



Ref. No: TSSEZL/ ENV/MoEF/1160 /2021

Dated: 20th May' 2021

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 Oct 2020 – March '2021 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

Chittaranjan Mahali
Head - (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, Brahmapur, Ganjam, Odisha.

TATA STEEL SPECIAL ECONOMIC ZONE LIMITED

(A 100% subsidiary of Tata Steel Limited)

Regd. Off: 5th Floor, C/2, Fortune Towers, Chandrasekharpur, Bhubaneswar - 751023, Odisha, India

Tel. No. 0674-2603000 Website: www.tatasteelsez.com E-mail : contact@tatasteelsez.com

CIN: U45201OR2006PLC008971

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: October'2020 – March'2021

Submitted By:

**Tata Steel Special Economic Zone Ltd
M/s. Tata Steel Limited
Fortune Tower, 5th Floor, Chandrasekharpur,
Bhubaneswar -751023 (Odisha)**

List of Annexures

Sl. No	Title of the Annexure	Annexure No.
1	Environment Monitoring Results of last Six months (Oct '2020 – March' 2021)	I
2	Photographs of Some CSR Activities	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

SI	Specific Condition	Compliance Status (Oct'20 to March'21)
(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.
(x)	The project proponent shall report to the State Pollution Control Board about the compliance of the prescribed standards for all	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



Sl	Specific Condition	Compliance Status (Oct'20 to March'21)
	discharges from the Industrial Area into the sea.	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, and then recycled or reused for the identified uses	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 up common facilities for waste treatment, recycle and disposal.
(xvi)	The quantity of freshwater usage, water recycling and rainwater harvesting shall be	One storm water reservoir has already been constructed inside the project area and two more



Sl	Specific Condition	Compliance Status (Oct'20 to March'21)
	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.	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 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.	Being Complied.
(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.
(xxv)	Parking space to accommodate trucks, cars, two wheelers and bicycles shall be provided as per the norms	Complied.
(xxvi)	Any hazardous waste generated during development/ construction phase, shall be	No hazardous wastes have been generated during the construction.



Sl	Specific Condition	Compliance Status (Oct'20 to March'21)
	disposed of as per applicable rules and norms with necessary approvals of the State.	
(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. However, if required in future, HSD (High Speed Diesel) oil used for D.G set is and will be of low Sulphur content, i.e., of 350 mg/kg maximum.
(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.
(xxxii)	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.
(xxxiii)	Water demand during development/construction shall be reduced by use of pre-mixed concrete, curing agents and other best practices referred.	Being Complied.
(xxxiv)	Permission to draw ground water shall be obtained from the competent Authority prior to construction/operation of the project.	Complied.
(xxxv)	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.



Sl	Specific Condition	Compliance Status (Oct'20 to March'21)
(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 environment policy (CEP) is being implemented. Some glimpse of key CSR activities and CSR expenditure details are enclosed as Annexure -II
(xxxviii)	Corporate Environment Responsibility:	Corporate social responsibility (CSR) is being implemented by M/s. TSSEZL through its CSR arm TSRDS, 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 compliance with the environmental clearance conditions shall be furnished.	Complied.
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		



Sl	Specific Condition	Compliance Status (Oct'20 to March'21)
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.
ii	No use of ground water for proposed multi - product SEZ/industrial park.	Noted, Compliance shall be ensured.
iii	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).
iv	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 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.	Being Complied.



Sl	Specific Condition	Compliance Status (Oct'20 to March'21)
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 project site must be avoided. Parking, loading and unloading shall be fully internalized and no public space shall be utilized.	Noted, Compliance shall be ensured.



Sl	Specific Condition	Compliance Status (Oct'20 to March'21)
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

Sl.No.	Stipulated Condition	Compliance Status (Oct' 20 to March'2021)
i	The responsibility to comply with the EC conditions mentioned in this letter is solely of the project proponent.	Noted, Compliance shall be ensured.
ii	The environmental safeguards contained in the EIA report shall be implemented in letter and spirit.	Noted, Compliance shall be ensured.
iii	Provision shall be made for supply of kerosene or cooking gas and pressure cooker to the labourers during construction phase.	Being Complied.
iv	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 budget and this shall not be diverted for any other purpose.	Noted, Compliance shall be ensured.



Sl.No.	Stipulated Condition	Compliance Status (Oct' 20 to March'2021)
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 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	Complied.



Sl.No.	Stipulated Condition	Compliance Status (Oct' 20 to March'2021)
	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 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	Noted, Compliance shall be ensured.



Sl.No.	Stipulated Condition	Compliance Status (Oct' 20 to March'2021)
	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



Head-SHE
TSSEZL,
Jodhpur Industrial Park

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

Date: 20th May' 2021



Six- Monthly Environmental Monitoring Report (Oct' 2020 - Mar'2021) of Tata Steel Special Economic Zone Limited													
Near TSSEZL Project Office (AAQ - Monitoring Report)													
	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)	(mg/m ³)	(µg/m ³)	(ng/m ³)	(ng/m ³)	(µg/m ³)	(ng/m ³)	
Oct-20	56.9	32.5	9.75	12.88	0.37	<20	<10	<0.1	<0.6	<0.44	<5	<1	
Nov-20	57.2	31.7	10.31	15.30	0.37	<20	<10	<0.1	<0.6	<0.44	<5	<1	
Dec-20	60.2	33.4	12.07	16.58	0.43	<20	<10	<0.1	<0.6	<0.44	<5	<1	
Jan-21	62.02	35.32	12.53	17.21	0.45	<20	<10	<0.1	<0.6	<0.44	<5	<1	
Feb-21	62.7	35.60	12.68	17.49	0.48	<20	<10	<0.1	<0.6	<0.44	<5	<1	
Mar-21	64.4	36.6	12.8	17.7	0.49	<20	<10	<0.1	<0.6	<0.44	<5	<1	
MAX	64.4	36.60	12.80	17.70	0.49	<20	<10	<0.1	<0.6	<0.44	<5	<1	
MIN	56.9	31.7	9.75	12.88	0.37	<20	<10	<0.1	<0.6	<0.44	<5	<1	
AVG	60.57	34.18	11.69	16.19	0.43	<20	<10	<0.1	<0.6	<0.44	<5	<1	
Near TSSEZL Main Gate (AAQ - Monitoring Report)													
	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)	
Oct-20	69.20	36.80	11.30	16.20	0.44	<20	<10	<0.1	<0.6	<0.44	<5	<1	
Nov-20	67.70	35.00	11.55	16.27	0.38	<20	<10	<0.1	<0.6	<0.44	<5	<1	
Dec-20	66.85	37.55	12.09	17.46	0.47	<20	<10	<0.1	<0.6	<0.44	<5	<1	
Jan-21	68.20	36.40	12.01	16.40	0.46	<20	<10	<0.1	<0.6	<0.44	<5	<1	
Feb-21	58.10	36.90	11.09	17.10	0.41	<20	<10	<0.1	<0.6	<0.44	<5	<1	
Mar-21	62.40	37.20	12.04	16.08	0.39	<20	<10	<0.1	<0.6	<0.44	<5	<1	
MAX	69.20	37.55	12.09	17.46	0.47	<20	<10	<0.1	<0.6	<0.44	<5	<1	

MIN	66.85	35.00	11.30	16.20	0.38	<20	<10	<0.1	<0.6	<0.44	<5	<1
AVG	65.95	36.46	11.64	16.65	0.43	<20	<10	<0.1	<0.6	<0.44	<5	<1
Near Anadrone Office (AAQ - Monitoring Report)												
	PM ₁₀	PM2.5	SO ₂	NOx	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)
Oct-20	59.80	32.20	7.60	10.80	0.38	<20	<10	<0.1	<0.6	<0.44	<5	<1
Nov-20	57.10	31.10	8.47	12.35	0.45	<20	<10	<0.1	<0.6	<0.44	<5	<1
Dec-20	62.17	34.50	12.32	15.43	0.44	<20	<10	<0.1	<0.6	<0.44	<5	<1
Jan-21	62.17	34.50	12.53	17.21	0.45	<20	<10	<0.1	<0.6	<0.44	<5	<1
Feb-21	63.10	35.30	12.68	17.63	0.48	<20	<10	<0.1	<0.6	<0.44	<5	<1
Mar-21	63.70	35.7	12.7	17.70	0.49	<20	<10	<0.1	<0.6	<0.44	<5	<1
MAX	63.70	35.70	12.70	17.70	0.49	<20	<10	<0.1	<0.6	<0.44	<5	<1
MIN	57.10	31.10	7.60	10.80	0.38	<20	<10	<0.1	<0.6	<0.44	<5	<1
AVG	61.34	33.88	11.05	15.18	0.44	<20	<10	<0.1	<0.6	<0.44	<5	<1
TSSEZL Project Office (Potable Water)			Month					Result				
Parameter	Unit	Oct-20	Nov-20	Dec-20	Jan-21	Feb-21	Mar-21	MAX	MIN	AVG		
Colour	Hazen	<05	<05	<05	<05	<05	<05	<05	<05	<05		
Odour	--	AL	AL	AL	AL	AL	AL	AL	AL	AL		
Taste	--	AL	AL	AL	AL	AL	AL	AL	AL	AL		
Turbidity	NTU	<0.1	<0.1	<0.1	<1.0	<0.1	<0.1	<0.1	<0.1	<0.1		

pH Value @ 25°C	--	6.54	6.69	6.75	7.06	7.15	7.05	7.15	6.54	6.87
Total Hardness (as CaCO ₃)	mg/l	142	108	110	120	124	122	124	108	121.0
Iron (as Fe)	mg/l	0.21	0.25	0.26	0.25	0.25	0.22	0.26	0.21	0.240
Chloride (as Cl)	mg/l	30.62	28.71	28.90	30.10	30.60	30.40	30.62	28.71	29.89
Residual, free Chlorine	mg/l	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Dissolved Solids	mg/l	198	190	201	219	241	204	241	190	209.00
Calcium (as Ca)	mg/l	30.50	19.23	25.65	28.86	30.46	24.60	30.50	19.23	26.55
Magnesium (as Mg)	mg/l	16.04	14.58	11.18	11.66	11.66	11.50	16.04	11.18	12.77
Copper (as Cu)	mg/l	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
Manganese (as Mn)	mg/l	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Sulphate (as SO ₄)	mg/l	15.20	12.40	12.80	13.50	13.80	13.4	15.20	12.40	13.52
Nitrate (as NO ₃)	mg/l	5.20	4.60	5.10	4.90	4.30	4.2	5.20	4.30	4.72
Fluoride (as F)	mg/l	0.15	0.13	0.13	0.13	0.14	0.13	0.15	0.13	0.14

[illegible]

Boron (as B)	mg/l	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Total Coliform	MPN/100 ml	Absent	Absent	Absent	Absent	Absent	Absent	Absent	Absent	Absent	Absent
Faecal Coliform	MPN/100 ml	Absent	Absent	Absent	Absent	Absent	Absent	Absent	Absent	Absent	Absent

Inlet of Khari Nalla (SW1) Surface Water		MONTH										Result	
Test Parameters	Unit	Oct-20	Nov-20	Dec-20	Jan-21	Feb-21	Mar-21	MAX	MIN	AVG			
Colour, Max.	Hazen	10	8	6	5	5	5	10	5	6.5			
pH Value @ 25°C	--	7.44	7.46	7.61	7.72	7.76	7.72	7.76	7.44	7.61			
Iron as Fe, Max.	mg/l	0.21	0.31	0.33	0.16	0.18	0.21	0.33	0.16	0.23			
Chloride as Cl, Max.	mg/l	19.14	28.71	29.60	29.60	30.30	29.50	30.30	19.14	27.80			
Dissolved Solids, Max.	mg/l	278.0	292	304	309.2	295	296.00	309.2	278	295.70			
Dissolved Oxygen, Min.	mg/l	5.8	5.8	5.6	5.8	5.6	5.6	5.8	5.6	5.70			
BOD for 3 days@ 27° C, Max.	mg/l	2.6	2.6	2.4	2.4	2.2	2.20	2.6	2.2	2.4			
Oil & Grease, 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			
Sulphate as SO ₄ , Max.	mg/l	4.2	5.8	6.3	6.5	6.9	6.5	6.9	4.20	6.0			

Nitrate as NO ₃ , Max.	mg/l	4.4	5.2	5.5	5.6	7.1	5.6	7.1	4.4	5.56
Fluoride as F, Max.	mg/l	0.18	0.14	0.14	0.14	0.14	0.14	0.18	0.14	0.15
Anionic detergent	mg/l	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cadmium as Cd, Max.	mg/l	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
Selenium as Se, Max.	mg/l	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Arsenic as As, Max.	mg/l	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Cyanide as CN, Max.	mg/l	ND	ND	ND	ND	ND	ND	ND	ND	ND
Phenolic compound as C ₆ H ₅ OH, Max.	mg/l	ND	ND	ND	ND	ND	ND	ND	ND	ND
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
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
Total Coliform, Max.	MPN/100ml	220.0	220	170	140	130	141	220	130	176
Faecal Coliform	MPN/100ml	17	26	20	22	17	17	26	17	20

[illegible]

Selenium as Se, Max.	mg/l	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Arsenic as As, Max.	mg/l	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Cyanide as CN, Max.	mg/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Phenolic compound as C ₆ H ₅ OH, Max.	mg/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Lead as Pb, Max.	mg/l	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<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	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
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	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Total Coliform, Max.	MPN/100ml	240	220	170	130	130	130	130	130	221	240	130	185	130	240	130	185	130	185
Faecal Coliform	MPN/100ml	22	17	22	17	17	17	17	17	21	22	17	19.3	17	22	17	19.3	17	19.3



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Report no.-CEMC/TSSEZL/040121/A1

Issued Date-04.01.2021

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. P K Pattnaik
Sampling Location	Near TSSEZL Project Office
Weather Conditions	Clear
Reference No.	CEMC-04012021A1
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)
01.12.2020	60.2	33.6	11.74	17.17	0.44
07.12.2020	58.8	32.8	11.53	15.53	0.39
14.12.2020	59.4	33.2	12.43	16.60	0.42
21.12.2020	62.3	34.1	12.60	17.03	0.45
Avg	60.17	33.43	12.07	16.58	0.425
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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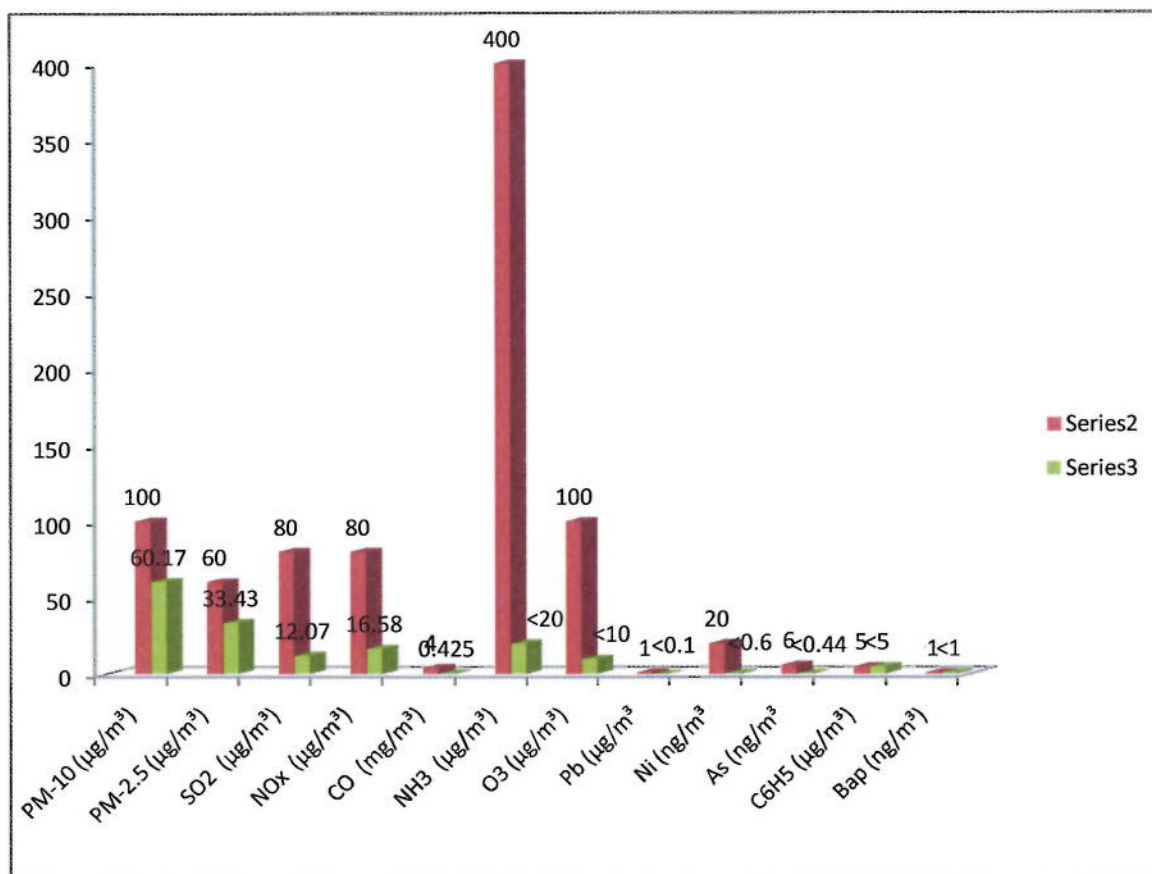
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This Graph is belongs to Station-01(Near TSSEZL Project Office) For the Month of December-20

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

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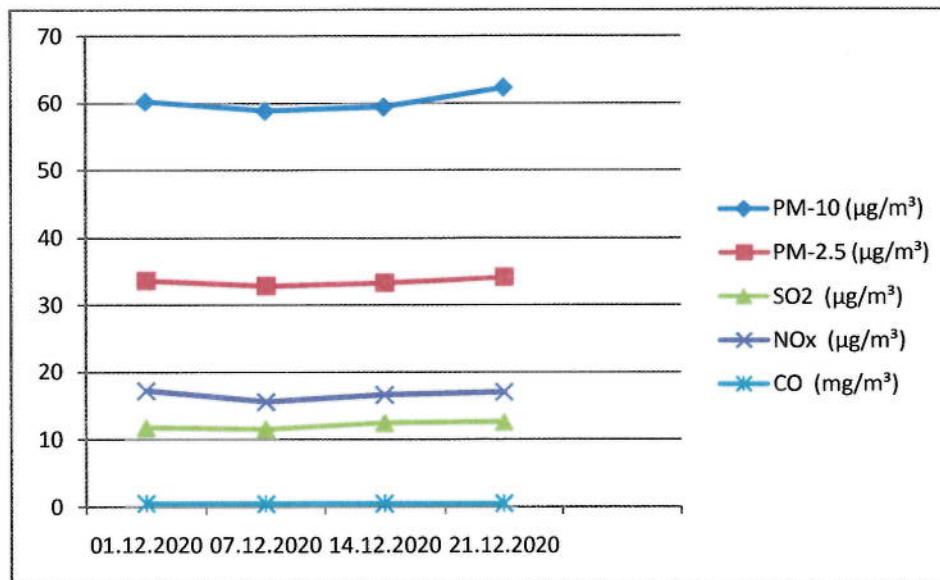
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Report no.-CEMC/TSSEZL/040121/A2

Issued Date-04.01.2021

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. P K Pattnaik
Sampling Location	Near Anadron Office
Weather Conditions	Clear
Reference No.	CEMC-04012021A2
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)
01.12.2020	62.3	34.1	12.25	17.32	0.45
07.12.2020	59.8	33.7	11.74	16.60	0.37
14.12.2020	61.4	33.9	12.43	17.17	0.44
21.12.2020	65.2	36.3	12.85	10.65	0.48
Average	62.17	34.50	12.32	15.43	0.435
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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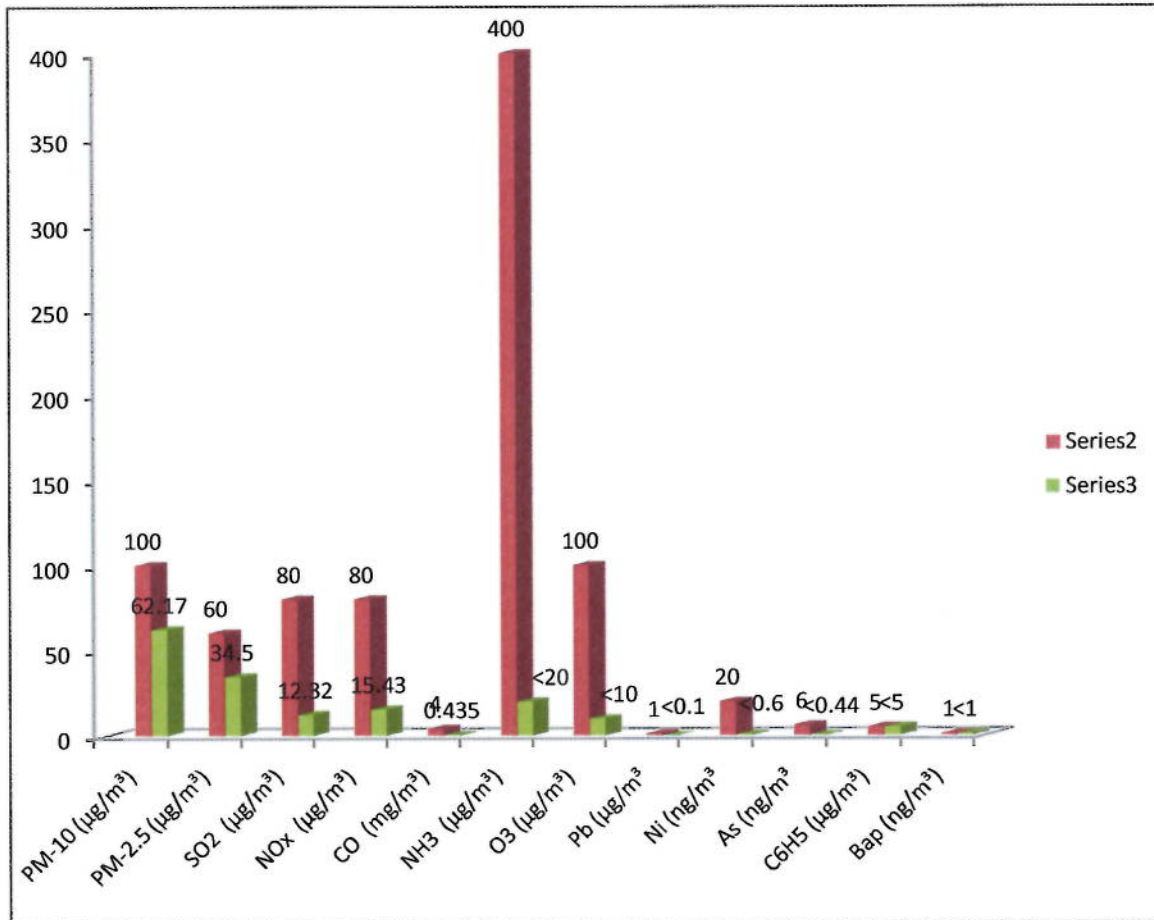
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This Graph is belongs to Station-02(Near Anadrone Office) For the Month of December-20

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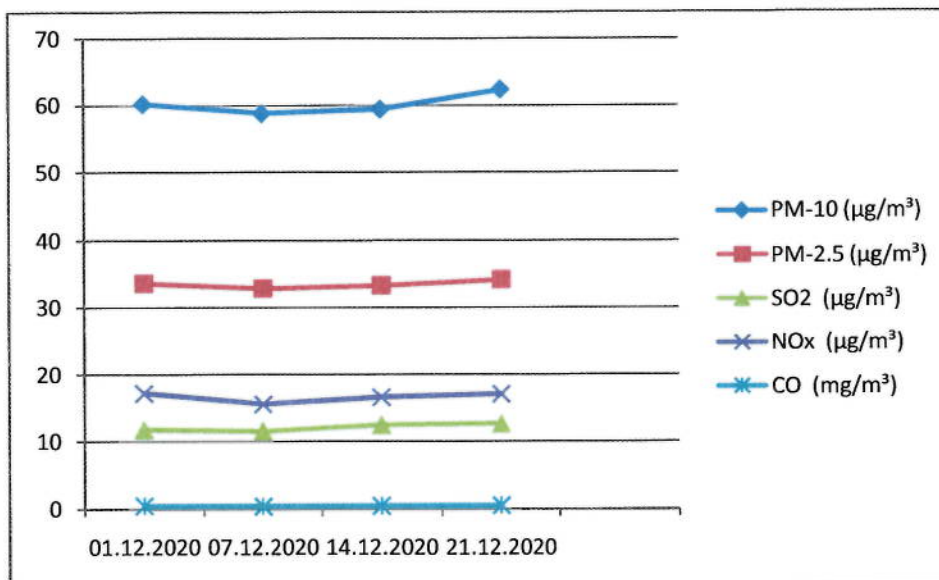
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Report no.-CEMC/TSSEZL/040121/A3

Issued Date-04.01.2021

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. P K Pattnaik
Sampling Location	Near SEZ Main Gate
Weather Conditions	Clear
Reference No.	CEMC-04012021A3
Instrument Used	Respirable Dust Sampler, Fine Dust Sampler, Gaseous Attachment

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 (mg/m ³)
01.12.2020	68.5	37.9	12.43	17.74	0.49
07.12.2020	65.2	37.2	11.74	17.17	0.44
Avg	66.85	37.55	12.085	17.455	0.465
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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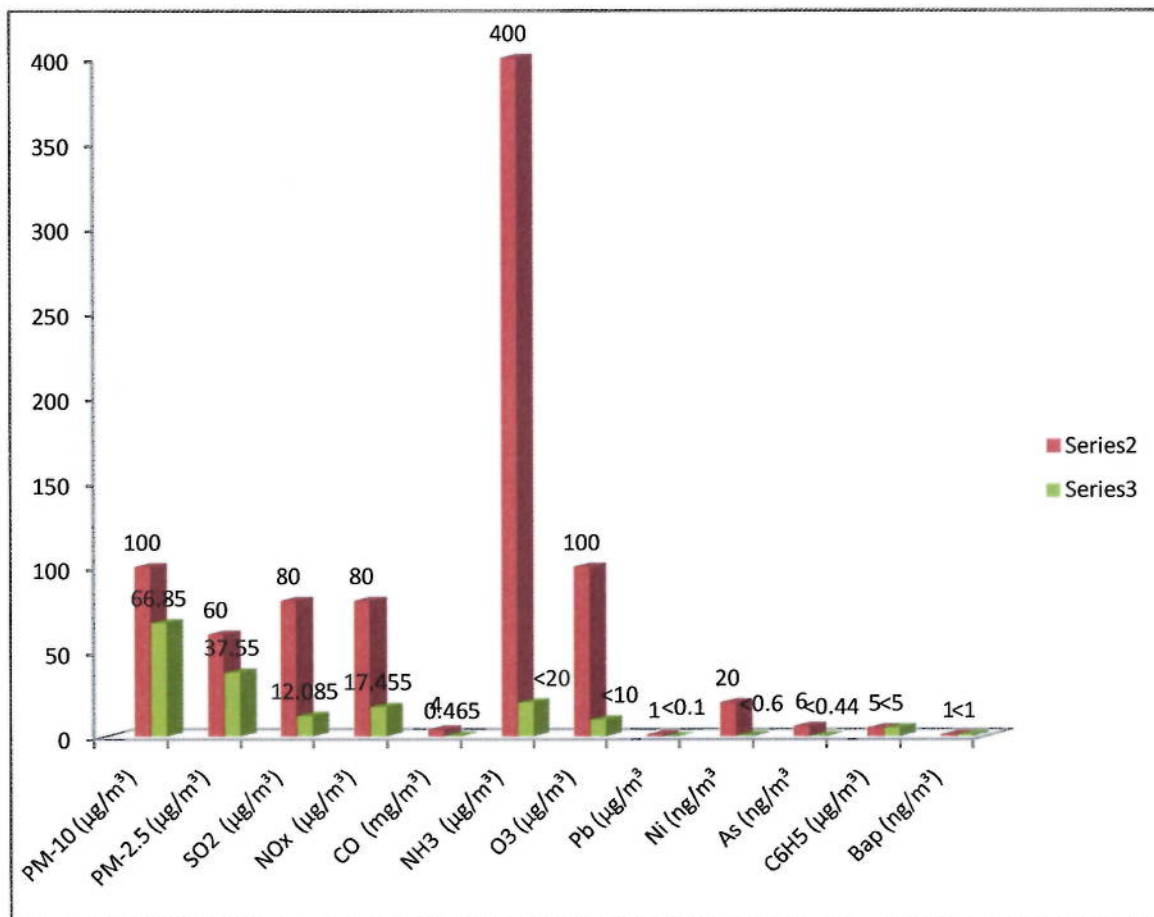
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This Graph is belongs to Station-03(Near Main Gate) For the Month of December-20

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

Environmental Studies (EIA & EMP), Monitoring, Forest Diversion Planning, DPR, Wildlife Management Plan, Hazardous & Safety Studies, RS & GIS, Baseline Survey, Hydrological & Geological Studies, Socio-economic Studies, DGPS & ETS Survey.

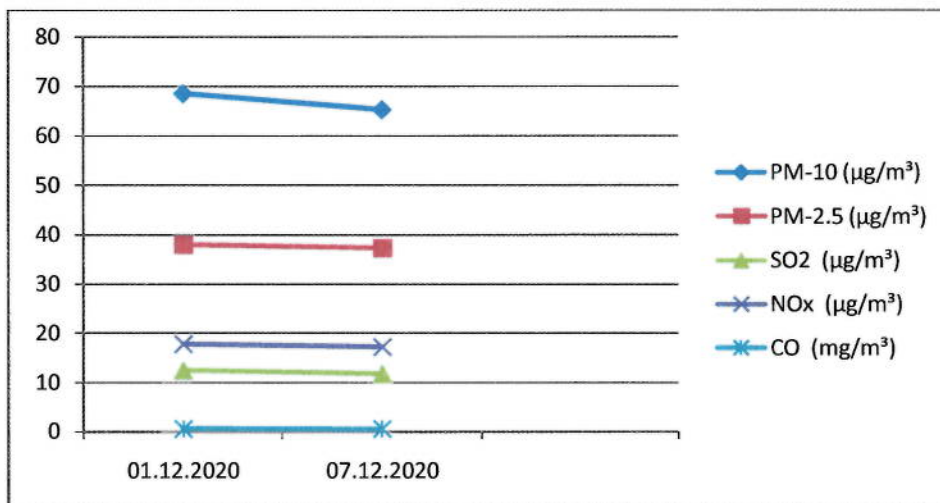
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Report no.-CEMC/TSSEZL/040121/A4

Issued Date-04.01.2021

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. P K Pattnaik
Weather Conditions	Clear
Reference No.	CEMC-04012021A4
Instrument Used	Respirable Dust Sampler, Fine Dust Sampler, Gaseous Attachment

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 SEZ Main Gate	07.12.2020	<20	<10	<0.1	<0.6	<0.44	<5	<1
Near TSSEZL Project Office	07.12.2020	<20	<10	<0.1	<0.6	<0.44	<5	<1
Near Anadrone Office	07.12.2020	<20	<10	<0.1	<0.6	<0.44	<5	<1
NAAQ* Standard		400	100	1.0	20	6	5	1
Methods of Analysis		Indophenol Blue Method followed by CPCB	IS: 5182 (Part-9)	IS: 5182 (Part-22)	As per CPCB method followed by AAS	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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Report no.-CEMC/TSSEZL/040121/N

Issued Date-04.01.2021

NOISE LEVEL MONITORING REPORT

Issued to	M/s. Tata Steel Special Economic Zone Ltd, Gopalpur.
Sample Description	Ambient Noise Quality
Sample Drawn Period/ Time	Monthly
Sample Drawn by	Mr. P K Pattnaik
Weather Conditions	Clear
Reference No.	CEMC-04012021N
Instrument Used	Noise Meter

Date	Location	Noise in dB(A) Day time	Noise in dB(A) Night time
15.12.2020	TSSEZL Project Office	61.7	53.6
15.12.2020	TSSEZL Entrance Gate Outside	64.9	52.8
15.12.2020	Anadrona (university gate) road	64.5	54.5

NATIONAL STANDARD OF 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

END OF REPORT

MP

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Report no.-CEMC/TSSEZL/040121/W1

Issued Date-04.01.2021

DRINKING WATER QUALITY TEST REPORT

Name & Address of the Client	: M/s. Tata Steel Special Economic Zone Ltd, Gopalpur.
Date of Sampling	: 30.12.2020
Sampling by	: Mr. P. K Pattnaik
Date of Sample Received	: 31.12.2020
Date of Analysis	: 31.12.2020 to 04.01.2021
Sample Description	: Drinking Water
Sample Location	: Drinking Water TSSEZL Project Office
Reference No.	: CEMC-04012021W1

ANALYSIS RESULT

Sl. No	Parameter	Unit of measurement	Standard as per IS: 10500, 2012		Result
			Acceptable Limit	Permissible Limit	
1	Colour	Hazen	5	15	<05
2	Odour	--	AL	AL	AL
3	Taste	--	AL	AL	AL
4	Turbidity	NTU	1	5	<1.0
5	pH Value @ 25°C	--	6.5-8.5	No Relaxation	6.75
6	Total Hardness (as CaCO ₃)	mg/l	200	600	110
7	Iron (as Fe)	mg/l	0.3	No Relaxation	0.26
8	Chloride (as Cl)	mg/l	250	1000	28.9
9	Residual, free Chlorine	mg/l	0.2	1.0	ND
10	Total Dissolved Solids	mg/l	500	2000	201
11	Calcium (as Ca)	mg/l	75	200	25.65
12	Magnesium (as Mg)	mg/l	30	100	11.18
13	Copper (as Cu)	mg/l	0.05	1.5	<0.03
14	Manganese (as Mn)	mg/l	0.1	0.3	<0.05
15	Sulphate (as SO ₄)	mg/l	200	400	12.8
16	Nitrate (as NO ₃)	mg/l	45	No Relaxation	5.1
17	Fluoride (as F)	mg/l	1.0	1.5	0.13
18	Phenolic Compounds (as C ₆ H ₅ OH)	mg/l	0.001	0.002	<0.001
19	Mercury (as Hg)	mg/l	0.001	No Relaxation	<0.001
20	Cadmium (as Cd)	mg/l	0.003	No Relaxation	<0.003
21	Selenium (as Se)	mg/l	0.01	No Relaxation	<0.001
22	Arsenic (as As)	mg/l	0.01	0.05	<0.001
23	Cyanide (as CN)	mg/l	0.05	No Relaxation	ND
24	Lead (as Pb)	mg/l	0.01	No Relaxation	<0.01
25	Zinc (as Zn)	mg/l	5	15	<0.05
26	Chromium (as Cr)	mg/l	0.05	No Relaxation	<0.05
27	Mineral Oil	mg/l	0.5	No Relaxation	<0.05
28	Total Alkalinity (as CaCO ₃)	mg/l	200	600	134
29	Aluminium (as Al)	mg/l	0.03	0.2	<0.01

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30	Boron (as B)	mg/l	0.5	1.0	<0.2
31	Total Coliform	MPN/100 ml	Absent in 100 mL Sample	Absent	Absent
32	Faecal Coliform	MPN/100 ml	Absent in 100 mL Sample	Absent	Absent

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

END OF REPORT

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Report no.-CEMC/TSSEZL/040121/W2

Issued Date-04.01.2021

SURFACE WATER QUALITY TEST REPORT

Name & Address of the Client : M/s. Tata Steel Special Economic Zone Ltd, Gopalpur.
Date of Sampling : 30.12.2020
Sampling by : Mr. P. K Pattnaik
Date of Sample Received : 31.12.2020
Date of Analysis : 31.12.2020 to 04.01.2021
Sample Description : Surface Water
Sample Location : Inlet of Khari Nalla (SW1)
Reference No. : CEMC-04.01.2021W2

ANALYSIS RESULT

Sl. No.	Test Parameters	Unit	Max. Tolerance Limit as per IS 2296 : Class C	Result
1	Colour, Max.	Hazen	300	6
2	pH Value @ 25°C	--	6.5 to 8.5	7.61
3	Iron as Fe, Max.	mg/l	50	0.33
4	Chloride as Cl, Max.	mg/l	600	29.6
5	Dissolved Solids, Max.	mg/l	1500	304
6	Dissolved Oxygen, Min.	mg/l	4	5.6
7	BOD for 3 days @ 27°C, Max.	mg/l	3	2.4
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	6.3
11	Nitrate as NO ₃ , Max.	mg/l	50	5.5
12	Fluoride as F, Max.	mg/l	1.5	0.14
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	170
23	Faecal Coliform	MPN/100ml	--	20

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

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Seal of Laboratory

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Report no.-CEMC/TSSEZL/040121/W3

Issued Date-04.01.2021

SURFACE WATER QUALITY TEST REPORT

Name & Address of the Client : M/s. Tata Steel Special Economic Zone Ltd, Gopalpur.
Date of Sampling : 30.12.2020
Sampling by : Mr. P. K Pattnaik
Date of Sample Received : 31.12.2020
Date of Analysis : 31.12.2020 to 04.01.2021
Sample Description : Surface Water
Sample Location : Outlet of Khari Nalla (SW2)
Reference No. : CEMC-04012021W3

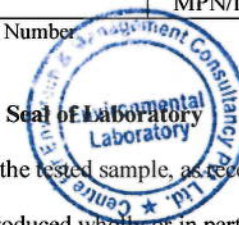
ANALYSIS RESULT

Sl. No.	Test Parameters	Unit	Max. Tolerance Limit as per IS 2296 : Class C	Result
1	Colour, Max.	Hazen	300	6
2	pH Value @ 25°C	--	6.5 to 8.5	7.55
3	Iron as Fe, Max.	mg/l	50	0.34
4	Chloride as Cl, Max.	mg/l	600	29.9
5	Dissolved Solids, Max.	mg/l	1500	312
6	Dissolved Oxygen, Min.	mg/l	4	5.4
7	BOD for 3 days @ 27°C, Max.	mg/l	3	2.6
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	6.5
11	Nitrate as NO ₃ , Max.	mg/l	50	5.7
12	Fluoride as F, Max.	mg/l	1.5	0.14
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	170
23	Faecal Coliform	MPN/100ml	--	22

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

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Support towards Sustain the Livelihood against Combat COVID-19

1. Marketing of Vegetables during Lockdown

Lockdown for COVID-19 became a problem for selling of vegetables by the farming community. With the help of newly formed Farmers Producers Company(Maa Shyamalai Farmers Producers Company Ltd, Burupada and Community Resource Persons 06 nos. of Vans and Vendors(Middle men) were arranged to purchase of their produces from the doorstep and crop fields. The vegetables were harvested by the farmers at midnight and send to Berhampur for selling by early morning according to time declared by district administration (7.00am to 10am)



In contineous to the same arrangement was made for Vegetable farmers of Hinjilikatu to sale their produces through "**Green On Wheel**" by taking the approval of Hinjilikatu Municipality and its identified area through the middle men by ensuring social distance . Also due to increase in production and decrease in prices of vegetables like Brinjal and Tomato, the farmers were advised to go for crop diversification in the field of brinjal and Toamato by sowing Zaid (Summer crops) like Watermelon, Pumpkin, Cowpea, Capsicum and Beans. The field preparation has been started by some of our farmers.



Arrangement has been made for saleing of 25101.9 qtls of harvested vegetables from four vegetable clusters and sale with income generation of Rs 1,91,20,000.00 during the peak harvesting season and the lockdown period.

2. Milk Collection through Cooperative Societies.

The eight Milk Cooperative Societies opened by TSRDS, Gopalpur collected 1800ltrs of milk on daily and stored at BMC and sold to the OMFED. Only about 1200ltrs of milk is collecting through Newsindhiguan Milk Cooperative Society from 150 farmers.

Due to lockdown and less market demand the milk union GGGMU unwilling to procure the milk from the farmers .Discussion was made with the General Manager, GGGMU and as per the decision of OMFED the apex body at State level for marketing of milk that

- a. The daily milk requirement for the two district (Ganjam & Raygarh) was 26000ltrs
- b. Milk collected from two district was-8000ltrs
- c. Currently milk consumption of two district is 22000ltrs
- d. Due to gap in milk collection they were procured the milks from near by district (Nayagarh & Khurda) of 20000ltrs to maintain the gap.
- e. Currently the milk collection has been increased to 12000ltrs due lockdown and closing of the market & others
- f. The OMFED is allowed to the milk union GGGMU to collect only 6000ltrs of milk from the societies.

The correspondence made by TSRDS with the district administration and letter issued to MD,OMFED, Bhubaneswar, Collector & DM magistrate to look into the matter for procuring of surplus milk through the milk union GGGMU. The Collector & District Magistrate, Ganjam proactively discussed the district issue with the Secretary, ARD Dept.- cum-MD,OMFED and he

had allowed the GGGMU through OMFED to procure all 12000 ltrs of milk through the Milk Society registered farmers as per the standards fixed for SNF & Fat %age from the district.



In the month of April,2020 during Lockdown 46459.8ltrs(From New sindhiguan,Tata Colony-30459.8ltrs) of milk have been procured and sold to OMFED with income of Rs.14,86,688.00.

In the month of May,2020 Toto of 52,899.4ltrs of milk (from New Sindhiguan MCS,Tata Colony-31,929.8ltrs)have been procured and sold to OMFED with income of Rs.16,92,780.80.

June,2020: Milk Collected and sold to OMFED- 52752.6 ltrs with income generation of Rs. 16,88,083.20 only.

July,2020: Milk Collected and sold to OMFED- 48778.6 ltrs with income generation of Rs. 15,60,915.00 only.

August,2020: 48778.6 ltrs of milk have been procured and sale to OMFED through 247 farmers with income generation of Rs.15,60,915.00.

September,2020: 53518.1 ltrs of milk have been procured and sale to OMFED through 303 farmers with income generation of Rs.1712601.60

In addition to milk collection provided cattle health care support through our two Animal Health Trainees in our operational villages during the lockdown from 22nd March,2020 to till date

A. No. of Artificial Insemination(AI)	= 41nos.
B. No. of Animal Treated	= 153nos.

C. Successfull Delivered

= 15 nos.



3. Polyhouse Rose Cultivation

The established each polyhouse were harvesting and marketed 800-1000 flowers on daily basis. Due to lockdown situation the problem arises in sale of flowers. Though the flowers are perishable and unavailability of storage facility the famers were discouraged. Accordingly discussion was made with district administration and Line departmental officers (Deputy Director horticulture)for arrangement of Cold storage. Also farmers are advised to bend the plant to restrict/delay the production of flower during the lockdown to another 20 to 30 days.



Restricting the production of flower accordingly the market sition under Polyhouse rose cultivation by technical advisory through the process for bending.

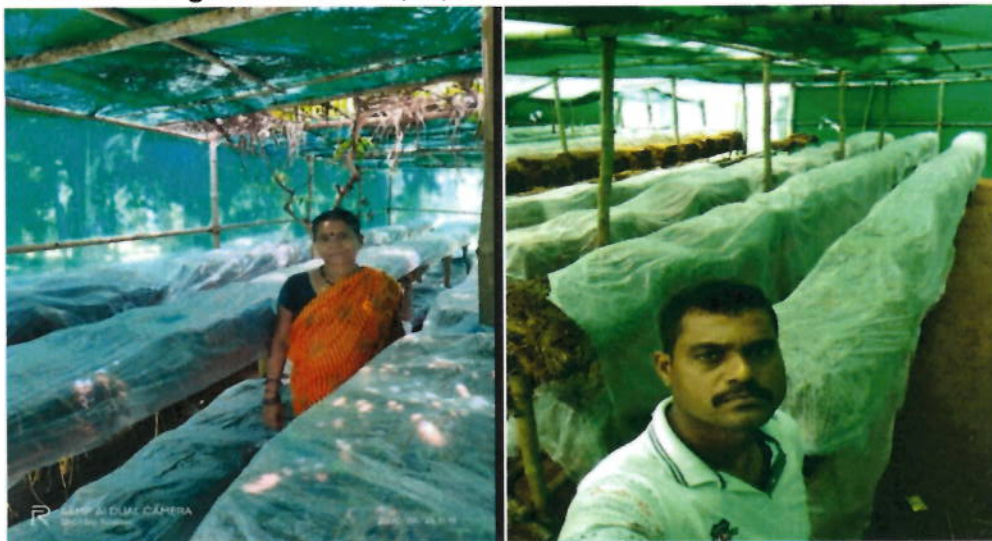
4. Mushroom Cultivation

During the lockdown and allowed to conduct the agricultural activities by the Govt., under our newly formed Mushroom Production Society(Mallikeswar Mushroom Producers Cooperative Society), 17 farmers/unit have produced 2450kg(Q 24.50) of mushroom and earned of Rs.4,15,500.00 by average sales price of Rs.170.00/kg till April,2020.In the month of May,2020 from 19 farmers/unit have produced 2853.8 kg of mushroom with income generating of Rs.,4,83,067.00.

Total Mushroom harvested & Sold-5303.8Kg

Avg.saleing price=Rs.160.00/kg

Total Income generated=Rs.8,98,567.00



5. Fish Production

In addition to Started agricultural activities like harvesting and selling of 9655kg fishes from 08 village community pond by ensuring social distance with income generation of Rs. 12,58,500.00 (Rupees Forteen Lakh Forty Eight Thousand Two Hundred Fifty Only) by the farmers after allowing to take agricultural activities during Lockdown by the Govt.

Another 7770kg. of fish have been harvested from 07 Villages, Mansurkota, Allipur, Palligumla, Sanakusasthali, S.paikapada, P.Laxmipur&Ramayapalli and sold with income generation of Rs.11,65,500.00(Rupees Eleven Lakh Sixty five Thousand Five Hundred only)

Total Fish Harvested-17,425kg

Avg.Saleing price-Rs.150.00/Kg

Price Realized /Income generated-Rs.26,13,750.00



6. Engaging the women associated with us through SWABALAMBAN.

The members of painting units were engaging with preparation of mask for volunteerism against use of mask to prevent infestation from Corona virus and painting at home according to the design given by the master painter through digitalized way to maintain their livelihood during the lockdown period.



7. Prepare and distribution of MASK by RISTA Team

To prevent contamination from CARONA virus, **200(Two Hundred)nos.** of Mask have been prepared and distributed among the needy & poor's by the adolescents of RISTA in four operational villages of Jagannathpur, Basanaputti, Sindhiguan and Chamakhandi.





In continuous to this another 600nos.mask and sanitizers have been provided to Warrior- The Heroes of COVID-19 in three police station (Chamakhandi,Chatrapur & Gopalpur) and to SOUTH Co employees .



Support has been given by the RISTA Team to the health workers for 100% health screening of 3697 households of 26 operational villages and distribution of cooked food at the GP Level by the ten PLC(Primary Learning Centre)teachers .



8. Arrangement of food for the needy

During this crucial time each and every day we were passing through some new experiences to deal with the pandemic Covid -19 in cooperate with Govt. system for ensuring each and every person of our working area to get benefit from the ongoing schemes. The information received from MS. Geeta, RISHTA field worker that some laborers from Kolkata working in Kewda processing unit of our periphery villages are unable to get ration from the panchayat as they are the outsiders. Whatever the money with them was finished and they don't even fulfill their daily meals. With approach to the Sarpanch & MPS of the Panchyat Sriramchandrapur through the help of one of our CRP and Ward member the free kitchen facility had been extended to all 21 through the WSHG appointed by the District administration to the Laborers of West Bengal(12 in 1st phase and followed by another 09 person).



9. Running of Kewda Industry

The TSRDS, Gopalpur unit with the help of CRP(community Resource Person) played a keen role for the Kewda industries as well as the peoples associated in collection of

flowers and the laborers to obtained their livelihood by getting the order/permission from the law & order enforcing agency. As the Govt. had provided the permission to do the agricultural activity by ensuring the social distance, the Police station, Chamakhandi permitted the farmers/villagers to collect the Kewda flower and saleing to the industry by getting Rs.7.00 to 8.00/flower. In a single day a man is able to collect and sale about 40-50 flowers with getting Rs.300.00 to Rs.400.00 to sustain the livelihood during the lockdown period.



10. Institutional Delivery of pregnant women of operational villages for a healthy live of mother & the Infants.

Prepared the list of pregnant women of our operational villages by the RISTA team and coordinate in providing smooth delivery/ health facility to the mother and the infants during the lockdown period with coordination of ASHA & Anganwadi Workers.

Sl.No.	Name	Village	EDD(Expected Date of Delivery)	Date of Delivery	Institution
1	Joshna Sethy	Jagannathpur	25.04.2020	10.05.2020	MKCG,Medical College,Berhampur
2	Sunita Reddy	Jagannathpur	22.04.2020	28.04.2020	MKCG,Medical College,Berhampur
3	P.Madhuri Reddy	Raghunathpur	18.04.2020		
4	Sujata Sahu	Raghunathpur	17.04.2020	16.04.2020	MKCG,Medical College,Berhampur
5	Kuni Pradhan	Mandiapalli	07.04.2020		
6	Nirmala Sahu	Badaputti	03.04.2020	23.04.2020	MKCG,Medical College,Berhampur
7	D Puspa	Badaputti	24.04.2020	25.04.2020	MKCG,Medical College,Berhampur
8	Urmila Sethi	Sitarampur	10.04.2020	23.04.2020	MKCG,Medical College,Berhampur
9	S Adilaxmi Reddy	Palipadar	27.04.2020	28.04.2020	MKCG,Medical College,Berhampur
10	Swanalata Maharana	Badapur	17.04.2020	13.04.2020	MKCG,Medical College,Berhampur
11	Sujata Nayak	Badapur	09 month continue	08.04.2020	MKCG,Medical College,Berhampur
12	Swapna Gauda	Badapur	09.04.2020	12.04.2020	MKCG,Medical College,Berhampur
13	B Sunita Reddy	Jaganathpur	09 month continue	28.04.2020	MKCG,Medical College,Berhampur

11. Engaging children during the lockdown period.

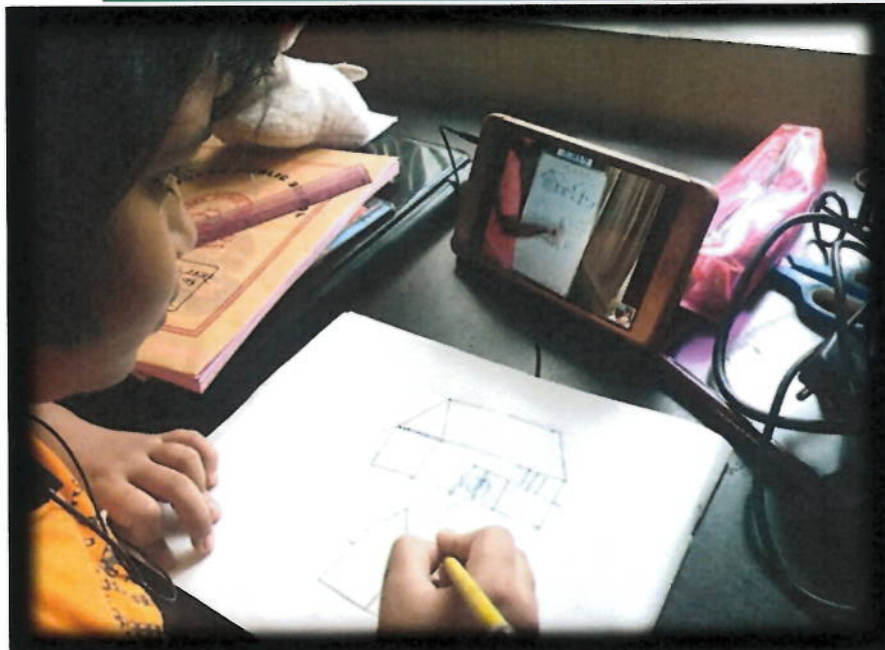
Corona virus disease (COVID-19) is an infectious disease caused by a newly discovered Corona virus. Most people infected with the COVID-19 will experience with mild to moderate respiratory illness. The older people with medical problems like cardiovascular disease, diabetes ,chronic respiratory disease are more likely to develop serious illness. At this time, though there are no specific vaccines or treatments for this, the best way to prevent and slow down transmission by protect yourself and others from infection by frequent hand washing coughing into the bend of elbow wearing a cloth face covering with practice social distancing. During this pandemic of COVID-19, to break the chain of spreading of the infestation, the Govt. has taken a major decision i.e Lockdown till 03rd May, 2020 and "Stay at home and Stay safe".

To extend this slogan/ advisory and to engage the students/professionals during the lockdown period Tata Steel Foundation along with District administration, Ganjam in collaboration with X-GEN College of Visual Art is creating awareness among the community about to prevent form the infestation and respect to the Covid-19 warriors-Our

Heroes through drawing, painting competition, slogan writing and free online Certificate course on Sketching & drawing, Photoshop.

The objective of the initiative is to

- Creating awareness on Covid-19 infestation and prevention from the community.
- Engaging the students and professional during the lockdown period
- Respect to the warriors-our heroes of Covid-19

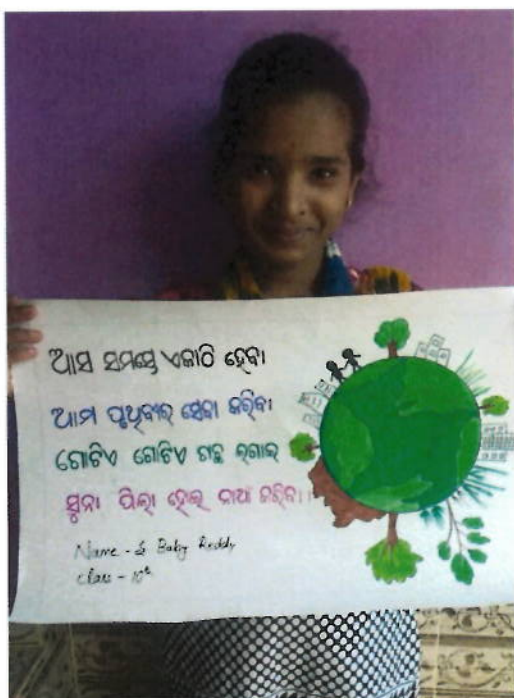


- 167 students are undergoing in online courses of drawing, painting and photoshop from three states of Jharkhand, Bihar & Odisha.

- More than 300 professional are enrolled under the drawing competition for the warrior-the heroes of Covid-19.
- 380 students were participated in the drawing completion on COVID-19 and Slogan on Stay Home and Stay Safe.

12. Observation of World Environment day

Digital drawing competition has been organized for the Youths @home among the youths of RISTA on world environment day and nutritional plants have been planted in their backyards on the environment day. From 06 operating villages 28 youths were took participated and upload their drawing in a whatsapp group for scrutiny. Along with this 200 saplings have been planted (100 each at Tata Colony & TATA Steel SEZ Plant) towards conservation of the environment & biodiversity.



13. Creating Livelihood Opportunity in convergence with Line department

In Convergence with Line department (**Agriculture and Farmers Empowerment, Panchyat Raj, RD**) under MGNREGS scheme towards employment generation and to sustain the livelihood of the farmers/agricultural labourer following activities have taken in our operational GPs.

A. Sriramchandrapur:

- | | |
|---|------------------|
| a. Farm Pond-02nos. amounting@Rs.50,000.00each | =Rs.10,000,00.00 |
| b. Dugwell(Open Well)-02nos. amounting Rs.62,500.00each | =Rs. 1,30,000.00 |

B. Burupada(Hinjilikatu)	
a. Cattleshed-11nos. amounting @Rs.1,13,000.00each	=Rs.12,43,000.00
b. Field Bond -2nos. @Rs.15000.00/ac	=Rs, 30,000.00
C. Jahami	
a. Pond Renovation-01 no.	=Rs.10,000,00.00
D. Karatali	
a. Pond Renovation-01 no.	=Rs.10,000,00.00
E. Baulaguan	
a. Approach road to GP-01no.	=Rs.10,000,00.00
b. Canal Renovation-01no.	=Rs.10,000,00.00
F. Mahanandapur	
a. Pond Renovation-01no.	=Rs. 5,000,00.00
G. Badakusasthali	
a. Pond Renovation-01no.	=Rs.10,000,00.00
H. Sanakusasthali	
a. Pond Renovation-01no	=Rs 5,000,00.00
I. Karapalli	
a. Pond Renovation-01no.	=Rs. 6,40,000.00
b. Approach Road -01no.	=Rs. 5,000,00.00
J. Narendrapur	
a. Pond Renovation-01no	=Rs.10,000,00.00
K. Luhajhar	
a. Pond Renovation-01no.	=Rs. 15,000,00.00
L. Chamakhandi	
a. Open Well (Dugwell)-01no.	=Rs. 1,63,000.00
M. Kalipalli	
a. Approach road to GP-01no.	=Rs. 5,000,00.00
N. Laxmipur	
a. Pond renovation-01no	=Rs.10,000,00.00
O. Nauli	
a. Pond Renovation-01no	=Rs.10,000,00.00
P. Nadika	
a. Pond Renovation-01no	=Rs.10,000,00.00
b. Canal Renovation-01no	=Rs. 8,000,00.00
c. Approach Road-01no.	=Rs. 5,000,00.00
Q. Gobindpur	
a. Pond Renovation-01no.	=Rs.10,000,00.00
R. Putiapadar	
a. Pond Renovation-01no.	=Rs.10,000,00.00
S. Bipilingi	
a. Pond renovation-01no.	=Rs. 7,000,00.00
b. Approach road-01no	=Rs. 3,000,00.00
T. Ailapur	
a. Pond Renovation-01no	=Rs. 10,000,00.00
Total = Rs.2,18,70,000.00	

Total nos.729 labourer have been engaged through MGNREGS for conducting above works with income generation of Rs.2,18,70,000.00 only.



Support to District Administration during the Pandemic

- 5000 nos. of dry ration kits have been provided to the district admin. For distributing to the COVID patients.



- To maintain the COVID-19 guidelines at urban and Rural areas of Ganjam district, the police men who are more vulnerable and frontline warriors directly contacted with the +Ve patients were Provided with 500 nos. of Face Mask (N-95 standard), 500nos. Sanitizer, 20nos Infrared Thermometer and 20 nos. of Pulse Oximeter for use of the frontline Police Covid Warriors to ensuring of social distancing and use of mask by people, which is highly essential in rural and urban areas of Ganjam district.



- To provide health service at the doorstep for home quarantine patients and TMH(Temporary Medical Health Center) 05 nos of MMU-Mobile Medical unit have been

given to the district administration for a period of two months.

