2023-24/05/566
Issued to	M/s. Tata Steel Special Economic Zone Ltd, Gopalpur.
Sample Description	Ambient Air Quality
Sample Drawn Period/Time	Monthly
Sample Drawn by	Ardra Consulting Services Pvt, Ltd,
Sampling Location	Near Main Gate (Chama Khandi)
Issued Date	03.06.2023
Instrument Used	Respirable Dust Sampler, Fine Dust Sampler, Gaseous Attachment
P.O NO	TSSEZL/2022/30002204232

ANALYSIS RESULT

Date	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)	SO ₂ (µg/m ³)	NO _x (µg/m ³)	CO (µg/m ³)
02.05.2023	70.8	37.8	12.8	24.8	0.5
04.05.2023	71.5	37.7	12.7	24.9	0.5
10.05.2023	69.4	36.2	12.1	24.3	0.4
12.05.2023	70.8	37.5	12.6	24.3	0.4
15.05.2023	72.8	37.6	13.3	24.4	0.5
18.05.2023	73.4	37.9	13.4	24.8	0.5
22.05.2023	74.6	38.4	13.5	25.6	0.5
25.05.2023	71.7	37.6	12.5	24.8	0.5
29.05.2023	73.5	37.9	13.5	24.9	0.5
Avg	72.1	37.6	12.9	24.8	0.5
NAAQ* Standard	100	60	80	80	4
Methods of Analysis	IS: 5182 (Part-23)	Gravimetric Method as per CPCB method	IS: 5182 (Part-2)	IS: 5182 (Part-6)	IS: 5182 (Part-10)

N.B.-*NAAQ-National Ambient Air Quality Standard as per 18th Nov, 2009 Gatt. Notification.


Authorized Signatory



Seal of Laboratory

Notes:

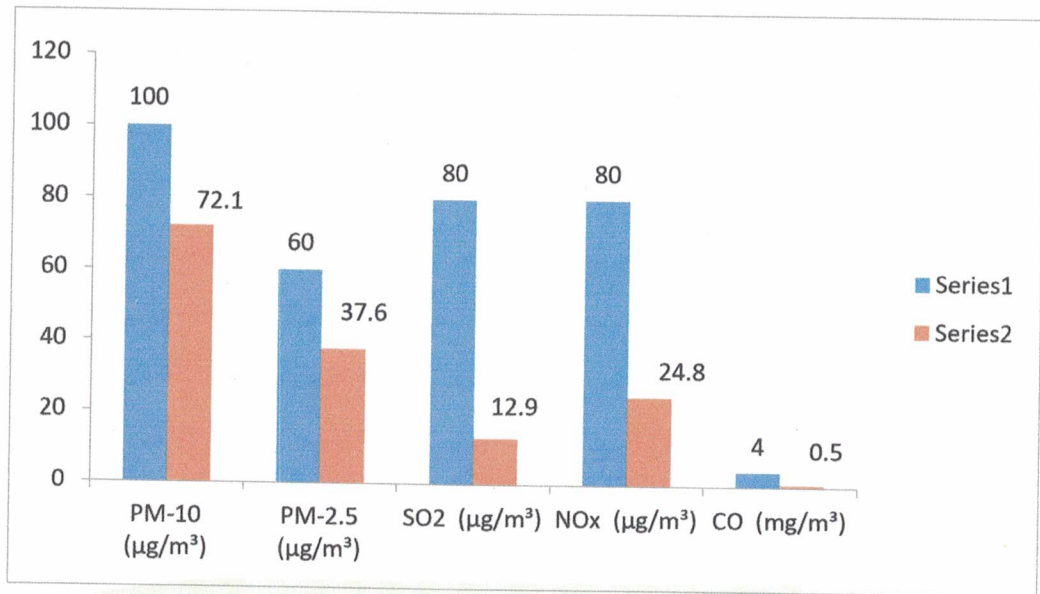
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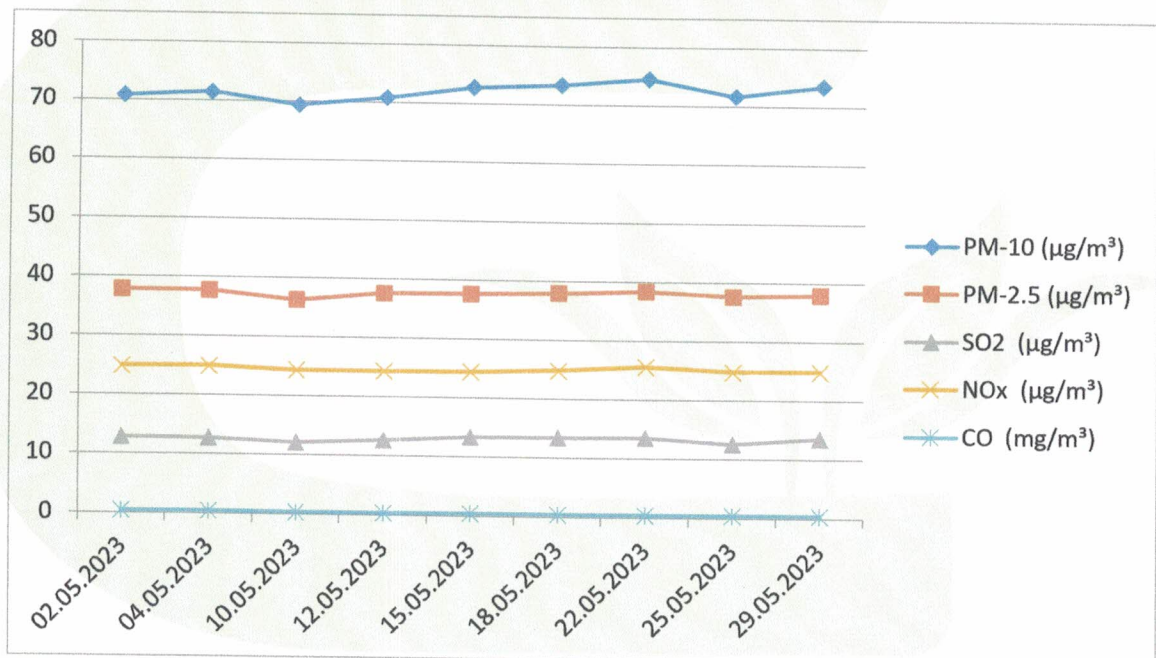
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NB-Series 1—Stands for Standard, Series 2—Stands for Resu



This Graph is belongs to Station-03 (Near Main Gate, Chama Khandi) For the Month of May -23



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SPECIAL AIR QUALITY MONITORING TEST REPORT

Report No:-	GESEC/PRO/AAQM/2023-24/05/567
Issued to	M/s. Tata Steel Special Economic Zone Ltd, Gopalpur.
Sample Description	Ambient Air Quality
Sample Drawn Period/Time	Monthly (Special)
Date of Sampling	25.05.2023
Sample Drawn by	Ardra Consulting Services Pvt, Ltd,
Sampling Location	Near TSSEZL Project Office
Issued Date	03.06.2023
Instrument Used	Respirable Dust Sampler, Fine Dust Sampler, Gaseous Attachment
P.O NO	TSSEZL/2022/30002204232

Ambient Air Analysis Result

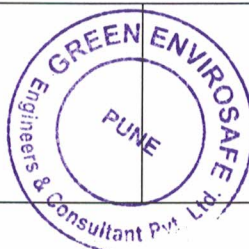
Sr. No.	Parameter	Result	Unit(s)	NAAQ Standards
1.	Ambient Temperature	33	°C	
2.	Relative Humidity	62	% RH	
3.	Sulphur Dioxide(SO ₂)	12.2	µg/M ³	≤ 80
4.	Oxides of Nitrogen(NO ₂)	23.9	µg/M ³	≤ 80
5.	Particulate Matter PM ₁₀	69.5	µg/M ³	≤ 100
6.	Particulate Matter PM _{2.5}	36.4	µg/M ³	≤ 60
7.	Carbon Monoxide (CO)	0.5	mg/M ³	≤ 04
8.	Ozone(O ₃)	12.8	µg/M ³	≤ 180
9.	Lead (Pb)	<0.09	µg/M ³	≤ 1.0
10.	Ammonia(NH ₃)	32.8	µg/M ³	≤ 400
11.	Benzene(C ₆ H ₆)	<4.1	µg/M ³	≤ 05
12.	Benzo(a)Pyrene(BaP)	<0.08	ng/M ³	≤ 01
13.	Arsenic(As)	<0.42	ng/M ³	≤ 06
14.	Nickel(Ni)	<0.4	ng/M ³	≤ 20

Remark-

- All above results are within National Ambient Air Quality standards.
- BDL – Below Detectable Limit.

ANALYZED BY-

Hinde



AUTHORIZED SIGNATORY

Hinde

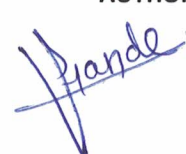
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SPECIAL AIR QUALITY MONITORING TEST REPORT

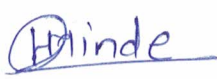
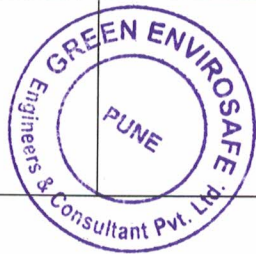
Report No:-	GESEC/PRO/AAQM/2023-24/05/568			
Issued to	M/s. Tata Steel Special Economic Zone Ltd, Gopalpur.			
Sample Description	Ambient Air Quality			
Sample Drawn Period/Time	Monthly (Special)			
Date of Sampling	25.05.2023			
Sample Drawn by	Ardra Consulting Services Pvt, Ltd,			
Sampling Location	Near Anadron Office			
Issued Date	03.06.2023			
Instrument Used	Respirable Dust Sampler, Fine Dust Sampler, Gaseous Attachment			
P.O NO	TSSEZL/2022/30002204232			
Ambient Air Analysis Result				
Sr. No.	Parameter	Result	Unit(s)	NAAQ Standards
1.	Ambient Temperature	33	°C	
2.	Relative Humidity	62	% RH	
3.	Sulphur Dioxide(SO ₂)	12.5	µg/M ³	≤ 80
4.	Oxides of Nitrogen(NO ₂)	24.7	µg/M ³	≤ 80
5.	Particulate Matter PM ₁₀	70.8	µg/M ³	≤ 100
6.	Particulate Matter PM _{2.5}	37.5	µg/M ³	≤ 60
7.	Carbon Monoxide (CO)	0.5	mg/M ³	≤ 04
8.	Ozone(O ₃)	12.9	µg/M ³	≤ 180
9.	Lead (Pb)	<0.09	µg/M ³	≤ 1.0
10.	Ammonia(NH ₃)	35.3	µg/M ³	≤ 400
11.	Benzene(C ₆ H ₆)	<4.1	µg/M ³	≤ 05
12.	Benzo(a)Pyrene(BaP)	<0.08	ng/M ³	≤ 01
13.	Arsenic(As)	<0.44	ng/M ³	≤ 06
14.	Nickel(Ni)	<0.5	ng/M ³	≤ 20
Remark- ➤ All above results are within National Ambient Air Quality standards. ➤ BDL – Below Detectable Limit.				
ANALYZED BY-			AUTHORIZED SIGNATORY	
				
				

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SPECIAL AIR QUALITY MONITORING TEST REPORT

Report No:-	GESEC/PRO/AAQM/2023-24/05/569			
Issued to	M/s. Tata Steel Special Economic Zone Ltd, Gopalpur.			
Sample Description	Ambient Air Quality			
Sample Drawn Period/Time	Monthly (Special)			
Date of Sampling	25.05.2023			
Sample Drawn by	Ardra Consulting Services Pvt, Ltd,			
Sampling Location	Near Main Gate (Chama Khandi)			
Issued Date	03.06.2023			
Instrument Used	Respirable Dust Sampler, Fine Dust Sampler, Gaseous Attachment			
P.O NO	TSSEZL/2022/30002204232			
Ambient Air Analysis Result				
Sr. No.	Parameter	Result	Unit(s)	NAAQ Standards
1.	Ambient Temperature	36	°C	
2.	Relative Humidity	65	% RH	
3.	Sulphur Dioxide(SO ₂)	12.5	µg/M ³	≤ 80
4.	Oxides of Nitrogen(NO ₂)	24.8	µg/M ³	≤ 80
5.	Particulate Matter PM ₁₀	71.7	µg/M ³	≤ 100
6.	Particulate Matter PM _{2.5}	37.6	µg/M ³	≤ 60
7.	Carbon Monoxide (CO)	0.5	mg/M ³	≤ 04
8.	Ozone(O ₃)	13.8	µg/M ³	≤ 180
9.	Lead (Pb)	<0.09	µg/M ³	≤ 1.0
10.	Ammonia(NH ₃)	36.5	µg/M ³	≤ 400
11.	Benzene(C ₆ H ₆)	<4.6	µg/M ³	≤ 05
12.	Benzo(a)Pyrene(BaP)	<0.08	ng/M ³	≤ 01
13.	Arsenic(As)	<0.46	ng/M ³	≤ 06
14.	Nickel(Ni)	<0.5	ng/M ³	≤ 20
Remark- > All above results are within National Ambient Air Quality standards. > BDL – Below Detectable Limit.				
ANALYZED BY-		AUTHORIZED SIGNATORY		
				
				

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**GREEN ENVIROSAFE**

Engineers & Consultant Pvt Ltd.

A-7/2/C-11, Capital City, Talwade - Chakan Road, Chakan MIDC, PH-IV, Village Nighoje, Tal. Khed,
Dist. Pune-410501. Mob+ 9545084620, 8421365421 CIN No. : U74900PN2013PTC149666
E-mail : envirosafetyeng@gmail.com, gesec12@gmail.com | www.greenenvirosafe.co.in

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SURFACE WATER QUALITY TEST REPORT

TEST CERTIFICATE					
Report No:- GESEC/PRO/W/2023-24/05/570					
Client Name and Address: TATA STEEL SPECIAL ECONOMIC ZONE LTD Gopalpur Industrial Park-DTA Chamakhandi, Chhatrapur, Dist-Ganjam Odisha-761020			Date of Sampling		25.05.2023
			Start Date of Analysis		25.05.2023
			End Date of Analysis		30.05.2023
			Sample Details		Surface water (US)
			Nature of sample		Liquid
Sample Collected By			Ardra Consulting Services Pvt, Ltd.,		
P.O NO			TSSEZL/2022/30002204232		
WATER ANALYSIS RESULT					
Sr. No.	Parameter	Result	Limits as per Is 2296:2012	Unit(s)	Standard Method
Physical Parameter					
1	Colour	48	300	Hazen	IS 3025: (Part 4)- 1983;(RA-2017)
2	pH	7.62	6.5-8.5	--	APHA 23rd ED 4500- H+B:2014
3	Chlorides as Cl	68	600	mg/l	APHA 23rd Ed 4500- Cl-B:2017
4	Total Dissolved Solids	538	1500	mg/l	APHA 23rd ED 2540-C: 2017
5	Dissolved Oxygen	5.4	4 (min)	mg/l	APHA 23rd ED 4500-OC :2017
6	BOD 3 days 27 °C	2.2	3	mg/l	IS 3025: Part 44- 1993;(RA-2014)
7	Sulphates as SO4	22.1	400	mg/l	APHA 23rd ED 4500-SO42-E: 2017
8	Nitrates as NO ₃	3.2	50	mg/l	APHA 23rd ED 4500-NO3-B: 2017
9	Fluoride as F	0.27	1.5	mg/l	APHA 23rd ED 4500-F-D: 2017
10	Total Oil & Grease	ND	0.1	mg/l	APHA 23rd ED 5520-B: 2017
11	Cyanide as CN	ND	0.05	mg/l	IS 3025 (Part 27); 1986
12	Copper as Cu	<0.03	1.5	mg/l	APHA 3111B.23rd Ed 2017 (AAS)
13	Iron as Fe	0.20	50	mg/l	APHA 3111B.23rd Ed 2017 (AAS)
14	Lead as Pb	<0.01	0.1	mg/l	APHA 3111B.23rd Ed 2017 (AAS)
15	Zinc as Zn	<0.05	15	mg/l	APBA 31 I IB,23rd Ed 2017 (AAS)
16	Arsenic asAs	<0.001	0.2	mg/l	APHA 3111B.23rd Ed 2017 (AAS)
17	Selenium as Se	<0.001	0.05	mg/l	APHA 3111B,23rd Ed 2017 (AAS)
18	Cadmium as Cd	ND	0.01	mg/l	APHA 3111B.23rd Ed 2017 (AAS)
19	Chromium as Cr6+	<0.05	0.05	mg/l	APHA 4500 Cr B 23rd Ed. 2017 (AAS)
20	Phenolic Compounds	ND	0.005	mg/l	IS : 3025 (Part 23)
21	Total Coliform	810	5000	MPN/100ml	IS : 1622(rev.2014)
Remark(s): All above results of Water Sample is chemically potable and bacteriologically with respect to above parameters. BDL – Below Detectable Limit.					
ANALYZED BY-			AUTHORIZED SIGNATORY		

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SURFACE WATER QUALITY TEST REPORT

TEST CERTIFICATE					
Report No:- GESEC/PRO/W/2023-24/05/571					
Client Name and Address: TATA STEEL SPECIAL ECONOMIC ZONE LTD Gopalpur Industrial Park-DTA Chamakhandi, Chhatrapur, Dist-Ganjam Odisha-761020			Date of Sampling		25.05.2023
			Start Date of Analysis		25.05.2023
			End Date of Analysis		30.05.2023
			Sample Details		Surface water (DS)
			Nature of sample		Liquid
Sample Collected By			Ardra Consulting Services Pvt, Ltd.,		
P.O NO			TSSEZL/2022/30002204232		
WATER ANALYSIS RESULT					
Sr. No.	Parameter	Result	Limits as per Is 2296:2012	Unit(s)	Standard Method
Physical Parameter					
1	Colour	90	300	Hazen	IS 3025: (Part 4)- 1983;(RA-2017)
2	pH	7.38	6.5-8.5	--	APHA 23rd ED 4500- H+B:2014
3	Chlorides as Cl	60	600	mg/l	APHA 23rd Ed 4500- Cl-B:2017
4	Total Dissolved Solids	4.2	1500	mg/l	APHA 23rd ED 2540-C: 2017
5	Dissolved Oxygen	5.0	4	mg/l	APHA 23rd ED 4500-OC :2017
6	BOD 3 days 27 °C	2.0	3	mg/l	IS 3025: Part 44- 1993;(RA-2014)
7	Sulphates as SO4	16.7	400	mg/l	APHA 23rd ED 4500-SO42-E: 2017
8	Nitrates as NO ₃	3.0	50	mg/l	APHA 23rd ED 4500-NO3-B: 2017
9	Fluoride as F	0.19	1.5	mg/l	APHA 23rd ED 4500-F-D: 2017
10	Total Oil & Grease	ND	0.1	mg/l	APHA 23rd ED 5520-B: 2017
11	Cyanide as CN	ND	0.05	mg/l	IS 3025 (Part 27); 1986
12	Copper as Cu	<0.03	1.5	mg/l	APHA 3111B.23rd Ed 2017 (AAS)
13	Iron as Fe	0.07	50	mg/l	APHA 23rd ED 3500-Fe-B: 20 17
14	Lead as Pb	<0.01	0.1	mg/l	APHA 3111B.23rd Ed 2017 (AAS)
15	Zinc as Zn	<0.05	15	mg/l	APBA 31 I IB,23rd Ed 2017 (AAS)
16	Arsenic asAs	<0.001	0.2	mg/l	APHA 3111B.23rd Ed 2017 (AAS)
17	Selenium as Se	<0.001	0.05	mg/l	APHA 3111B,23rd Ed 2017 (AAS)
18	Cadmium as Cd	ND	0.01	mg/l	APHA 3111B.23rd Ed 2017 (AAS)
19	Chromium as Cr6+	<0.05	0.05	mg/l	APHA 23rd ED 3500-Cr-B: 20 17
20	Phenolic Compounds	ND	0.005	mg/l	APHA 23rd ED 3500
21	Total Coliform	536	5000	MPN/100 ml	IS 1622:1981
Remark(s): All above results of Water Sample is chemically potable and bacteriologically with respect to above parameters. BDL – Below Detectable Limit.					
ANALYZED BY-			AUTHORIZED SIGNATORY		

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NOISELEVEL MONITORING REPORT

TEST CERTIFICATE							
Report No:- GESEC/PRO/ANLM/2023-24/05/572							
Client Name and Address: TATA STEEL SPECIAL ECONOMIC ZONE LTD Gopalpur Industrial Park-DTA Chamakhandi, Chhatrapur, Dist-Ganjam Odisha-761020				Date of Sampling		25.05.2023	
				Sample Details		Noise For 24 Hours	
				Sample location		Near Anadrone Office	
Sample Collected By				Ardra Consulting Services Pvt, Ltd.,			
P.O NO:				TSSEZL/2022/30002204232			
Noise Monitoring Result							
Date	Timing	Result dB(A)	Date	Timing	Result dB(A)	Unit	CPCB Standards dB(A)
25.05.2023	06.00	55.8	25.05.2023	18.00	64.2	dB(A)	75/70
25.05.2023	07.00	52.5	25.05.2023	19.00	66.2	dB(A)	
25.05.2023	08.00	55.3	25.05.2023	20.00	53.9	dB(A)	
25.05.2023	09.00	63.4	25.05.2023	21.00	61.8	dB(A)	
25.05.2023	10.00	59.9	25.05.2023	22.00	62.8	dB(A)	
25.05.2023	11.00	55.6	25.05.2023	23.00	53.4	dB(A)	
25.05.2023	12.00	56.2	26.05.2023	24.00	42.8	dB(A)	
25.05.2023	13.00	58.2	26.05.2023	01.00	36.4	dB(A)	
25.05.2023	14.00	58.9	26.05.2023	02.00	35.2	dB(A)	
25.05.2023	15.00	60.8	26.05.2023	03.00	32.5	dB(A)	
25.05.2023	16.00	61.8	26.05.2023	04.00	33.2	dB(A)	
25.05.2023	17.00	63.5	26.05.2023	05.00	50.2	dB(A)	
Day Time Leq		59.3					
Night Time Leq		43.3					
Remark-							
➤ All above Noise level results are within Central Pollution Control Board Standards limit. ➤ Day/Night -75/70 dB..(A)							
ANALYZED BY-				AUTHORIZED SIGNATORY			

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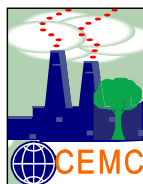
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NOISELEVEL MONITORING REPORT

TEST CERTIFICATE							
Report No:- GESEC/PRO/ANLM/2023-24/05/573							
Client Name and Address: TATA STEEL SPECIAL ECONOMIC ZONE LTD Gopalpur Industrial Park-DTA Chamakhandi, Chhatrapur, Dist-Ganjam Odisha-761020				Date of Sampling		25.05.2023	
				Sample Details		Noise For 24 Hours	
				Sample location		Near Main Gate (Chama Khandi)	
Sample Collected By				Ardra Consulting Services Pvt, Ltd,			
P.O NO				TSSEZL/2022/30002204232			
Noise Monitoring Result							
Date	Timing	Result dB(A)	Date	Timing	Result dB(A)	Unit	CPCB Standards dB(A)
25.05.2023	06.00	63.2	25.05.2023	18.00	66.4	dB(A)	75/70
25.05.2023	07.00	62.8	25.05.2023	19.00	65.6	dB(A)	
25.05.2023	08.00	65.9	25.05.2023	20.00	57.2	dB(A)	
25.05.2023	09.00	68.4	25.05.2023	21.00	60.1	dB(A)	
25.05.2023	10.00	65.7	25.05.2023	22.00	64.3	dB(A)	
25.05.2023	11.00	56.8	25.05.2023	23.00	62.1	dB(A)	
25.05.2023	12.00	59.8	26.05.2023	24.00	55.2	dB(A)	
25.05.2023	13.00	62.3	26.05.2023	01.00	52.4	dB(A)	
25.05.2023	14.00	65.4	26.05.2023	02.00	51.0	dB(A)	
25.05.2023	15.00	62.1	26.05.2023	03.00	49.3	dB(A)	
25.05.2023	16.00	64.3	26.05.2023	04.00	52.4	dB(A)	
25.05.2023	17.00	65.7	26.05.2023	05.00	56.1	dB(A)	
Day Time Leq		63.2					
Night Time Leq		55.4					
Remark-							
➤ All above Noise level results are within Central Pollution Control Board Standards limit.							
➤ Day/Night -75/70 dB.(A)							
ANALYZED BY-				AUTHORIZED SIGNATORY			

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Report no.-CEMC/TSSEZL/030723/A1

Issued Date-03.07.2023

AMBIENT AIR QUALITY MONITORING TEST REPORT

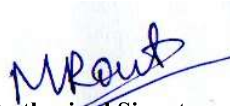
Issued to	M/s. Tata Steel Special Economic Zone Ltd, Gopalpur.
Sample Description	Ambient Air Quality
Sample Drawn Period/ Time	Monthly
Sample Drawn by	Mr. R.N Das
Sampling Location	Near TSSEZL Project Office
Weather Conditions	Clear
Reference No.	CEMC-03072023A1
Instrument Used	Respirable Dust Sampler, Fine Dust Sampler, Gaseous Attachment

ANALYSIS RESULT

Date	PM ₁₀ ($\mu\text{g}/\text{m}^3$)	PM _{2.5} ($\mu\text{g}/\text{m}^3$)	SO ₂ ($\mu\text{g}/\text{m}^3$)	NO _x ($\mu\text{g}/\text{m}^3$)	CO (mg/m^3)
02.06.2023	67.6	38.3	13.24	18.21	0.58
05.06.2023	63.8	36.2	12.72	17.32	0.46
09.06.2023	65.7	36.8	12.85	17.88	0.53
12.06.2023	66.9	37.2	12.96	17.91	0.56
16.06.2023	68.3	39.1	13.64	18.49	0.61
19.06.2023	67.2	37.7	12.80	17.91	0.51
23.06.2023	64.9	35.6	12.85	17.88	0.55
26.06.2023	66.2	36.4	12.72	17.91	0.6
Avg	66.33	37.16	12.97	17.94	0.55
NAAQ* Standard	100	60	80	80	4
Methods of Analysis	IS: 5182 (Part-23)	Gravimetric Method as per CPCB method	IS: 5182 (Part-2)	IS: 5182 (Part-6)	IS: 5182 (Part-10)

N.B- *NAAQ- National Ambient Air Quality Standard as per 18th Nov, 2009 Gatt. Notification.

END OF REPORT


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Notes:



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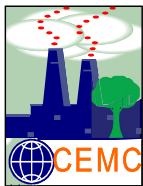
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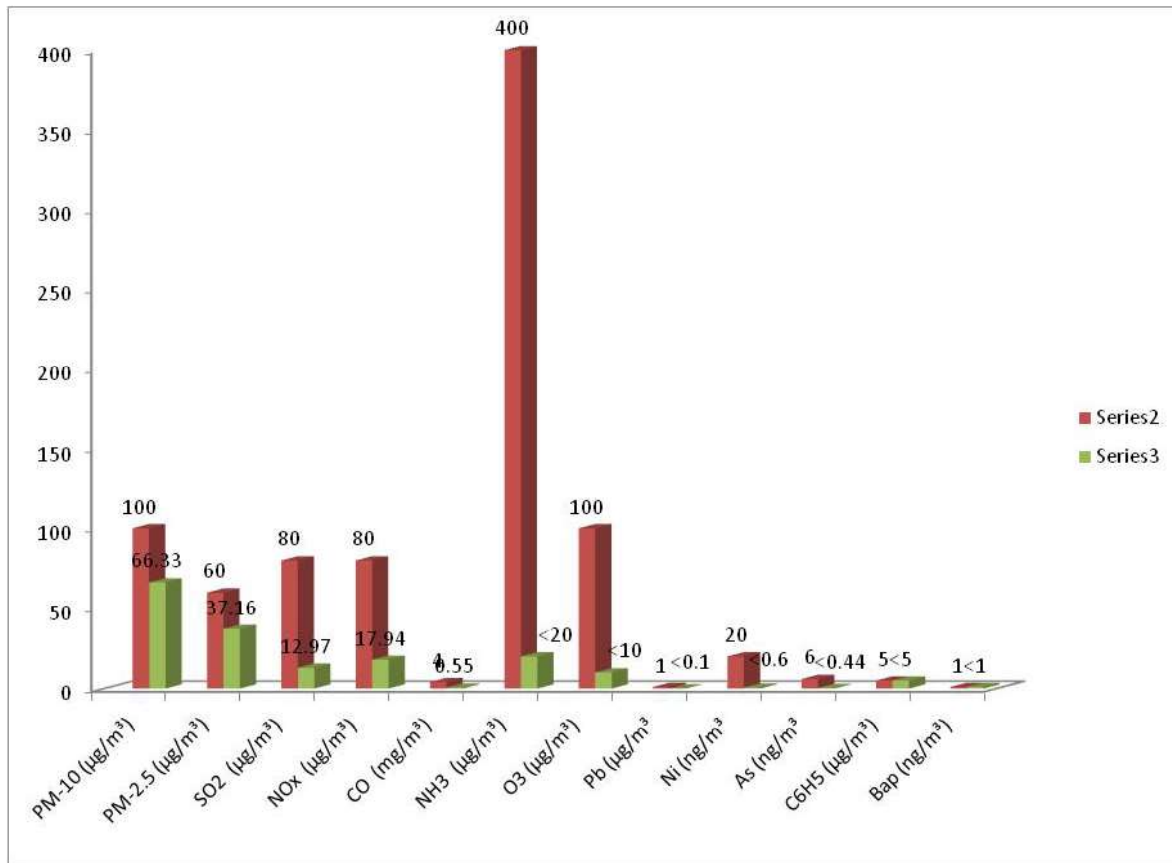
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NB-Series2 –Stands for Standard, Series3 –Stands for Result

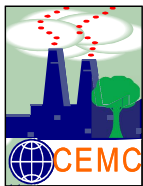
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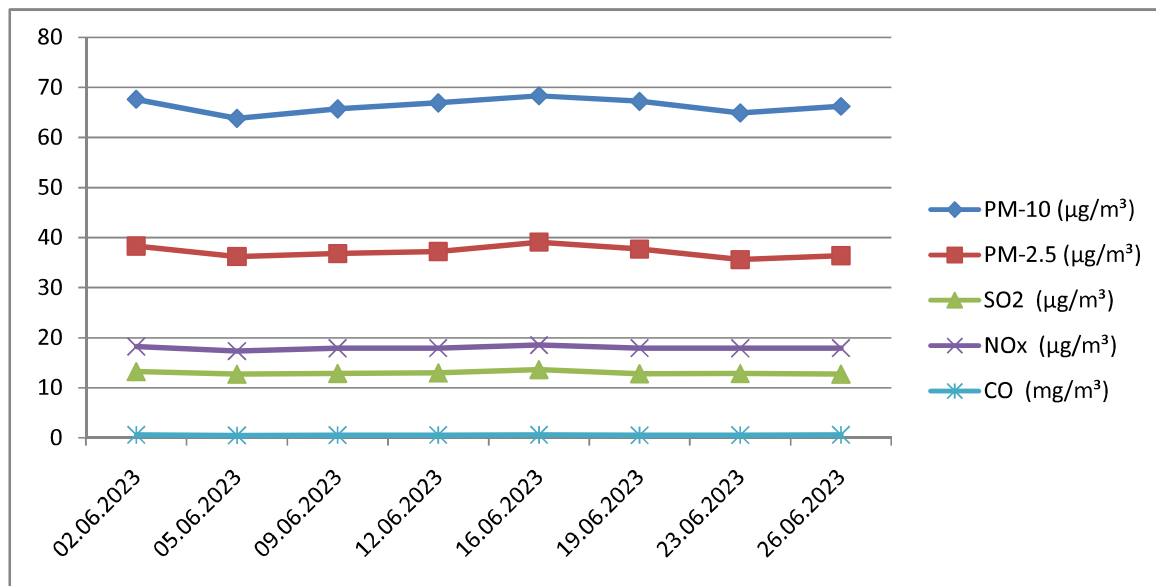
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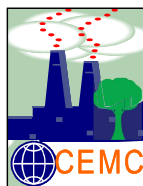
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Report no.-CEMC/TSSEZL/030723/A2

Issued Date-03.07.2023

AMBIENT AIR QUALITY MONITORING TEST REPORT

Issued to	M/s. Tata Steel Special Economic Zone Ltd, Gopalpur.
Sample Description	Ambient Air Quality
Sample Drawn Period/ Time	Monthly
Sample Drawn by	Mr. R.N Das
Sampling Location	Near Anadrone Office
Weather Conditions	Clear
Reference No.	CEMC-03072023A2
Instrument Used	Respirable Dust Sampler, Fine Dust Sampler, Gaseous Attachment

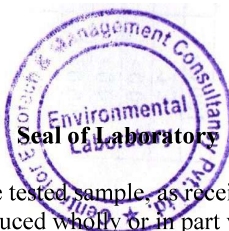
ANALYSIS RESULT

Date	PM ₁₀ ($\mu\text{g}/\text{m}^3$)	PM _{2.5} ($\mu\text{g}/\text{m}^3$)	SO ₂ ($\mu\text{g}/\text{m}^3$)	NO _x ($\mu\text{g}/\text{m}^3$)	CO (mg/m^3)
02.06.2023	64.6	35.9	12.85	17.74	0.53
05.06.2023	64.8	36.2	12.72	17.79	0.49
09.06.2023	65.4	36.5	12.91	17.85	0.53
12.06.2023	65.9	36.9	13.08	17.93	0.52
16.06.2023	66.3	37.4	13.21	18.22	0.56
19.06.2023	66.7	37.8	13.43	18.56	0.61
23.06.2023	67.2	36.4	12.91	17.74	0.53
26.06.2023	66.4	35.2	12.72	17.85	0.49
Average	65.91	36.54	12.98	17.96	0.53
NAAQ* Standard	100	60	80	80	4
Methods of Analysis	IS: 5182 (Part-23)	Gravimetric Method as per CPCB method	IS: 5182 (Part-2)	IS: 5182 (Part-6)	IS: 5182 (Part-10)

N.B- *NAAQ- National Ambient Air Quality Standard as per 18th Nov, 2009 Gatt. Notification.

END OF REPORT


Authorized Signatory
Notes:



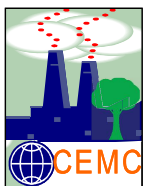
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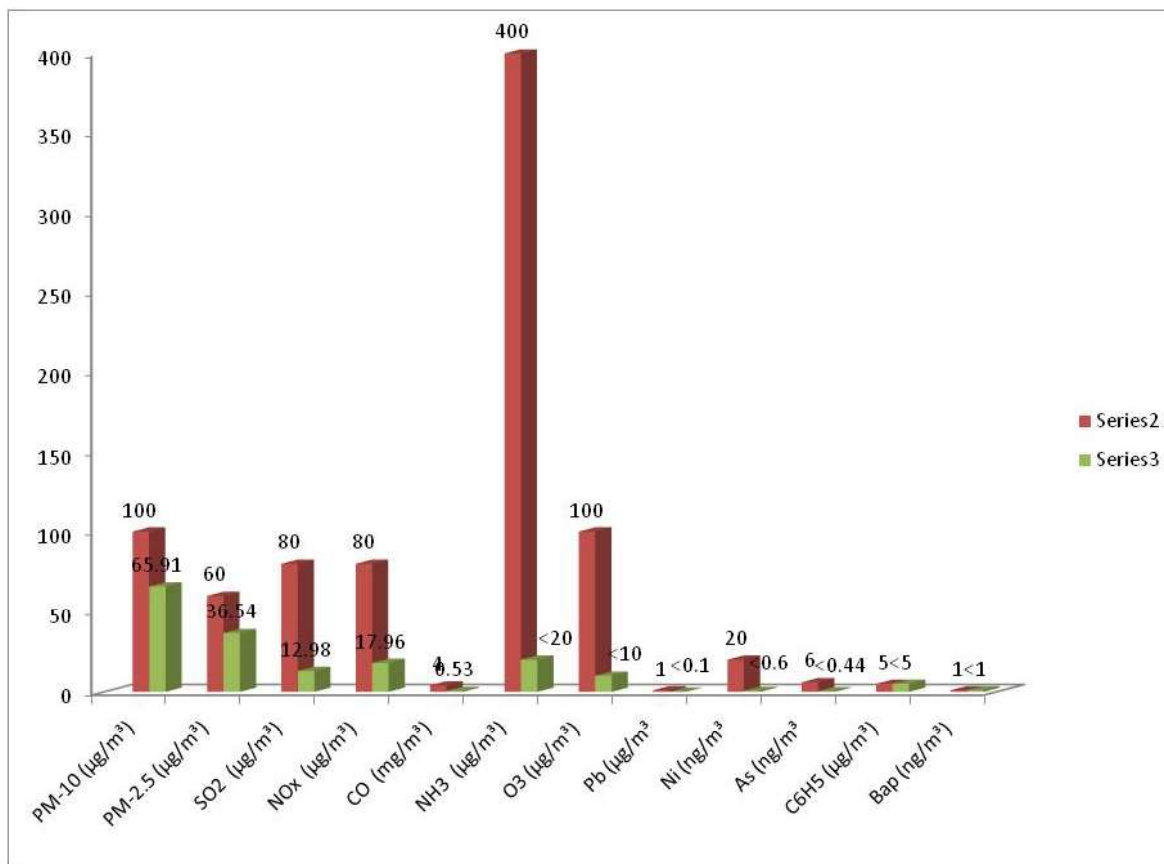
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NB-Series2 –Stands for Standard, Series3 –Stands for Result

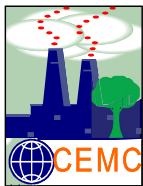
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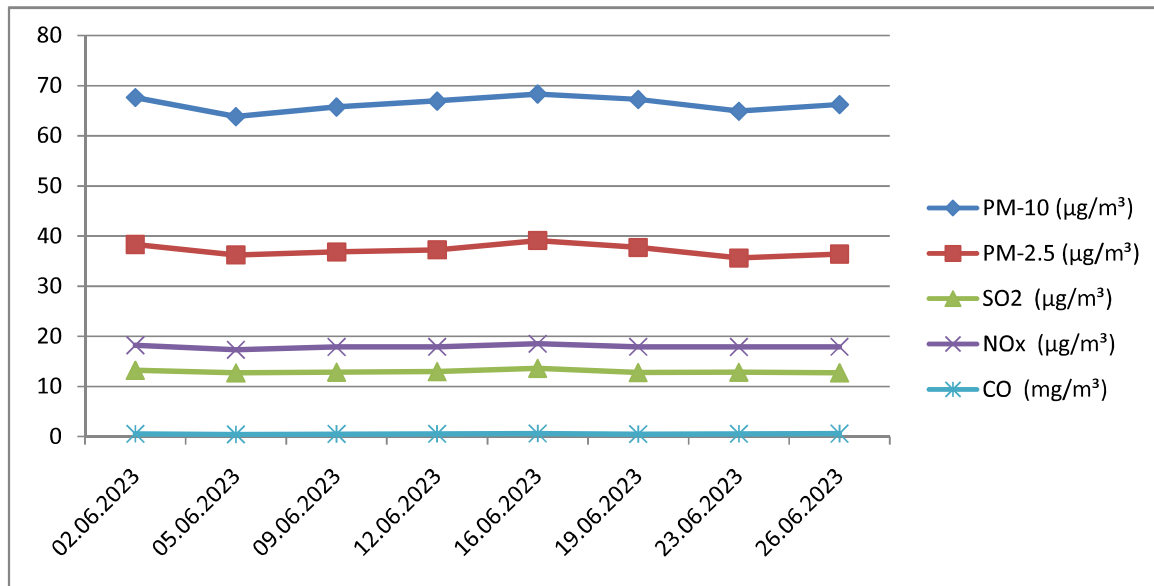
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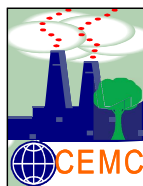
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Report no.-CEMC/TSSEZL/031020/A3

Issued Date-03.10.2020

AMBIENT AIR QUALITY MONITORING TEST REPORT

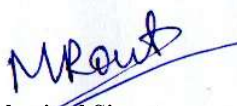
Issued to	M/s. Tata Steel Special Economic Zone Ltd, Gopalpur.
Sample Description	Ambient Air Quality
Sample Drawn Period/ Time	Monthly
Sample Drawn by	Mr. R.N Das
Sampling Location	Near Main Gate (Chamakhandi)
Weather Conditions	Clear
Reference No.	CEMC-03102020A3
Instrument Used	Respirable Dust Sampler, Fine Dust Sampler, Gaseous Attachment

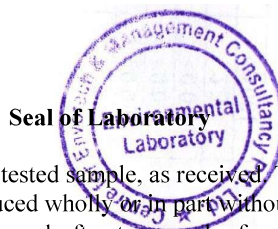
ANALYSIS RESULT

Date	PM ₁₀ ($\mu\text{g}/\text{m}^3$)	PM _{2.5} ($\mu\text{g}/\text{m}^3$)	SO ₂ ($\mu\text{g}/\text{m}^3$)	NO _x ($\mu\text{g}/\text{m}^3$)	CO (mg/m^3)
02.06.2023	61.4	32.9	9.9	14.80	0.42
05.06.2023	60.8	30.4	9.2	14.75	0.44
09.06.2023	61.6	31.3	10.3	15.71	0.41
12.06.2023	60.0	30.8	9.2	15.52	0.43
16.06.2023	59.8	30.2	8.6	13.44	0.38
19.06.2023	63.4	32.8	10.3	15.71	0.4
23.06.2023	61.8	31.6	10.8	14.68	0.41
26.06.2023	64.8	33.2	12.4	15.52	0.37
Avg	61.70	31.65	10.09	15.02	0.41
NAAQ* Standard	100	60	80	80	4
Methods of Analysis	IS: 5182 (Part-23)	Gravimetric Method as per CPCB method	IS: 5182 (Part-2)	IS: 5182 (Part-6)	IS: 5182 (Part-10)

N.B- *NAAQ- National Ambient Air Quality Standard as per 18th Nov, 2009 Gatt. Notification.

END OF REPORT


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Notes:



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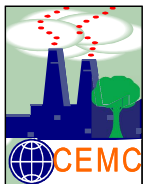
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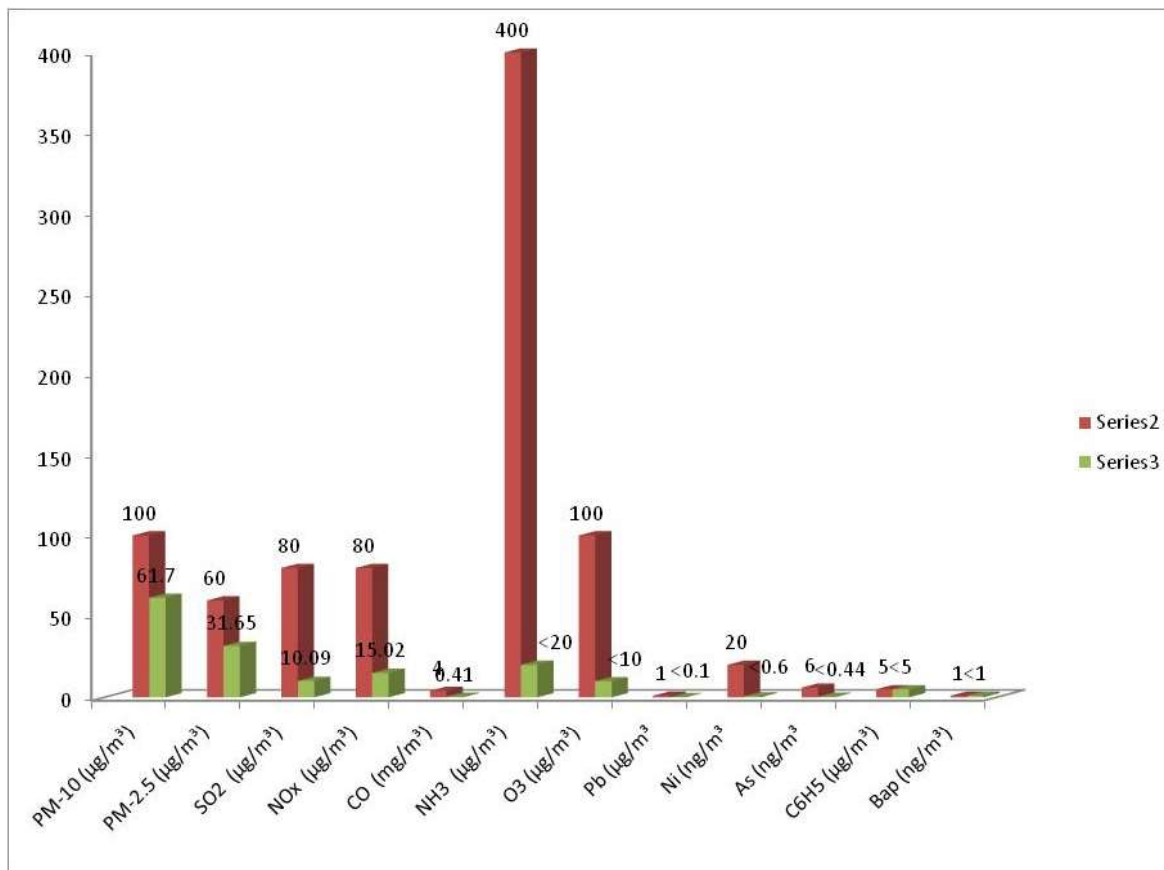
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This Graph is belongs to Station-03(Near Main Gate (Chamakhandi) For the Month of June-23

NB-Series2 –Stands for Standard, Series3 –Stands for Result

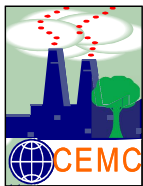
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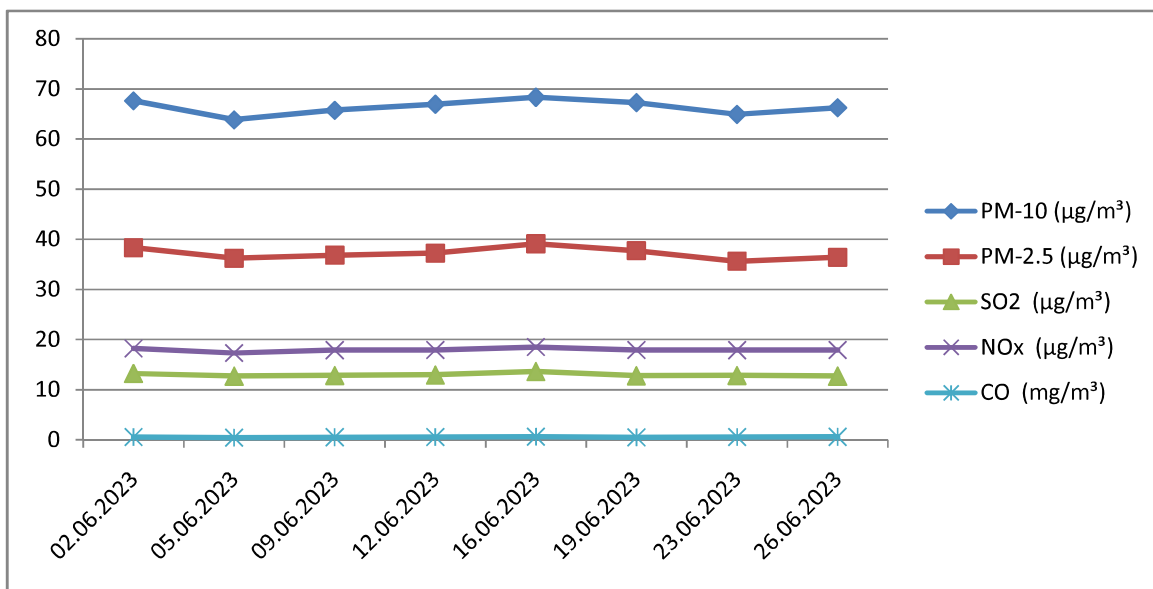
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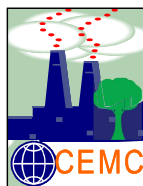
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Report no.-CEMC/TSSEZL/030723/A3

Issued Date-03.07.2023

SPECIAL AIR QUALITY MONITORING TEST REPORT

Issued to	M/s. Tata Steel Special Economic Zone Ltd, Gopalpur.
Sample Description	Ambient Air Quality
Sample Drawn Period/ Time	Monthly
Sample Drawn by	Mr. R.N Das
Weather Conditions	Clear
Reference No.	CEMC-03072023A3
Instrument Used	Respirable Dust Sampler,

ANALYSIS RESULT

Locations	Date	NH ₃ (µg/m ³)	O ₃ (µg/m ³)	Pb (µg/m ³)	Ni (ng/m ³)	As (ng/m ³)	Benzene (µg/m ³)	BaP (ng/m ³)
Near TSSEZL Project Office	16.06.2023	<20	<10	<0.1	<0.6	<0.44	<5	<1
Near Anadron Office	16.06.2023	<20	<10	<0.1	<0.6	<0.44	<5	<1
Near Main Gate(Chamakhandi)	16.06.2023	<20	<10	<0.1	<0.6	<0.44	<5	<1
NAAQ* Standard		400	100	1.0	20	6	5	1
Methods of Analysis		IS: 5182 (Part-25)	IS: 5182 (Part-9)	IS: 5182 (Part-22)	IS: 5182 (Part-26)	As per CPCB method followed by AAS	IS: 5182 (Part-11)	IS: 5182 (Part-12)

N.B- *NAAQ- National Ambient Air Quality Standard as per 18th Nov, 2009 Gatt. Notification.

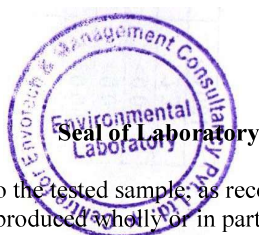
END OF REPORT

Signature

Authorized Signatory

Notes:

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Seal of Laboratory

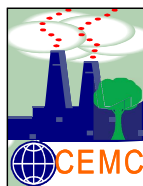
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Report no.-CEMC/TSSEZL/030723/W1

Issued Date-03.07.2023

SURFACE WATER QUALITY TEST REPORT

Name & Address of the Client : M/s. Tata Steel Special Economic Zone Ltd, Gopalpur.
Date of Sampling : 17.06.2023
Sampling by : Mr. R.N Das
Date of Sample Received : 17.06.2023
Date of Analysis : 17.06.2023 to 24.06.2023
Sample Location : Khari Nalla, Up stream(SW1)
Reference No. : CEMC-03072023W1

ANALYSIS RESULT

Sl. No.	Test Parameters	Unit	Max. Tolerance Limit as per IS 2296 : Class C	SW2
1	Colour, Max.	Hazen	300	65
2	pH Value @ 25°C	--	6.5 to 8.5	7.48
3	Iron as Fe, Max.	mg/l	50	0.18
4	Chloride as Cl, Max.	mg/l	600	34.0
5	Dissolved Solids, Max.	mg/l	1500	276.0
6	Dissolved Oxygen, Min.	mg/l	4	6.9
7	BOD for 3 days @ 27°C, Max.	mg/l	3	<2.0
8	Oil & Grease, Max.	mg/l	0.1	ND
9	Copper as Cu, Max.	mg/l	1.5	<0.03
10	Sulphate as SO ₄ , Max.	mg/l	400	5.9
11	Nitrate as NO ₃ , Max.	mg/l	50	1.8
12	Fluoride as F, Max.	mg/l	1.5	0.06
13	Anionic detergent	mg/l	1	ND
14	Cadmium as Cd, Max.	mg/l	0.01	<0.003
15	Selenium as Se, Max.	mg/l	0.05	<0.001
16	Arsenic as As, Max.	mg/l	0.2	<0.001
17	Cyanide as CN, Max.	mg/l	0.05	ND
18	Phenolic compound as C ₆ H ₅ OH, Max.	mg/l	0.005	ND
19	Lead as Pb, Max.	mg/l	0.1	<0.01
20	Zinc as Zn, Max.	mg/l	15	<0.05
21	Hexavalent Chromium as Cr ⁺⁶ , Max.	mg/l	0.05	<0.05
22	Total Coliform, Max.	MPN/100ml	5000	470
23	Faecal Coliform	MPN/100ml	--	20

, MPN-Most Probable Number

END OF REPORT

M. Raut

Authorized Signatory

Notes:

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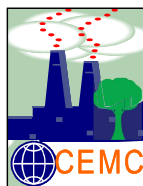
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Report no.-CEMC/TSSEZL/030723/W2

Issued Date-03.07.2023

SURFACE WATER QUALITY TEST REPORT

Name & Address of the Client : M/s. Tata Steel Special Economic Zone Ltd, Gopalpur.
Date of Sampling : 17.06.2023
Sampling by : Mr. R.N Das
Date of Sample Received : 17.06.2023
Date of Analysis : 17.06.2023 to 24.06.2023
Sample Description : Surface Water
Sample Location : Khari Nalla, Down Stream(SW2)
Reference No. : CEMC-03072023W2

ANALYSIS RESULT

Sl. No.	Test Parameters	Unit	Max. Tolerance Limit as per IS 2296 : Class C	SW3
1	Colour, Max.	Hazen	300	70
2	pH Value @ 25°C	--	6.5 to 8.5	7.78
3	Iron as Fe, Max.	mg/l	50	0.21
4	Chloride as Cl, Max.	mg/l	600	30.0
5	Dissolved Solids, Max.	mg/l	1500	440.0
6	Dissolved Oxygen, Min.	mg/l	4	6.7
7	BOD for 3 days @ 27°C, Max.	mg/l	3	<2.0
8	Oil & Grease, Max.	mg/l	0.1	ND
9	Copper as Cu, Max.	mg/l	1.5	<0.03
10	Sulphate as SO ₄ , Max.	mg/l	400	17.4
11	Nitrate as NO ₃ , Max.	mg/l	50	2.9
12	Fluoride as F, Max.	mg/l	1.5	0.09
13	Anionic detergent	mg/l	1	ND
14	Cadmium as Cd, Max.	mg/l	0.01	<0.003
15	Selenium as Se, Max.	mg/l	0.05	<0.001
16	Arsenic as As, Max.	mg/l	0.2	<0.001
17	Cyanide as CN, Max.	mg/l	0.05	ND
18	Phenolic compound as C ₆ H ₅ OH, Max.	mg/l	0.005	ND
19	Lead as Pb, Max.	mg/l	0.1	<0.01
20	Zinc as Zn, Max.	mg/l	15	<0.05
21	Hexavalent Chromium as Cr ⁺⁶ , Max.	mg/l	0.05	<0.05
22	Total Coliform, Max.	MPN/100ml	5000	470
23	Faecal Coliform	MPN/100ml	--	34

NB: ND- Not Detectable, MPN-Most Probable Number

END OF REPORT

Authorized Signatory

Seal of Laboratory

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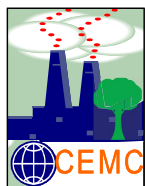
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Report No. - CEMC/ TSSEZL /030723/N

Issued Date-03.07.2023

Name & Address of the Client	M/s. Tata Steel Special Economic Zone Ltd, Gopalpur
Reference No.	CEMC-03072023N
Nature of Sampling	Noise Monitoring
Sampling By	Mr. R.N Das
Instrument Used	Noise Level Meter
Sampling Period	24 Hours

NOISE MONITORING REPORT

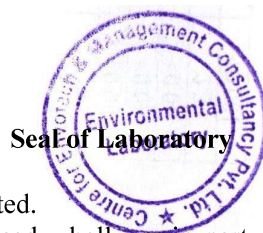
Date of Sampling	Locations	NL Day Time dB (A)			NL Night Time dB (A)		
		Max	Min.	Avg.	Max.	Min.	Avg.
16.06.2023	Near Anadron Office	62.1	58.9	60.5	58.2	54.4	56.3
16.06.2023	Near main gate(Chamakhandi)	69.8	63.4	66.6	59.6	55.2	57.4

End of Report

NATIONAL STANDARD NOISE LEVEL

Area Code	Category of Area/Zone	Permissible Limit in dB (A)	
		Day Time	Night Time
A	Industrial Area*	75	70
B	Commercial Area	65	55
C	Residential Area	55	45
D	Silence Zone	50	40


Authorized Signatory



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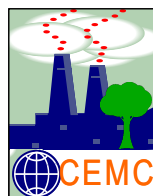
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Report no.-CEMC/TSSEZL/030823/A1

Issued Date-03.08.2023

AMBIENT AIR QUALITY MONITORING TEST REPORT

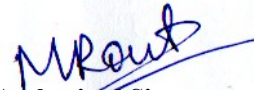
Issued to	M/s. Tata Steel Special Economic Zone Ltd, Gopalpur.
Sample Description	Ambient Air Quality
Sample Drawn Period/ Time	Monthly
Sample Drawn by	Mr. R.N Das
Sampling Location	Near TSSEZL Project Office
Weather Conditions	Clear
Reference No.	CEMC-03082023A1
Instrument Used	Respirable Dust Sampler, Fine Dust Sampler, Gaseous Attachment

ANALYSIS RESULT

Date	PM ₁₀ ($\mu\text{g}/\text{m}^3$)	PM _{2.5} ($\mu\text{g}/\text{m}^3$)	SO ₂ ($\mu\text{g}/\text{m}^3$)	NO _x ($\mu\text{g}/\text{m}^3$)	CO (mg/m^3)
11.07.2023	62.9	35.7	11.38	14.56	0.49
14.07.2023	55.9	32.8	10.65	13.92	0.34
17.07.2023	61.4	31.9	10.73	14.65	0.45
20.07.2023	62.6	33.7	10.49	15.34	0.51
24.07.2023	64.5	33.4	11.25	14.32	0.47
27.07.2023	63.8	33.2	10.24	13.36	0.36
29.07.2023	61.8	31.3	11.25	14.34	0.49
Avg	61.84	33.14	10.86	14.36	0.44
NAAQ* Standard	100	60	80	80	4
Methods of Analysis	IS: 5182 (Part-23)	Gravimetric Method as per CPCB method	IS: 5182 (Part-2)	IS: 5182 (Part-6)	IS: 5182 (Part-10)

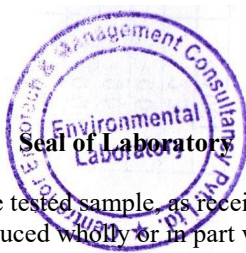
N.B- *NAAQ- National Ambient Air Quality Standard as per 18th Nov, 2009 Gatt. Notification.

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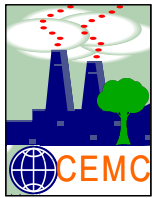


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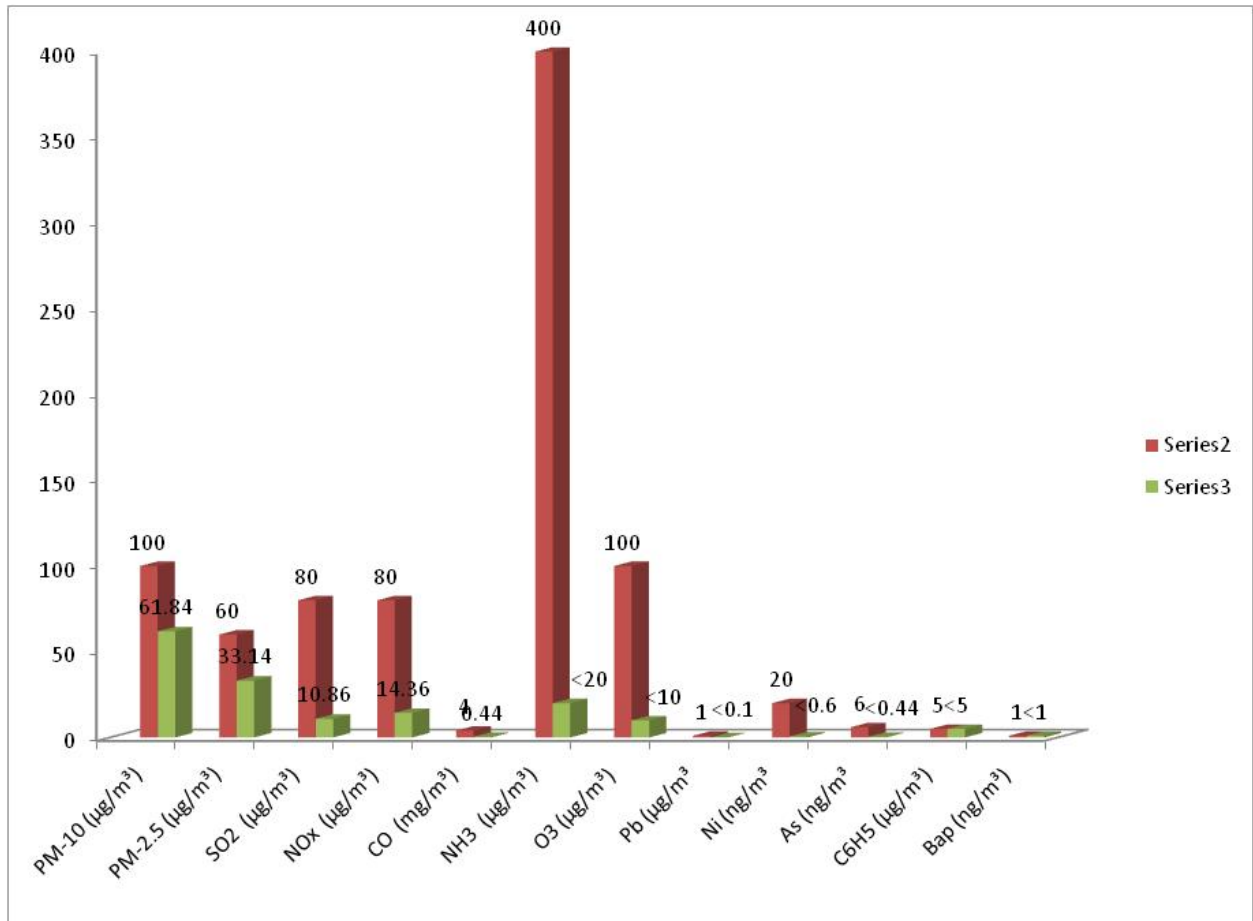
E-mail- ccmc_consultancy@yahoo.co.in, ccmc122@gmail.com, website: www.ccmc.in.

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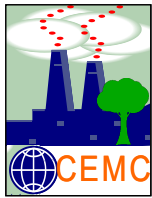
NB-Series2 –Stands for Standard, Series3 –Stands for Result

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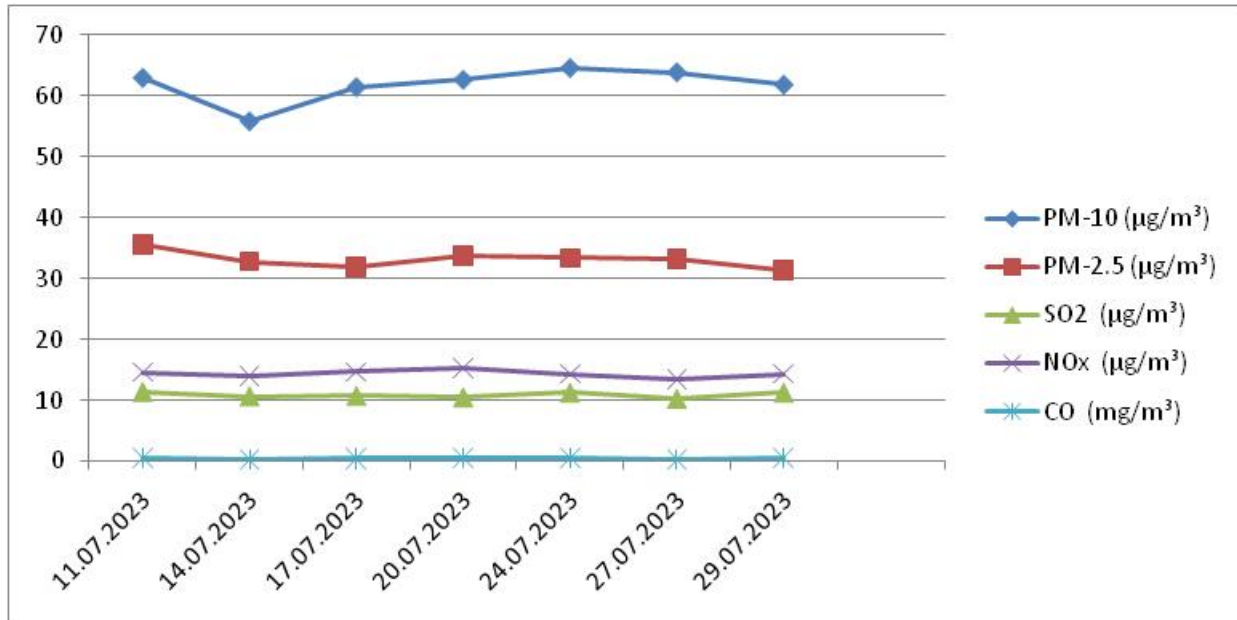
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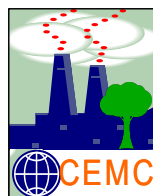
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Report no.-CEMC/TSSEZL/030823/A2

Issued Date-03.08.2023

AMBIENT AIR QUALITY MONITORING TEST REPORT

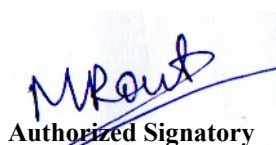
Issued to	M/s. Tata Steel Special Economic Zone Ltd, Gopalpur.
Sample Description	Ambient Air Quality
Sample Drawn Period/ Time	Monthly
Sample Drawn by	Mr. R.N Das
Sampling Location	Near Anadrone Office
Weather Conditions	Clear
Reference No.	CEMC-03082023A2
Instrument Used	Respirable Dust Sampler, Fine Dust Sampler, Gaseous Attachment

ANALYSIS RESULT

Date	PM ₁₀ ($\mu\text{g}/\text{m}^3$)	PM _{2.5} ($\mu\text{g}/\text{m}^3$)	SO ₂ ($\mu\text{g}/\text{m}^3$)	NO _x ($\mu\text{g}/\text{m}^3$)	CO (mg/m^3)
11.07.2023	61.3	32.0	10.23	14.32	0.49
14.07.2023	61.8	33.2	10.19	14.43	0.43
17.07.2023	62.1	33.4	10.21	13.92	0.51
20.07.2023	61.4	32.9	11.23	13.73	0.49
24.07.2023	63.1	33.9	10.92	15.62	0.51
27.07.2023	64.1	34.3	11.12	15.34	0.61
29.07.2023	60.9	33.3	12.11	15.32	0.46
Average	62.10	33.29	10.86	14.67	0.50
NAAQ* Standard	100	60	80	80	4
Methods of Analysis	IS: 5182 (Part-23)	Gravimetric Method as per CPCB method	IS: 5182 (Part-2)	IS: 5182 (Part-6)	IS: 5182 (Part-10)

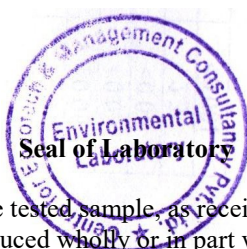
N.B- *NAAQ- National Ambient Air Quality Standard as per 18th Nov, 2009 Gatt. Notification.

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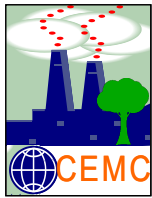


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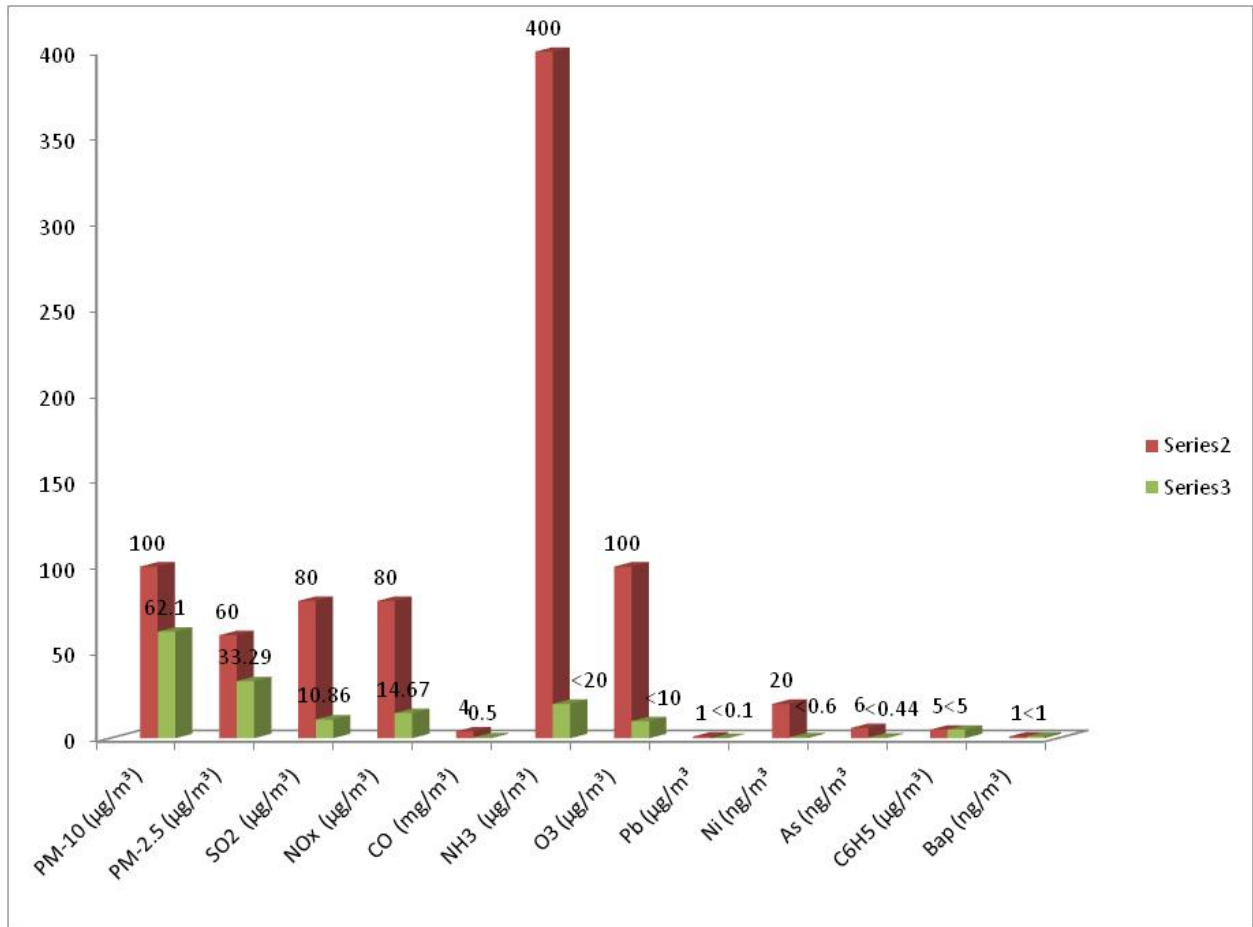
E-mail- ccmc_consultancy@yahoo.co.in, ccmc122@gmail.com, website: www.ccmc.in.

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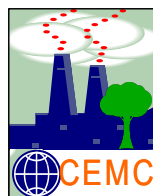
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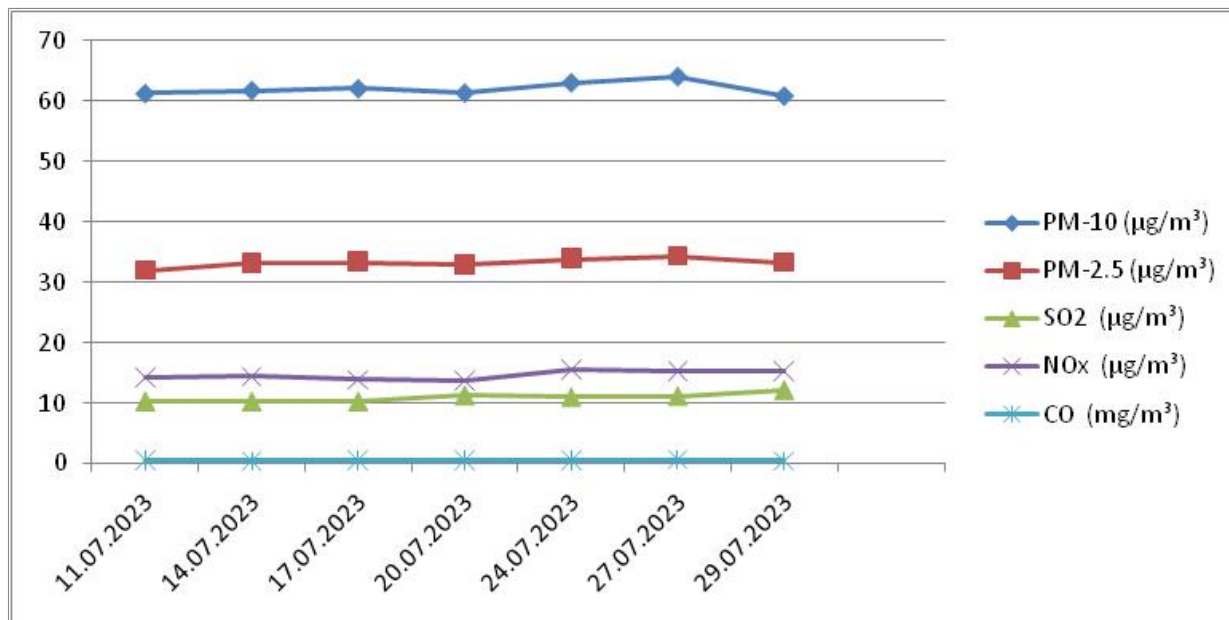
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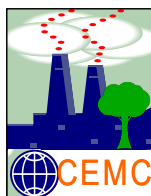
This Graph is belongs to Station-02(Near Anadrone Office) For the Month of July-23

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Report no.-CEMC/TSSEZL/031020/A3

Issued Date-03.10.2020

AMBIENT AIR QUALITY MONITORING TEST REPORT

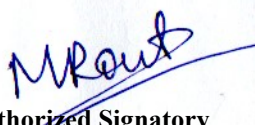
Issued to	M/s. Tata Steel Special Economic Zone Ltd, Gopalpur.
Sample Description	Ambient Air Quality
Sample Drawn Period/ Time	Monthly
Sample Drawn by	Mr. R.N Das
Sampling Location	Near Main Gate (Chamakhandi)
Weather Conditions	Clear
Reference No.	CEMC-03102020A3
Instrument Used	Respirable Dust Sampler, Fine Dust Sampler, Gaseous Attachment

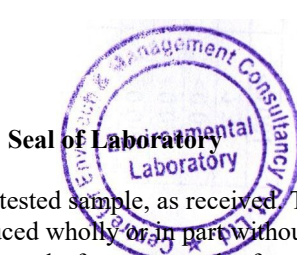
ANALYSIS RESULT

Date	PM ₁₀ ($\mu\text{g}/\text{m}^3$)	PM _{2.5} ($\mu\text{g}/\text{m}^3$)	SO ₂ ($\mu\text{g}/\text{m}^3$)	NO _x ($\mu\text{g}/\text{m}^3$)	CO (mg/m^3)
11.07.2023	59.5	31.6	8.32	11.39	0.39
14.07.2023	57.7	29.4	8.66	11.42	0.39
17.07.2023	59.1	29.0	8.58	12.45	0.41
20.07.2023	58.0	28.2	7.94	12.34	0.36
24.07.2023	56.6	28.5	7.72	11.38	0.38
27.07.2023	56.4	27.2	7.42	11.96	0.2
29.07.2023	58.1	27.3	8.38	13.24	0.3
Avg	57.91	28.74	8.15	12.03	0.35
NAAQ* Standard	100	60	80	80	4
Methods of Analysis	IS: 5182 (Part-23)	Gravimetric Method as per CPCB method	IS: 5182 (Part-2)	IS: 5182 (Part-6)	IS: 5182 (Part-10)

N.B- *NAAQ- National Ambient Air Quality Standard as per 18th Nov, 2009 Gatt. Notification.

END OF REPORT


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Notes:

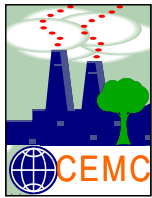
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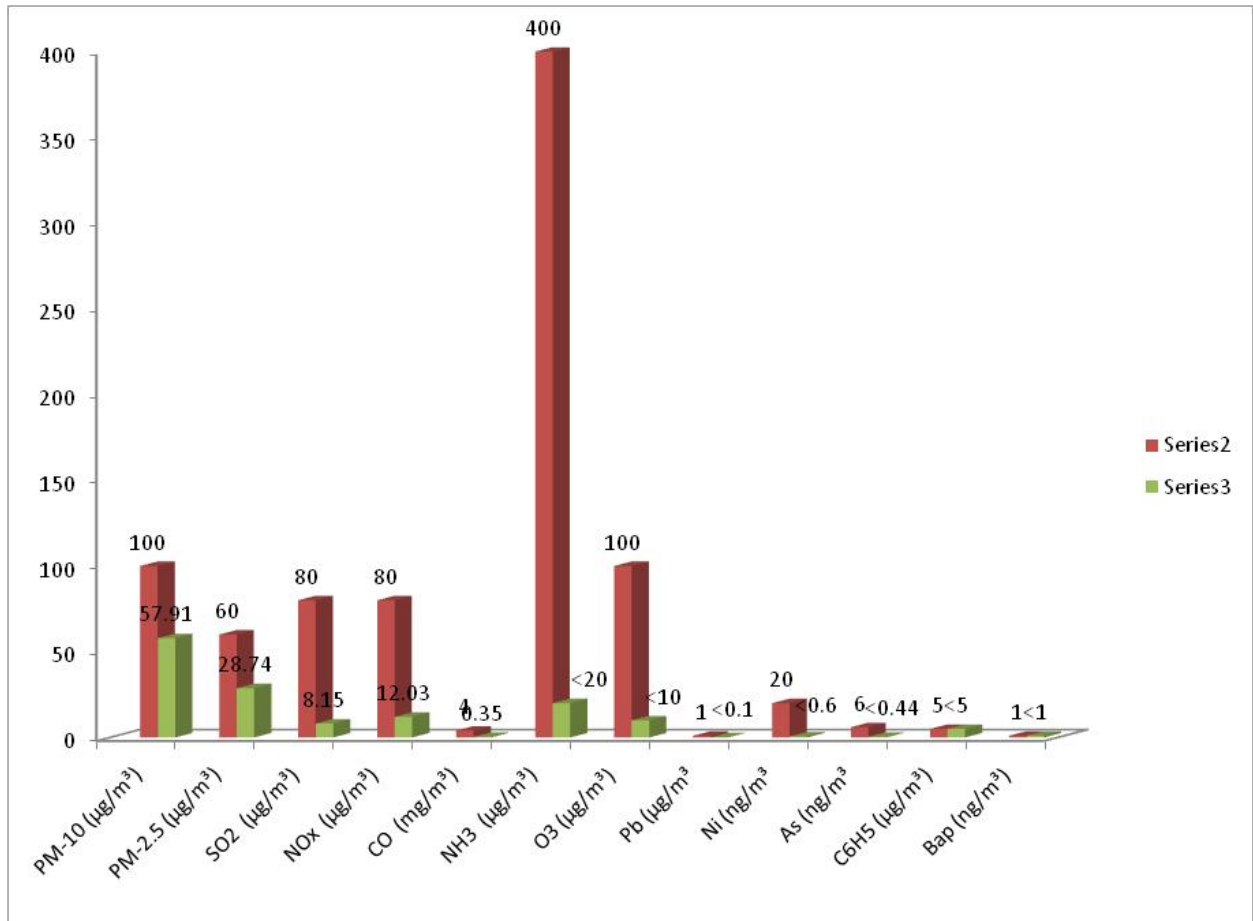
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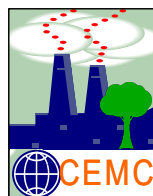
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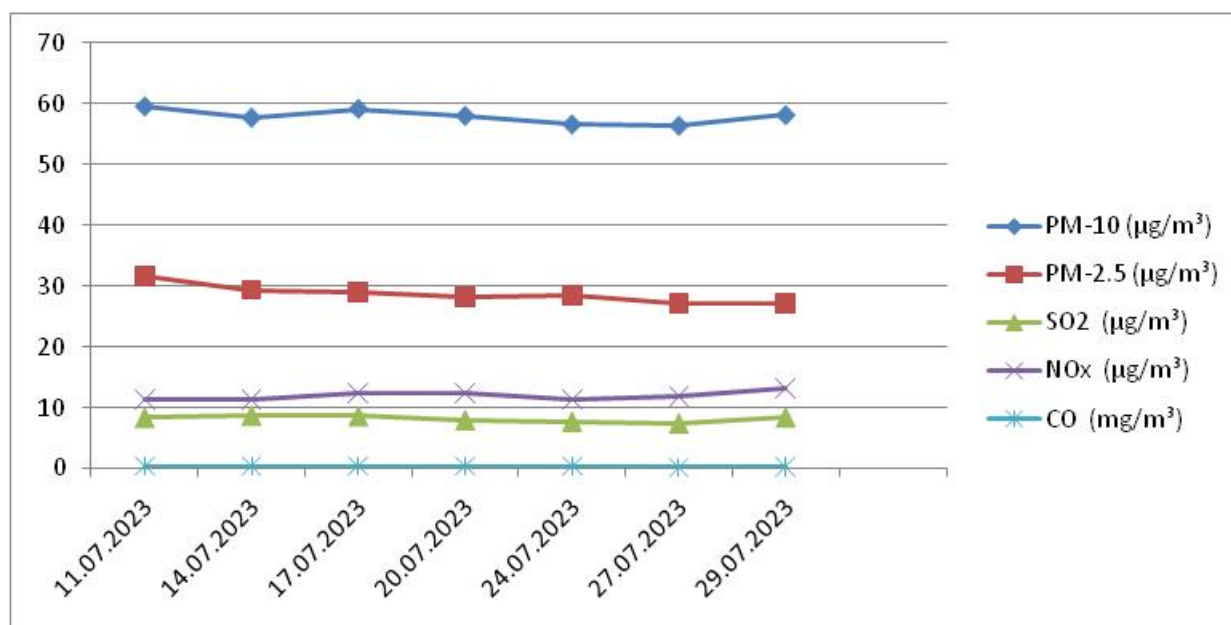
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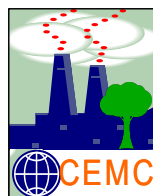
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Report no.-CEMC/TSSEZL/030823/A3

Issued Date-03.08.2023

SPECIAL AIR QUALITY MONITORING TEST REPORT

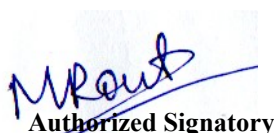
Issued to	M/s. Tata Steel Special Economic Zone Ltd, Gopalpur.
Sample Description	Ambient Air Quality
Sample Drawn Period/ Time	Monthly
Sample Drawn by	Mr. R.N Das
Weather Conditions	Clear
Reference No.	CEMC-03082023A3
Instrument Used	Respirable Dust Sampler,

ANALYSIS RESULT

Locations	Date	NH ₃ (µg/m ³)	O ₃ (µg/m ³)	Pb (µg/m ³)	Ni (ng/m ³)	As (ng/m ³)	Benzene (µg/m ³)	BaP (ng/m ³)
Near TSSEZL Project Office	27.07.2023	<20	<10	<0.1	<0.6	<0.44	<5	<1
Near Anadrone Office	27.07.2023	<20	<10	<0.1	<0.6	<0.44	<5	<1
Near Main Gate(Chamakhandi)	27.07.2023	<20	<10	<0.1	<0.6	<0.44	<5	<1
NAAQ* Standard		400	100	1.0	20	6	5	1
Methods of Analysis		IS: 5182 (Part-25)	IS: 5182 (Part-9)	IS: 5182 (Part-22)	IS: 5182 (Part-26)	As per CPCB method followed by AAS	IS: 5182 (Part-11)	IS: 5182 (Part-12)

N.B- *NAAQ- National Ambient Air Quality Standard as per 18th Nov, 2009 Gatt. Notification.

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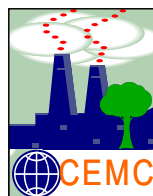
Seal of Laboratory

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Report no.-CEMC/TSSEZL/030823/W1

Issued Date-03.08.2023

SURFACE WATER QUALITY TEST REPORT

Name & Address of the Client : M/s. Tata Steel Special Economic Zone Ltd, Gopalpur.
Date of Sampling : 27.07.2023
Sampling by : Mr. R.N Das
Date of Sample Received : 27.07.2023
Date of Analysis : 27.07.2023 to 02.08.2023
Sample Location : Khari Nalla, Up stream(SW1)
Reference No. : CEMC-03082023W1

ANALYSIS RESULT

Sl. No.	Test Parameters	Unit	Max. Tolerance Limit as per IS 2296 : Class C	SW1
1	Colour, Max.	Hazen	300	70
2	pH Value @ 25°C	--	6.5 to 8.5	7.32
3	Iron as Fe, Max.	mg/l	50	0.22
4	Chloride as Cl, Max.	mg/l	600	36.9
5	Dissolved Solids, Max.	mg/l	1500	284
6	Dissolved Oxygen, Min.	mg/l	4	6.5
7	BOD for 3 days@ 27°C, Max.	mg/l	3	<2.0
8	Oil & Grease, Max.	mg/l	0.1	ND
9	Copper as Cu, Max.	mg/l	1.5	<0.03
10	Sulphate as SO ₄ , Max.	mg/l	400	22.8
11	Nitrate as NO ₃ , Max.	mg/l	50	2.8
12	Fluoride as F, Max.	mg/l	1.5	0.1
13	Anionic detergent	mg/l	1	ND
14	Cadmium as Cd, Max.	mg/l	0.01	<0.003
15	Selenium as Se, Max.	mg/l	0.05	<0.001
16	Arsenic as As, Max.	mg/l	0.2	<0.001
17	Cyanide as CN, Max.	mg/l	0.05	ND
18	Phenolic compound as C ₆ H ₅ OH, Max.	mg/l	0.005	ND
19	Lead as Pb, Max.	mg/l	0.1	<0.01
20	Zinc as Zn, Max.	mg/l	15	<0.05
21	Hexavalent Chromium as Cr ⁺⁶ , Max.	mg/l	0.05	<0.05
22	Total Coliform, Max.	MPN/100ml	5000	342
23	Faecal Coliform	MPN/100ml	--	14

, MPN-Most Probable Number

END OF REPORT

MPRout

Authorized Signatory

Notes:

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Seal of Laboratory

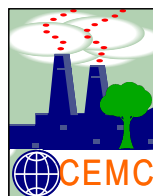
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Report no.-CEMC/TSSEZL/030823/W2

Issued Date-03.08.2023

SURFACE WATER QUALITY TEST REPORT

Name & Address of the Client : M/s. Tata Steel Special Economic Zone Ltd, Gopalpur.
Date of Sampling : 27.07.2023
Sampling by : Mr. R.N Das
Date of Sample Received : 27.07.2023
Date of Analysis : 27.07.2023 to 02.08.2023
Sample Description : Surface Water
Sample Location : Khari Nalla, Down Stream(SW2)
Reference No. : CEMC-03082023W2

ANALYSIS RESULT

Sl. No.	Test Parameters	Unit	Max. Tolerance Limit as per IS 2296 : Class C	SW2
1	Colour, Max.	Hazen	300	80
2	pH Value @ 25°C	--	6.5 to 8.5	7.44
3	Iron as Fe, Max.	mg/l	50	0.32
4	Chloride as Cl, Max.	mg/l	600	41.9
5	Dissolved Solids, Max.	mg/l	1500	510
6	Dissolved Oxygen, Min.	mg/l	4	6.1
7	BOD for 3 days@ 27°C, Max.	mg/l	3	<2.0
8	Oil & Grease, Max.	mg/l	0.1	ND
9	Copper as Cu, Max.	mg/l	1.5	<0.03
10	Sulphate as SO ₄ , Max.	mg/l	400	26.6
11	Nitrate as NO ₃ , Max.	mg/l	50	2.9
12	Fluoride as F, Max.	mg/l	1.5	0.12
13	Anionic detergent	mg/l	1	ND
14	Cadmium as Cd, Max.	mg/l	0.01	<0.003
15	Selenium as Se, Max.	mg/l	0.05	<0.001
16	Arsenic as As, Max.	mg/l	0.2	<0.001
17	Cyanide as CN, Max.	mg/l	0.05	ND
18	Phenolic compound as C ₆ H ₅ OH, Max.	mg/l	0.005	ND
19	Lead as Pb, Max.	mg/l	0.1	<0.01
20	Zinc as Zn, Max.	mg/l	15	<0.05
21	Hexavalent Chromium as Cr ⁺⁶ , Max.	mg/l	0.05	<0.05
22	Total Coliform, Max.	MPN/100ml	5000	442
23	Faecal Coliform	MPN/100ml	--	41

NB: ND- Not Detectable, MPN-Most Probable Number

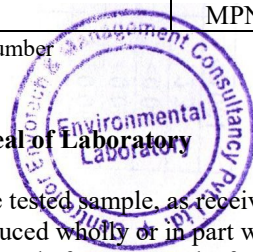
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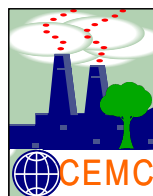
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Report No. - CEMC/ TSSEZL /030823/N

Issued Date-03.08.2023

Name & Address of the Client	M/s. Tata Steel Special Economic Zone Ltd, Gopalpur
Reference No.	CEMC-03082023N
Nature of Sampling	Noise Monitoring
Sampling By	Mr. R.N Das
Instrument Used	Noise Level Meter
Sampling Period	24 Hours

NOISE MONITORING REPORT

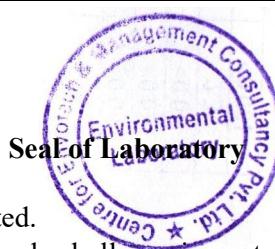
Date of Sampling	Locations	NL Day Time dB (A)			NL Night Time dB (A)		
		Max	Min.	Avg.	Max.	Min.	Avg.
26.07.2023	Near Anadrone Office	63.2	59.0	61.1	57.6	53.8	55.7
27.07.2023	Near main gate(Chamakhandi)	68.8	64.2	66.5	60.2	56.4	58.3

End of Report

NATIONAL STANDARD NOISE LEVEL

Area Code	Category of Area/Zone	Permissible Limit in dB (A)	
		Day Time	Night Time
A	Industrial Area*	75	70
B	Commercial Area	65	55
C	Residential Area	55	45
D	Silence Zone	50	40


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Notes:

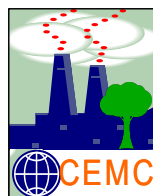
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Report no.-CEMC/TSSEZL/010923/A1

Issued Date-01.09.2023

AMBIENT AIR QUALITY MONITORING TEST REPORT

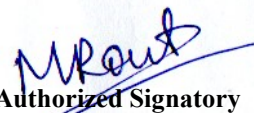
Issued to	M/s. Tata Steel Special Economic Zone Ltd, Gopalpur.
Sample Description	Ambient Air Quality
Sample Drawn Period/ Time	Monthly
Sample Drawn by	Mr. R.N Das
Sampling Location	Near TSSEZL Project Office
Weather Conditions	Clear
Reference No.	CEMC-01092023A1
Instrument Used	Respirable Dust Sampler, Fine Dust Sampler, Gaseous Attachment

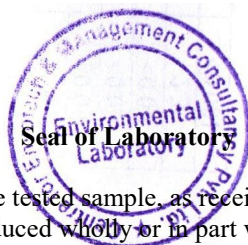
ANALYSIS RESULT

Date	PM ₁₀ ($\mu\text{g}/\text{m}^3$)	PM _{2.5} ($\mu\text{g}/\text{m}^3$)	SO ₂ ($\mu\text{g}/\text{m}^3$)	NOx ($\mu\text{g}/\text{m}^3$)	CO (mg/m^3)
03.08.2023	66.4	34.6	11.25	15.34	0.49
07.08.2023	61.6	32.4	10.82	14.34	0.46
10.08.2023	63.2	33.2	11.62	16.22	0.4
14.08.2023	60.2	31.8	11.38	15.62	0.51
17.08.2023	64.8	33.6	10.65	14.56	0.49
21.08.2023	65.4	34.0	10.73	13.86	0.34
24.08.2023	62.6	31.8	10.49	14.65	0.45
28.08.2023	63.8	32.4	11.25	14.32	0.47
31.08.2023	65.8	33.8	10.24	13.36	0.36
Avg	63.76	33.07	10.94	14.70	0.44
NAAQ* Standard	100	60	80	80	4
Methods of Analysis	IS: 5182 (Part-23)	Gravimetric Method as per CPCB method	IS: 5182 (Part-2)	IS: 5182 (Part-6)	IS: 5182 (Part-10)

N.B- *NAAQ- National Ambient Air Quality Standard as per 18th Nov, 2009 Gatt. Notification.

END OF REPORT


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Notes:



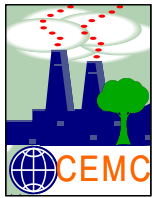
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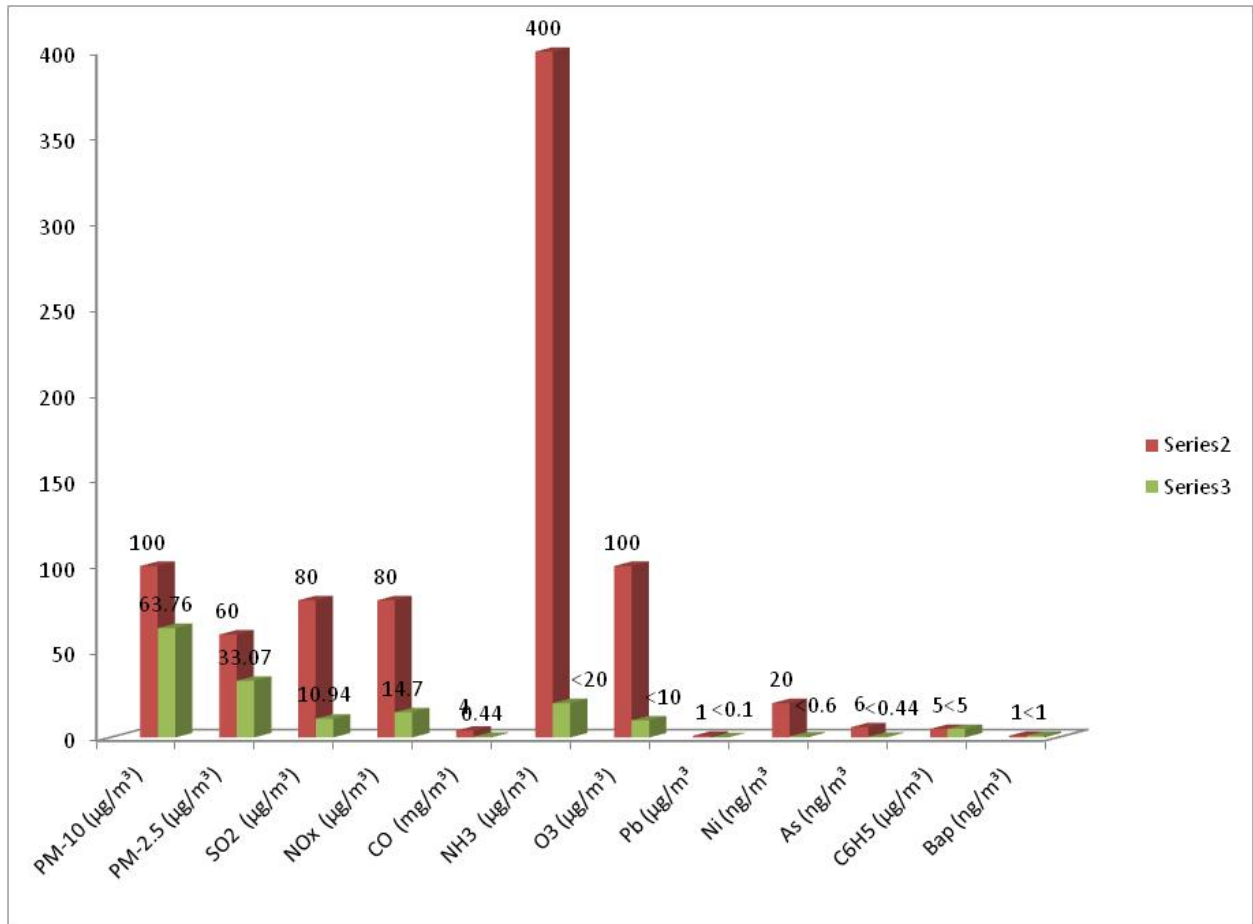
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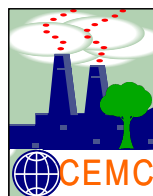
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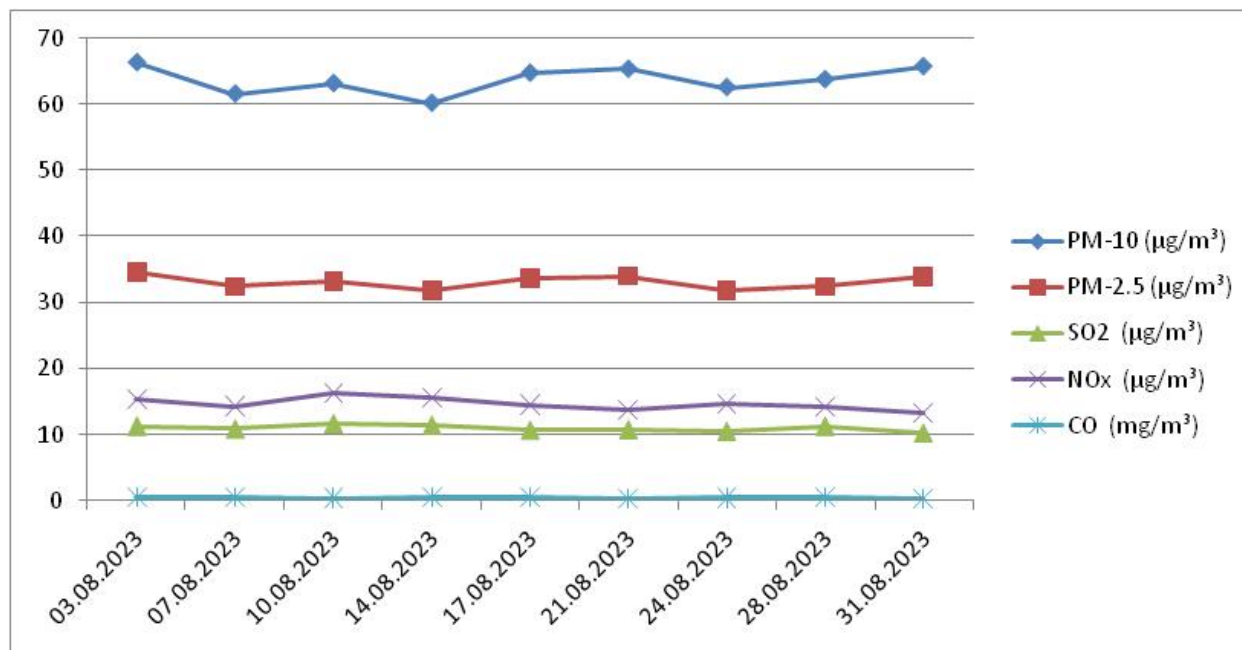
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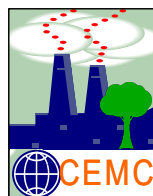
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Report no.-CEMC/TSSEZL/010923/A2

Issued Date-01.09.2023

AMBIENT AIR QUALITY MONITORING TEST REPORT

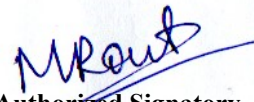
Issued to	M/s. Tata Steel Special Economic Zone Ltd, Gopalpur.
Sample Description	Ambient Air Quality
Sample Drawn Period/ Time	Monthly
Sample Drawn by	Mr. R.N Das
Sampling Location	Near Anadrone Office
Weather Conditions	Clear
Reference No.	CEMC-01092023A2
Instrument Used	Respirable Dust Sampler, Fine Dust Sampler, Gaseous Attachment

ANALYSIS RESULT

Date	PM ₁₀ ($\mu\text{g}/\text{m}^3$)	PM _{2.5} ($\mu\text{g}/\text{m}^3$)	SO ₂ ($\mu\text{g}/\text{m}^3$)	NO _x ($\mu\text{g}/\text{m}^3$)	CO (mg/m^3)
03.08.2023	64.6	33.4	10.41	14.32	0.51
07.08.2023	68.4	35.8	12.88	16.12	0.47
10.08.2023	63.2	32.2	10.14	14.32	0.51
14.08.2023	64.4	33.8	11.34	14.43	0.44
17.08.2023	65.6	34.6	11.62	13.92	0.52
21.08.2023	66.2	35.4	11.12	13.73	0.49
24.08.2023	63.6	32.0	10.76	15.62	0.51
28.08.2023	64.2	34.2	13.82	15.34	0.61
31.08.2023	62.8	32.4	11.92	15.32	0.46
Average	64.78	33.76	11.56	14.79	0.50
NAAQ* Standard	100	60	80	80	4
Methods of Analysis	IS: 5182 (Part-23)	Gravimetric Method as per CPCB method	IS: 5182 (Part-2)	IS: 5182 (Part-6)	IS: 5182 (Part-10)

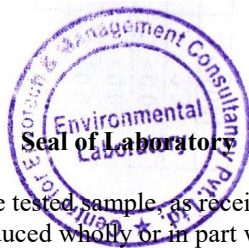
N.B- *NAAQ- National Ambient Air Quality Standard as per 18th Nov, 2009 Gatt. Notification.

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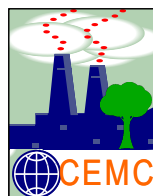
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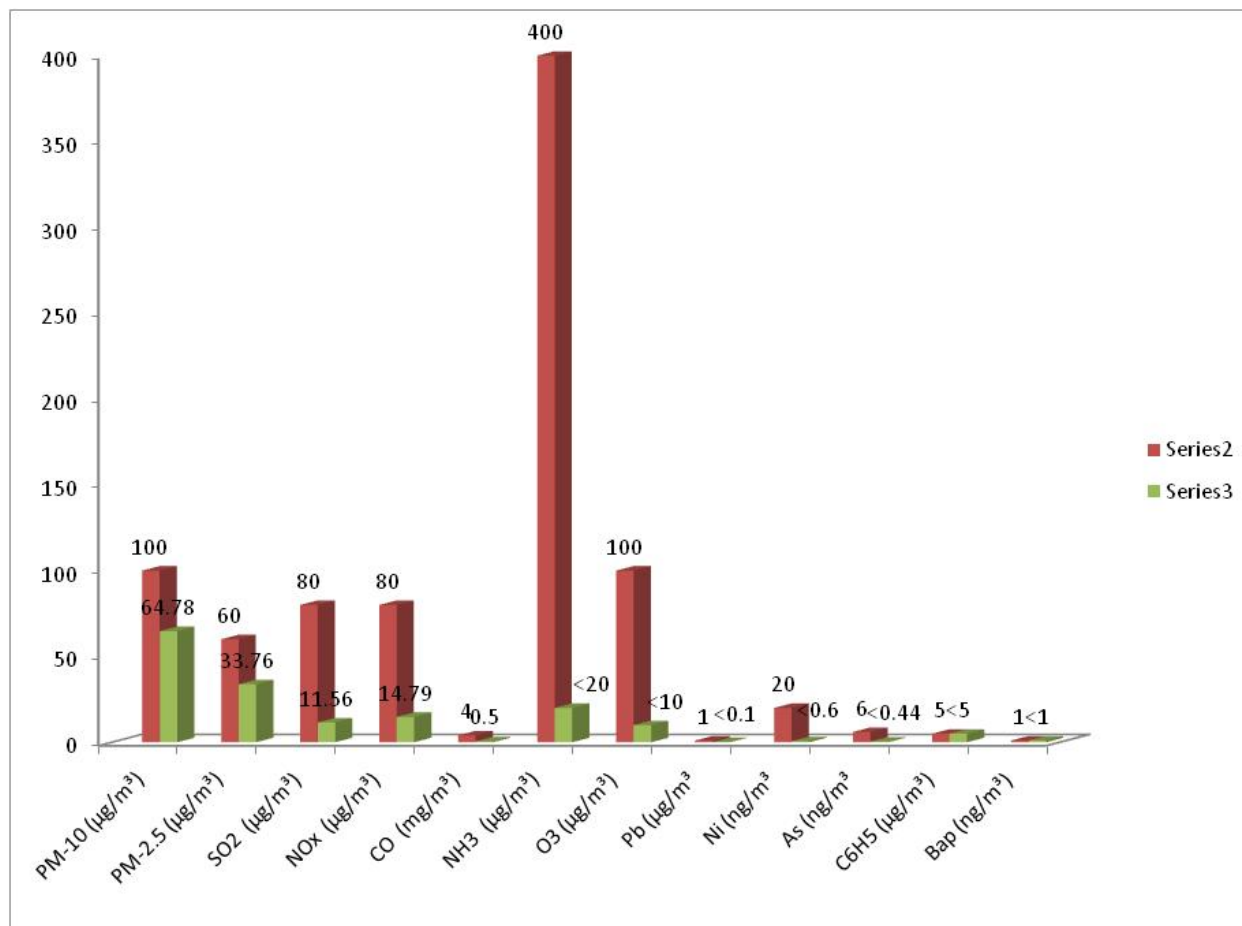
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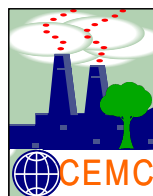
NB-Series2 –Stands for Standard, Series3 –Stands for Result

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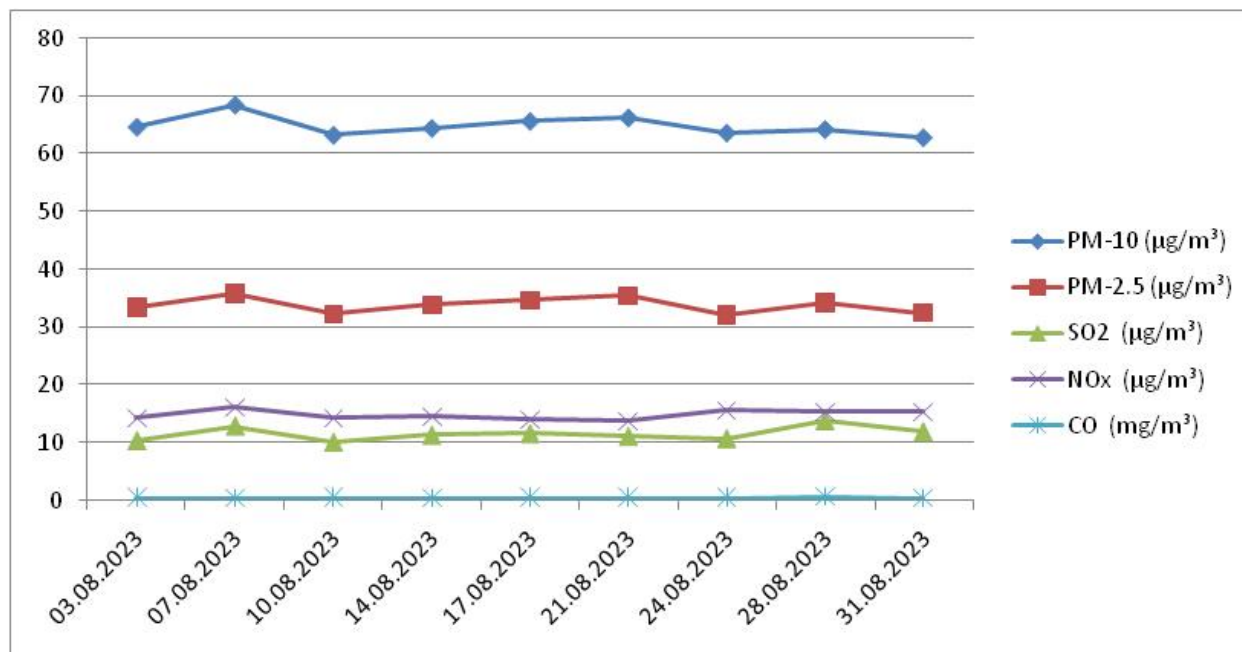
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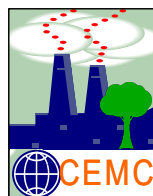
This Graph is belongs to Station-02(Near Anadrone Office) For the Month of August-23

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Report no.-CEMC/TSSEZL/010923/A3

Issued Date-01.09.2023

AMBIENT AIR QUALITY MONITORING TEST REPORT

Issued to	M/s. Tata Steel Special Economic Zone Ltd, Gopalpur.
Sample Description	Ambient Air Quality
Sample Drawn Period/ Time	Monthly
Sample Drawn by	Mr. R.N Das
Sampling Location	Near Main Gate (Chamakhandi)
Weather Conditions	Clear
Reference No.	CEMC-01092023A3
Instrument Used	Respirable Dust Sampler, Fine Dust Sampler, Gaseous Attachment

ANALYSIS RESULT

Date	PM ₁₀ ($\mu\text{g}/\text{m}^3$)	PM _{2.5} ($\mu\text{g}/\text{m}^3$)	SO ₂ ($\mu\text{g}/\text{m}^3$)	NO _x ($\mu\text{g}/\text{m}^3$)	CO (mg/m^3)
03.08.2023	62.6	32.2	9.42	13.34	0.41
07.08.2023	60.8	31.6	9.86	14.12	0.38
10.08.2023	61.4	32.6	8.58	12.45	0.36
14.08.2023	60.2	30.4	7.94	12.34	0.4
17.08.2023	63.8	33.6	7.72	11.38	0.38
21.08.2023	62.4	32.4	7.42	11.96	0.3
24.08.2023	60.8	31.4	8.38	13.24	0.35
28.08.2023	59.8	30.2	8.32	12.34	0.41
31.08.2023	63.2	32.2	8.66	12.92	0.36
Avg	61.67	31.84	8.48	12.68	0.37
NAAQ* Standard	100	60	80	80	4
Methods of Analysis	IS: 5182 (Part-23)	Gravimetric Method as per CPCB method	IS: 5182 (Part-2)	IS: 5182 (Part-6)	IS: 5182 (Part-10)

N.B- *NAAQ- National Ambient Air Quality Standard as per 18th Nov, 2009 Gatt. Notification.

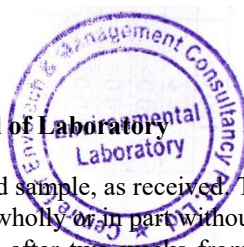
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Notes:

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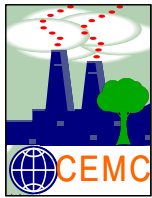
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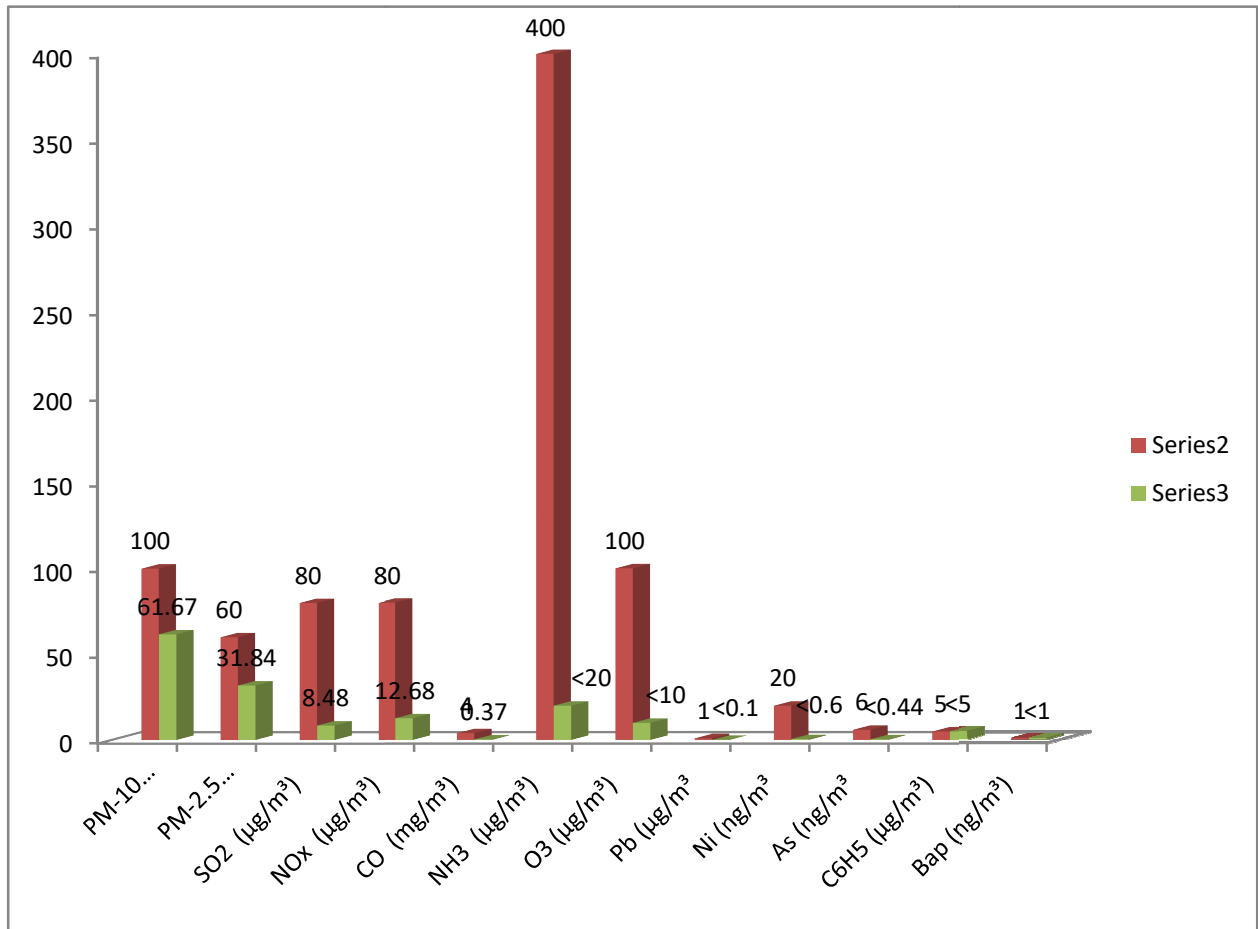
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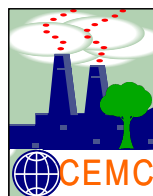
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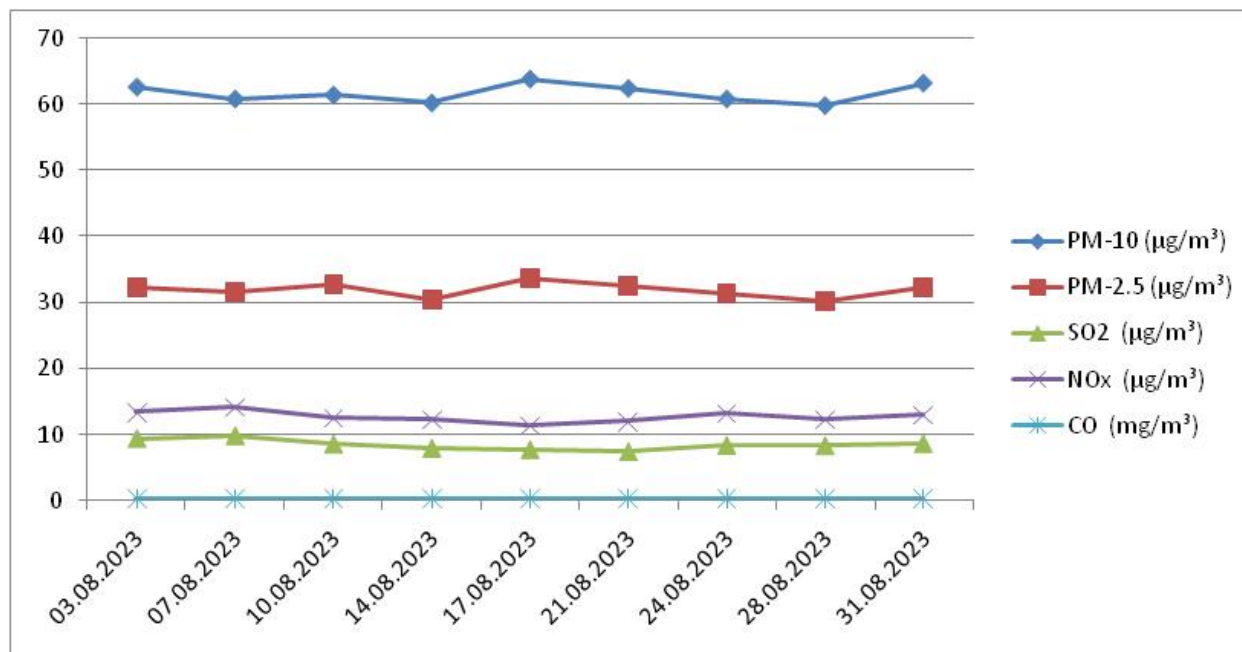
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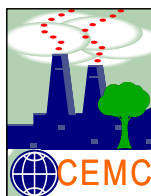
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Report no.-CEMC/TSSEZL/010923/A3

Issued Date-01.09.2023

SPECIAL AIR QUALITY MONITORING TEST REPORT

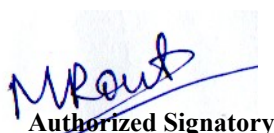
Issued to	M/s. Tata Steel Special Economic Zone Ltd, Gopalpur.
Sample Description	Ambient Air Quality
Sample Drawn Period/ Time	Monthly
Sample Drawn by	Mr. R.N Das
Weather Conditions	Clear
Reference No.	CEMC-01092023A3
Instrument Used	Respirable Dust Sampler,

ANALYSIS RESULT

Locations	Date	NH ₃ (µg/m ³)	O ₃ (µg/m ³)	Pb (µg/m ³)	Ni (ng/m ³)	As (ng/m ³)	Benzene (µg/m ³)	BaP (ng/m ³)
Near TSSEZL Project Office	21.08.2023	<20	<10	<0.1	<0.6	<0.44	<5	<1
Near Anadrone Office	21.08.2023	<20	<10	<0.1	<0.6	<0.44	<5	<1
Near Main Gate(Chamakhandi)	21.08.2023	<20	<10	<0.1	<0.6	<0.44	<5	<1
NAAQ* Standard		400	100	1.0	20	6	5	1
Methods of Analysis		IS: 5182 (Part-25)	IS: 5182 (Part-9)	IS: 5182 (Part-22)	IS: 5182 (Part-26)	As per CPCB method followed by AAS	IS: 5182 (Part-11)	IS: 5182 (Part-12)

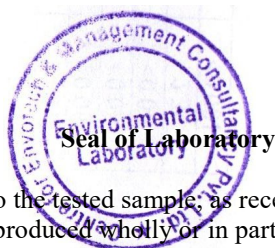
N.B- *NAAQ- National Ambient Air Quality Standard as per 18th Nov, 2009 Gatt. Notification.

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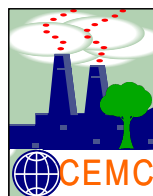
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Report no.-CEMC/TSSEZL/010923/W1

Issued Date-01.09.2023

SURFACE WATER QUALITY TEST REPORT

Name & Address of the Client : M/s. Tata Steel Special Economic Zone Ltd, Gopalpur.
Date of Sampling : 25.08.2023
Sampling by : Mr. R.N Das
Date of Sample Received : 25.08.2023
Date of Analysis : 26.08.2023 to 31.08.2023
Sample Location : Khari Nalla, Up stream(SW1)
Reference No. : CEMC-01092023W1

ANALYSIS RESULT

Sl. No.	Test Parameters	Unit	Max. Tolerance Limit as per IS 2296 : Class C	SW1
1	Colour, Max.	Hazen	300	40
2	pH Value @ 25°C	--	6.5 to 8.5	7.24
3	Iron as Fe, Max.	mg/l	50	0.2
4	Chloride as Cl, Max.	mg/l	600	39.9
5	Dissolved Solids, Max.	mg/l	1500	290
6	Dissolved Oxygen, Min.	mg/l	4	6.2
7	BOD for 3 days@ 27°C, Max.	mg/l	3	<2.0
8	Oil & Grease, Max.	mg/l	0.1	ND
9	Copper as Cu, Max.	mg/l	1.5	<0.03
10	Sulphate as SO ₄ , Max.	mg/l	400	24.6
11	Nitrate as NO ₃ , Max.	mg/l	50	3.2
12	Fluoride as F, Max.	mg/l	1.5	0.12
13	Anionic detergent	mg/l	1	ND
14	Cadmium as Cd, Max.	mg/l	0.01	<0.003
15	Selenium as Se, Max.	mg/l	0.05	<0.001
16	Arsenic as As, Max.	mg/l	0.2	<0.001
17	Cyanide as CN, Max.	mg/l	0.05	ND
18	Phenolic compound as C ₆ H ₅ OH, Max.	mg/l	0.005	ND
19	Lead as Pb, Max.	mg/l	0.1	<0.01
20	Zinc as Zn, Max.	mg/l	15	<0.05
21	Hexavalent Chromium as Cr ⁺⁶ , Max.	mg/l	0.05	<0.05
22	Total Coliform, Max.	MPN/100ml	5000	310
23	Faecal Coliform	MPN/100ml	--	11

, MPN-Most Probable Number

END OF REPORT

MPRout

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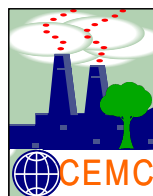
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Report no.-CEMC/TSSEZL/010923/W2

Issued Date-01.09.2023

SURFACE WATER QUALITY TEST REPORT

Name & Address of the Client : M/s. Tata Steel Special Economic Zone Ltd, Gopalpur.
Date of Sampling : 25.08.2023
Sampling by : Mr. R.N Das
Date of Sample Received : 25.08.2023
Date of Analysis : 26.08.2023 to 31.08.2023
Sample Description : Surface Water
Sample Location : Khari Nalla, Down Stream(SW2)
Reference No. : CEMC-01092023W2

ANALYSIS RESULT

Sl. No.	Test Parameters	Unit	Max. Tolerance Limit as per IS 2296 : Class C	SW2
1	Colour, Max.	Hazen	300	50
2	pH Value @ 25°C	--	6.5 to 8.5	7.32
3	Iron as Fe, Max.	mg/l	50	0.4
4	Chloride as Cl, Max.	mg/l	600	49.9
5	Dissolved Solids, Max.	mg/l	1500	580
6	Dissolved Oxygen, Min.	mg/l	4	6.0
7	BOD for 3 days@ 27°C, Max.	mg/l	3	<2.0
8	Oil & Grease, Max.	mg/l	0.1	ND
9	Copper as Cu, Max.	mg/l	1.5	<0.03
10	Sulphate as SO ₄ , Max.	mg/l	400	32.8
11	Nitrate as NO ₃ , Max.	mg/l	50	3.8
12	Fluoride as F, Max.	mg/l	1.5	0.18
13	Anionic detergent	mg/l	1	ND
14	Cadmium as Cd, Max.	mg/l	0.01	<0.003
15	Selenium as Se, Max.	mg/l	0.05	<0.001
16	Arsenic as As, Max.	mg/l	0.2	<0.001
17	Cyanide as CN, Max.	mg/l	0.05	ND
18	Phenolic compound as C ₆ H ₅ OH, Max.	mg/l	0.005	ND
19	Lead as Pb, Max.	mg/l	0.1	<0.01
20	Zinc as Zn, Max.	mg/l	15	<0.05
21	Hexavalent Chromium as Cr ⁺⁶ , Max.	mg/l	0.05	<0.05
22	Total Coliform, Max.	MPN/100ml	5000	420
23	Faecal Coliform	MPN/100ml	--	21

NB: ND- Not Detectable, MPN-Most Probable Number

END OF REPORT

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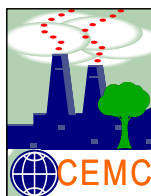
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Report No. - CEMC/ TSSEZL /010923/N

Issued Date-01.09.2023

Name & Address of the Client	M/s. Tata Steel Special Economic Zone Ltd, Gopalpur
Reference No.	CEMC-01092023N
Nature of Sampling	Noise Monitoring
Sampling By	Mr. R.N Das
Instrument Used	Noise Level Meter
Sampling Period	24 Hours

NOISE MONITORING REPORT

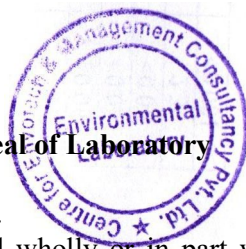
Date of Sampling	Locations	NL Day Time dB (A)			NL Night Time dB (A)		
		Max	Min.	Avg.	Max.	Min.	Avg.
25.08.2023	Near Anadrone Office	63.4	59.4	61.4	57.4	53.4	55.2
25.08.2023	Near main gate(Chamakhandi)	68.6	64.2	66.4	60.4	56.6	58.5

End of Report

NATIONAL STANDARD NOISE LEVEL

Area Code	Category of Area/Zone	Permissible Limit in dB (A)	
		Day Time	Night Time
A	Industrial Area*	75	70
B	Commercial Area	65	55
C	Residential Area	55	45
D	Silence Zone	50	40


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Seal of Laboratory

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E-mail: cemclab@yahoo.in

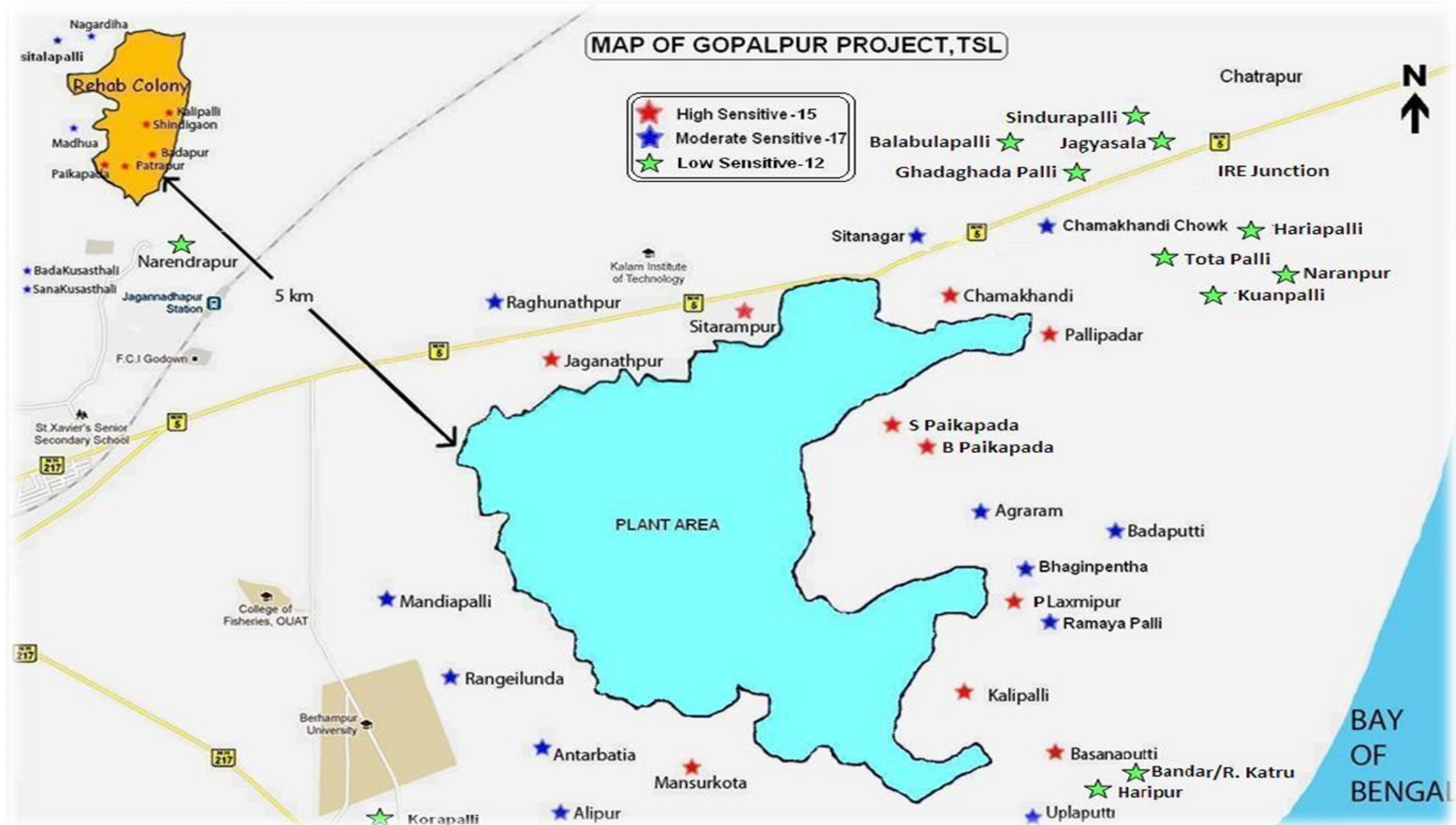
A wide-angle photograph of a sunset over the ocean. The sun is a bright, glowing orb in the upper center, casting a long, shimmering reflection across the water's surface. The sky is a mix of soft orange and grey clouds. The ocean has gentle waves with white foam washing onto a sandy beach in the foreground.

CSR Initiatives

By

Tata Steel Foundation, Gopalpur, Ganjam

Operating Map of Villages



Objective

- Improve the quality of life of the communities we serve.
- Create a favorable social environment conducive for the growth of the Company.

Core Areas

- Health & Hygiene
- Drinking Water.
- Education
- Livelihood (Agriculture & Allied)
- Empowerment
- Skill Development
- Sports
- Water & Civil Infrastructure
- Environment

Demographic Profile:

Tata Steel Foundation, Gopalpur CSR Operational Villages(Current)

Sl. No.	Name of the Blocks	Nos of GPs	Nos of villages
1	Rangeilunda	08	21
2	Chatrapur	14	68
3	Ganjam	08	30
4	Kukudakhandi	01	01
5	Purusottampur	02	04
6	Aska	03	05
7	Sheragad	07	24
8	Hinjilicut	07	12
9	Rambha (NAC)		01
	Total	50	166

Gender and Community Enterprise:

Objective:

1. To ensure the SDG-5 (Gender Equality) through intensive Disha training and empower local women leadership in local self governance.
2. To initiative Social Change activities by SHGs in a voluntary way which called We for Change
3. To partnership with line departments and SRLM (State Rural Livelihood Mission) to ensure Women Empowerment
4. To develop Micro Enterprises and ensure socio-economic conditions of SHGs
5. To enhance the work periphery of Cooperatives and provide hand holding support to Entrepreneurs

Sl. No.	Name of the activities	Nos of SHGs	Nos of villages	Nos of GPs	Nos of Blocks	Outreach	Remarks
01	Disha Module Training	30	24	8	2	321	Leadership training for Women
02	We for change Initiatives	20	4	7	1	200	Self driven Voluntary Work
03	Exposure Visit of Entrepreneurs	5	4	5	2	48	Exposure visit for set up micro enterprises
04	Financial Support to Women Entrepreneurs	26	16	12	3	154	Ensure livelihood and develop socio-economic conditions
05	Development of Artisans	4	2	1	1	36	Develop Artisans skills through Srujanika
06	Marketing and Capacity Building	2	2	1	1	30	Apparel and Craft producer Group ensure marketing through various exposure and workshop

Objective: To address the total wellbeing of community from child to elder.

Sl. No.	Name of the activities	Nos. of villages	Nos. of GPs	Nos. of Block	Outreach	Remarks
1	Non-Communicable Disease (NCD)	02	02	01	200 patients	Oral cancer, Diabetics, Blood Pressure etc.
2	Vector Bone Disease (VBD)	350		04		To be implemented by October
3	Preventable Eye Blindness	03	01	01	20	Screening completed In partnership with Shankar Eye Hospital, Samarjhola, Ganjam
4	RISHTA project- Adolescent Boys & Girls	309	50	02	3640 23087 (Profiling)	Awareness on Child Marriage, knowledge on Adolescent Reproductive Sexual Health, substance abuse, Reenrollment of drop out school students etc
5	Mobile Public Health Unit (MPHU) – 3 Nos. & APPI Collect Mobile App	45	16	02	To be start by Oct	Health service to the door step of communities. Patient prifile will be uploaded in mobile App.
6	Village Level Child Protection Committee	20	20	02	300	Awareness on Child Marriage & Child labor, Reenrollment of drop out school students

Sl. No.	Name of the activities	Nos. of villages	Nos. of GPs	Nos. of Block	Outreach	Remarks
1	Hemoglobin Test	22	14	02	1600	Adolescent Girls & Mothers
2	Identification of SAM Child	18	12	02	274	0 – 10 Years (out of 4692 from 0-5 yrs)
3	Identification of Malnutrition child	18	12	02	200	0 – 10 Years
4	Development of Kitchen Garden	160	40	02	2000	Anemic patients HH

Education & Sports:

Objective: To encourage meritorious dalit & adivasi students to achieve their educational potential through Jyoti Fellowship scholarship from School to Graduation studies.

Sl. No.	Name of the activities	Nos. of Center/ School/College	Nos. of GPs	Nos. of Block	Outreach	Remarks
1	Primary Learning Centers	29	09	02	810	Nos of PLC: 29, Standard 1 to 7 th class
2	Jyoti Fellowship Program	30	12	02	898	Class: 7 th to Degree course
	Sports					
3	Inter School Athletic Tournament	28	12	02	280	
4	Cross Country Race	32	15	02	438	Observation 119 th Birth Anniversary of Bharat Ratan JRD Tata
5	Army Coaching Camp at Berhampur University Ground	23	12	02	165	Employment opportunity: 19 Local youth (Odisha Police/CISF/Indian Army)

Agriculture and Allied Interventions:



Objective:

1. To enhance the income of the farmer through increasing the production and productivity by promoting crop diversification through Climate Resilient Agricultural practices & dry land farming.
2. To reduce the use of chemical & inorganic fertilizers & pesticides through the concept of biological method of disease pest management and application of organic micronutrients.

Sl. No	Name of the Activities	Area in Acre	Nos. of villages	Nos. of GPs	Nos. of Block/NAC	Outreach	Remarks
1.	Promotion of SRI & Dryland Agriculture	9226	166	50	Block: 08 NAC: 01	17586	Paddy, vegetables, Maize, Foot yam, Betel vine, Millets
2.	Promotion of 2 nd crop	12520					Green & Black Gram, vegetables, Maize, Groundnut,
3.	Dairy Development		22	14	06	938	Through 8 MPCs in collaboration with OMFED
4.	Milk ATM established	04 Nos			02		In collaboration with OMFED & NABARD.
5.	Commercial Fish Farming	370 (MSWA)	92	22	07	576	197 Farm/GP ponds in collaboration with kvk
6.	Environment Conservation through plantation		56	12	02	5400	54000 fruit crop saplings provided in TSF vicinity
7.	Betel vine Cultivation (Climate Resilient Agriculture)	82	04	04	02	164	Scientific method of Betel vine cultivation in Bamboo structure

Agriculture and Allied Interventions:

Sl. No	Name of the Activities	Area in Acre	Nos. of villages	Nos. of GPs	Nos. of Block	Outreach	Remarks
8.	Irrigation infrastructure: 36 LI point (LI & River lift)	1862	14	12	04	2028	36 LI pint developed in collaboration with OLIC, Ganjam. Each LI point covers more than 50 Acre
9.	Solar based irrigation for vegetable cultivation	40	01	01	01	84	84 small & marginal farmers are directly benefited at Karapali village
10.	Development of protected cultivation (Poly house)	6500 sq ft	05	04	02	05	CRA practices of protected 6500 in collaboration with
11.	Development of Poultry layering unit	1 units	01	01	01	08	1000 Bird capacity at kalipalli. Productivity: 800 egg per day
12.	Development of poultry Broiler farm	1 unit	01	01	01	10	2000 bird capacity at Ramayapalli
13.	Development of IFS models	45	22	11	06	30	Proper land utilization & regular income generation through farm families engagement
14.	Biogas plant		09	04	03	30 HH	Recycling of livestock residues & CRA practices
15.	Mushroom spawn unit		02	01	01	62 HH	Ensuring addition income generation
16.	Promotion of FPO		25	09	03	1750	Associated with 1750 small & marginal farmers
17.	Farmers training through FFS class.		12	01	01	320	Hand holding training on crop diversification and adoption of CRA practices

Infrastructure:



Sl. No.	Name of the activities	Achieved	Nos. of villages	Nos. of GPs	Nos. of Block	Outreach	Remarks
1	Renovation of JNTTEC						
2	Community Centre	12	12	05	02	2800 population	Its an important infrastructure in village serving multitudes of needs and is an asset with many uses
3	Over Head Water tank	05	05	05	02	15000 HH (approx.)	To provide drinking water facilities to the villages in its periphery areas of operation. (Capacity-40,000 and 20,000 liters)
4	Water Harvesting structure (Pond)	15	15	11	02	320 farmers	Excavation & Renovation of Various size of pond for irrigation of field crops
5	Solar Light Installation	800	32	18	02		To provide the facility of renewable source of light in the areas lacking electricity connection..
6	Deep Borewell	36	14	12	02	2028 farmers	Deep borewell plays a crucial role in the community development like Relabel water supply, Improved health, Agricultural Development, Livelihood opportunities & drinking water facility etc.
7	School Infrastructure	07	07	07		398 students	Support of new additional classroom and Renovation of school building
8	Milk ATM	04	28	15	03	400-500 people per day	Milk ATM have significant importance in villages for several reasons like Direct source of fresh Milk, Empowering local Dairy Farmers, Enhancing Livelihoods, Reduction in Food waste, Improving Nutrition, Promoting Entrepreneurship and Community development.
9	RCC Drain	14	13	04	02		Drains help in channeling rainwater away from the road surface. Proper drainage prevents water accumulation, which can erode the road and create potholes, ensuring the road remains intact and drivable

ENVIRONMENT: CONSERVATION OF FLORA AND FAUNA OF GANJAM DISTRICT WITH SPECIAL REFERENCE TO OLIVE RIDLEY SEA TURTLE, BLACKBUCK AND INDIAN PEA FOWL:

Ganjam, a district in India's eastern coastline, has a remarkable identity shaped by the density of Schedule Species in the district, most notably Olive Ridley Turtles, known for their mass nesting at the Rushikulya Rookery; Peafowls, which have proliferated significantly in numbers; and the Blackbuck, a species that thrives only in Ganjam. While the district's environmental circumstances encourage the proliferation of animals, local communities inside the district also devote effort to conserve them despite daily problems in preserving their livelihoods.

- **Bhetnai area for Blackbuck Conservation.**
- **Pakidi Hill area for Peafowl Conservation.**
- **Rushikulya area for Olive Ridley Sea Turtle Conservation.**

Sl. No.	Name of the Activities	No. of Villages	No. of GPs	No. of Block	Outreach	Animal Population in 2022	Activities
1	Blackbuck Conservation	1	1	1	600	1974	Community Awareness and conservation activities, Agripractice programmes, Blackbuck protection committee, Rescue centre development, Health Camps
2	Peafowl Conservation	1	1	1	304	2500	Community Awareness and conservation activities, Agripractice programmes, Peafowl protection committee, Health Camps, Mobilization and capacity building program
3	Olive Ridley Sea Turtle Conservation	4	1	1	522	6.37 Lakhs	Community Awareness and conservation activities, Beach cleaning, Voluntarism, Health Camps, Mobilization and capacity building program, Livlihood development

YEARWISE EXPENDITURE DETAILS UNDER TATA STEEL CSR,GOPALPUR										
Details of CSR Spent Interventions	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
Collaborative Projects	6,789.00	-	0	-	-	-	-	-	-	26,58,580.60
Health	20,75,580.00	25,05,668.00	1,61,80,751.88	1,59,24,236.73	1,55,73,501.34	1,48,29,642.59	23,55,000.00	1,42,38,000.00	8,82,129.43	64,34,708.00
Drinking Water	-	17,01,080.00	6,59,669.09	32,24,701.80	1,74,663.60	2,24,500.83	-	16,38,000.00	50,489.50	32,50,302.00
Education	7,41,529.00	47,62,917.00	1,68,552.48	2,95,147.18	7,63,00,026.62	7,87,13,237.00	13,67,000.00	9,34,000.00	11,93,196.92	45,59,115.00
Skill Development	-	55,87,454.00	5,76,981.34	4,16,160.17	11,27,970.64	64,600.00	4,22,000.00	-	47,09,567.82	90,49,617.37
Agriculture	-	1,12,36,888.00	35,58,432.12	53,19,093.59	65,73,907.54	39,41,926.60	58,28,000.00	70,95,000.00	95,28,920.52	92,23,886.00
Entrepreneurship/ Empowerment	1,86,13,902.00	46,42,172.00	26,07,631.32	16,83,129.99	14,19,588.48	6,52,257.07	7,00,000.00	5,15,000.00	7,76,358.74	29,60,723.00
Sports	-	1,52,228.00	36,420.00	4,30,538.78	3,34,666.63	3,24,517.15	6,68,000.00	91,500.00	73,500.00	3,41,348.00
Infrastructure	96,89,106.00	26,10,076.00	99,816.36	28,38,901.52	38,01,170.64	30,20,042.31	21,26,000.00	24,58,000.00	-	41,93,064.00
Environment		17,56,135.00	4,696.09	-	-	1,95,788.90	53,000.00	13,41,000.00	2,20,240.00	2,37,548.00
Ethnicity	1,40,966.00	2,24,049.00	6,607.00	-	-	-	-	-	-	1,53,368.00
HR, Admin	64,08,108.00	1,07,75,603.00	57,80,313.09	63,67,374.74	80,29,975.45	1,10,64,437.69	61,36,000.00	93,16,000.00	1,19,76,338.10	1,71,91,888.00
Special Commitments (Tata Medica Hospital, Gopalpur)	-	-	0.00	-	41,89,41,557.00	42,32,23,294.34	1,42,12,000.00	1,24,16,000.00	1,14,28,813.14	1,11,69,708.00
COVID-19								7,32,66,000.00	71,05,917.92	3,25,543.00
Sub.Total	3,76,75,980.00	4,59,54,270.00	2,96,79,870.77	3,64,99,284.50	53,22,77,027.94	53,62,54,244.48	3,38,67,000.00	12,33,08,500.00	4,79,45,465.13	7,17,49,398.97
Total from 2013-22	149,52,11,042.00									
Shankar Eye Hospital	42,30,00,000.00									
Grand Total	191,82,11,042.00									



THEME	REVISED BUDGET IN LAKHS (2023-24)
ETHNICITY	30.00
Public Health	240.15
EDUCATION	50.59
LIVELIHOODS (AGRICULTURE)	191.26
LIVELIHOODS (Empowerment)	67.00
LIVELIHOODS (SKILL DEVELOPMENT)	415.00
SPORTS	25.00
ENVIRONMENT	135.24
RURAL INFRASTRUCTURE & URBAN SERVICES	90.00
DRINKING WATER	57.12
SPECIAL COMMITMENTS	116.73
Enterprise Costs	289.73
TOTAL BUDGET	1707.83

“CONSERVATION OF IMPORTANT FLORA AND FAUNA OF GANJAM DISTRICT WITH SPECIAL REFERENCE TO SEA TURTLE, BLACKBUCK AND INDIAN PEA FOWL”

Total Project Outlay is ~**₹2.40 Crore** (Two Crore Forty lakhs only) for **three years**.

Cost Category	Cost in ₹ (in lakhs)
Protection of 3 Species	34.8
Habitat Improvement	21.8
Man-Animal Conflict Management	4.5
Research and Training	11.5
Publicity and Awareness Generation	48.79
Eco-Tourism Development	21.00
Ecosystem for Eco-Tourism and Eco-conservation Development	37.24
MIS System Development and Maintenance	5.4
Program Human Resources Costs	45.34
Administration Costs	9.59
Total	240.00

Cost Split (year-on-year):

- FY 22-23 = ₹80 lakhs (in 2 tranches)
- FY 23-24 = ₹80 lakhs (in 2 tranches)
- FY 24-25 = ₹80 lakhs (in 2 tranches)

