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KATTUPALLI PORT
CHENNAI's NEW GATEWAY

MIDPL/ EC-HYC/2018-19/02

Date: 16-10-2018

Additional Principal Chief Conservator of Forests (C),
Ministry of Environment, Forest and Climate Change, Regional Office (South Eastern Zone),
I[st] and II[nd] Floor, Handloom Export Promotion Council,
34, Cathedral Garden Road, Nungambakkam,
Chennai – 600 034

Dear Sir,

Sub : Environment & CRZ Clearance for the development of proposed Port at Katupalli, Tiruvallur District of Tamilnadu by M/s Marine Infrastructure Developer Pvt. Limited – Submission of Half yearly Compliance report for the period of April 2018 – September 2018

Ref : Bifurcation of EC&CRZ Clearance vide F. No 10-130/2007 – IA.III dtd . 9th February 2018

With reference to the captioned subject and cited reference above; we are herewith submitting the Half yearly Compliance Report for the period **April 2018 to September 2018** in both hard & soft copy for your kind reference.

Thank you,

For Marine Infrastructure Developer Ltd

Authorized Signatory.

Marine Infrastructure Developer Pvt. Ltd. Chennai 600 120

Encl: As above

सी. आर. अनुभाग द्वारा प्राप्त किया
Received by CR Section
पर्यावरण, वन एवं जलवायु परिवर्तन मंत्रालय
Ministry of Environment, Forests & Climate Change
भारत सरकार/Govt. of India
इन्दिरा पर्यावरण भवन/Indira Paryavaran Bhawan
जोरबाग रोड, अलीगंज/Jorbagh Road, Aliganj
नई दिल्ली/New Delhi-110003

Copy to:

1) The Director (Monitoring –IA-III Division), Ministry of Environment, Forest & Climate Change, Indira Paryavaran Bhawan, Jor Bagh Road, New Delhi – 110003
2) Zonal Office, Central Pollution Control Board, A-Block, Nisarga Bhavan, 1st and 2nd Floors, 7th D Cross, Thimmaiah Road, Shivanagar, Bengaluru, Karnataka 5600879
3) The Member Secretary, Tamil Nadu Pollution Control Board, 76, Mount Salai, Guindy, Chennai - 600 032
4) The District Environmental Engineer, Tamil Nadu Pollution Control Board, EPIB Building, A.O Block, Gummidipoondi Industrial Complex, Gummidipoondi – 601201.
5) Member Secretary TNCZMA & Director – Dept of Environment, No.1, Jeenis Road, Panagal Building, Ground Floor, Saidapet, Chennai -600 015

Marine Infrastructure Developer Pvt Ltd
(Kattupalli Port)
Kattupalli Village, Ponneri Taluk,
Tirivalluvar District 600 120,
Tamil Nadu, India

Tel +91 44 2824 3062

CIN: U74999TN2016PTC103769

DTDC Express Limited
Regd.Office: No-3,Victoria Road
Bengaluru - 560047

dtdc lite

Pouch Num:

ORIGIN:

DEST:

Consignment Note / Subject to Bengaluru Jurisdiction. Please refer to all the terms & conditions printed overleaf of this consignment note before tendering a consignment to DTDC

Sender's Code: | Pick-up Ref. No:

1 Sender's (Consignor) Name: Ph:
Company Name:
Address:
City: State: PIN Code:
Sender's GSTIN*: *Where Applicable

2 Recipient's (Consignee) Name: Ph:
Company Name:
Address:
City: State: PIN Code:
Recipient's GSTIN*: *Where Applicable

3 Nature of consignment	Dox ☐	Non-Dox ☐	Total Num Pcs:	
DIM 1: L cm X B cm X H cm X Pcs			Actual Wt.:	kg
DIM 2: L cm X B cm X H cm X Pcs			Volumetric Wt.:	kg
DIM 3: L cm X B cm X H cm X Pcs			Chargeable Wt.:	kg

4 Description of Content	Value of Goods
The Total Value of consignment for carriage / E-Way bill	₹

5 Risk Coverage: Owner ☐ Carrier ☐ 6 Paper Work Enclosures
Ref. condition no.16 overleaf for detailed risk surcharge chart applicable.

7 Type of consignment (Please ✓) Commercial ☐ Non Commercial ☐
8 Value Added Services - Not Available
CN Expiry Dt.:

9 Mode : Surface ☐ Air cargo ☐ Express ☐

10 Charges	Amount (₹)
a) Tariff (incl. OI FSC + Taxes)	
b) Value Added Service Charges	
c) Risk Surcharge	
d) Total amount (a+b+c)	

Above charges are inclusive of GST & other taxes if applicable

11 I/We declare that this consignment does not contain personal mail, cash, jewellery, contraband, illegal drugs, any prohibited items and commodities which can cause safety hazards while transporting. The declared value of goods is true and accurate.

Sender's Signature
Date: Time: AM/PM
The consignment note is not a tax invoice. A tax invoice will be made available by DTDC or it's channel partner as the case may be, upon request.

Mode of Payment: Cash ☐ Card ☐ Wallet ☐
12 Booking Branch / Franchisee Code
Courier Signature

Consignment Number: *C84907259*

13 Receiver's Name:
Relationship:
Ph. No.:
Company Stamp & Signature: DD MM YY TIME AM/PM

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Item Code : 11000135 | Item LITE Circle Sheet - 8x4x3

DTDC Express Limited
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Pouch Num:

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Sender's Code:

Pick-up Ref. No:

1 Sender's (Consignor) Name: Ph:

Company Name:

Address:

City: State: PIN Code:

Sender's GSTIN*:

*Where Applicable

2 Recipient's (Consignee) Name: Ph:

Company Name:

Address:

City: State: PIN Code:

Recipient's GSTIN*:

*Where Applicable

3 Nature of consignment: Dox ☐ Non-Dox ☐

DIM 1: L	cm X B	cm X H	cm X	Pcs	Total Num Pcs:
DIM 2: L	cm X B	cm X H	cm X	Pcs	Actual Wt.: kg
DIM 3: L	cm X B	cm X H	cm X	Pcs	Volumetric Wt.: kg
					Chargeable Wt.: kg

4 Description of Content | **Value of Goods**

The Total Value of consignment for carriage / E-Way bill ₹

5 Risk Coverage: Owner ☐ Carrier ☐

Ref. condition no.14 overleaf for detailed risk surcharge chart applicable

6 Paper Work Enclosures

7 Type of consignment (Please ✓): Commercial ☐ Non Commercial ☐

8 Value Added Services - Not Available

CN Expiry Dt.:

9 Mode : Surface ☐ Air cargo ☐ Express ☐

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	Amount (₹)
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b) Value Added Service Charges	
c) Risk Surcharge	
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Company Name:

Address:

City: State: PIN Code:

Recipient's GSTIN*:

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CRZ & Environment Clearance for the development of proposed Shipyard-cum-Minor Port Complex at Kattupali, Ponneri Taluka, Tiruvallur district, Tamil Nadu by M/s Marine Infrastructure Developer private Limited (MIDPL) – bifurcation of Environment & CRZ clearance – reg
File no: 10-130/2007- A.III dated: 09/02/2018.

Specific Conditions:

SN	EC Condition	MIDPL Compliance
(i)	The proponent shall comply all the conditions stipulated in the letter R.C.No. P1/2004/2008, dated 21.10.2008 of the Department of Environment, Chennai.	Complied. Compliance to letter R.C.No. P1/2004/2008, dated 21.10.2008, is enclosed as **Annexure -I**
(ii)	The proponent shall comply all the commitment made vide his letter No. D/Shipyard/00/07 dated 20.03.2009.	Complied This EC is just a bifurcation of original EC of LTSB in name of MIDPL & LTSB. All applicable commitments, wrt letter No. D/Shipyard/00/07 dated 20.03.2009 like provision of fire station, independent port connectivity, no reclamation on areas outside port, non-usage of Tri Butyl Tin [TBT] and treatment of waste water in STP and recycling, disposal of hazardous waste to authorised recyclers are being complied. Dumping of dredging material shall be carried out at identified location, (as per modelling studies carried out by LTSB). In past, LTSB engaged Institute of Ocean Management, Anna University, Chennai for shoreline Change study. MIDPL shall further carry out shoreline studies of the concerned area.
(iii)	Provision shall be made for the housing of Construction labour within the site with all necessary infrastructure and facilities such as fuel or cooking, mobile toilets, mobile STP, safe drinking water, medical health care, creche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.	Complied. Most of the construction labours are from nearby villages. Construction activities are being carried out in daytime and worker leave the site on daily basis.
(vi)	There shall be no withdrawal of groundwater in Coastal Regulation Zone area, for this project. In any case any	Complied. Presently unit is procuring water from M/s. Chennai

	ground water is proposed to be withdrawn from outside the CRZ area, specific prior permission from the concerned State /Central Groundwater board shall be obtained in this regard.	Metropolitan Water Supply and Sewerage Board, Chennai.
(v)	No dumping of dredging materials in the sea shall be undertaken. In case of sea dumping required, an integrated Modelling study to be carried out to locate the dump site so that it does not cause any problem to Ennore port.	Complied. No dumping was carried out during the period April-18 to September-18.
(vi)	Shoreline changes due the project shall be monitored continuously nourishment of northern shoreline shall be carried out using the sediments from beach acceleration on the southern shoreline.	In past, LTSB was associated with Institute of Ocean Management, Anna University, Chennai for shoreline Change study. MIDPL shall further carry out shoreline studies of the concerned area, based on the outcome of the report, necessary measures will be taken.
(vii)	Suitable Screens shall be installed between the construction area and the intakes so that operations of the intakes are not affected by the construction activity.	Complied Presently marine side construction is being carried out within basin area, which is sheltered by northern break water. No impact envisaged.
(viii)	At least a distance of 100 meter shall be provided between intake of Chennai Water Desalination Ltd. (CWDL) and north edge of the northern breakwater as agreed in the meeting between the proponent and CWDL	Complied Distance maintained as agreed.
(ix)	Independent port connectivity shall be developed.	Complied An independent port connectivity was developed
(x)	Rehabilitation if any shall be carried out as per law / State Government.	Complied Rehabilitation was carried out completely as per law / State Government at the time of project implementation.
(xi)	Fire station shall be located within the project area	Complied MIDPL is having dedicated fire station with multiple mobile fire tender.
(xii)	The Hazardous waste generated shall be properly collected and handled as per the provisions of Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016.	Complied. Hazardous wastes generated are handled inline to Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016. Details of the same are submitted to TNPCB as a part of Hazardous waste

		annual return (Form 4) on regular basis. Copy enclosed as **Annexure 2.**
(xiii)	The waste water generated from the activity shall be collected, treated and reused properly.	Complied Domestic waste water generated from the activity is being collected, treated in STP and reused for green belt.
(xiv)	Sewage Treatment Facility should be provided in accordance with the CRZ Notification.	Complied STP provided in accordance with the CRZ notification.
(xv)	No Solid Waste will be disposed of in the Coastal Regulatory Zone area. The Solid Waste shall be properly collected segregated and disposed as per the provision of Solid Waste Management Rules, 2016.	Complied No solid waste is being disposed of in the CRZ area. APSEZ has developed a vision for making itself – "A Zero Waste Port" by the year 2020. MIDPL vision is based on adoption of 5R principle of waste management i.e Reduce, Reuse, Reprocess, Recycle & Recover. All waste will be handled inline to 5R principle.
(xvi)	Installation and operation of DG set if any shall comply with the guidelines of CPCB.	Complied 02 no of DG set with 2000 kVA capacity has been installed inline to CPCB guideline. Flue gas anaylsis report, attached as **Annexure 3**
(xviii)	Air quality including the VOC shall be monitored regularly as per the guidelines of CPCB and reported.	Complied Ambient Air Quality Monitoring is being carried out by NABL accredited agency, Reports for the period April 2018 – September 2018 is enclosed as **Annexure -3**. All emissions are well with the prescribed standards
(xix)	The project proponent shall undertake green belt development all along the periphery of the project area and also alongside the road.	Complied Adequate greenbelt has been developed and maintained. As, Project will be undergoing expansion, and green belt shall be developed inline to the requirement.
(xx)	All necessary clearances from the concerned agencies shall be obtained before initiating the project.	Complied
(xxi)	Project proponent shall install necessary oil spill mitigation measures in the	Complied All necessary precaution will be

	shipyard. The details of the facilities provided shall be informed to this Ministry within 3 months from the date of receipt of this letter.	taken to avoid any kind of spillages. Oil spill contingency plan along with list of available oil spill equipment submitted vide our Letter No. MIDPL/TNPCB/GMP/EC-HYC dated 14.05.2018.
(xxii)	No hazardous chemicals shall be stored in the Coastal Regulation Zone area.	Noted.
(xxiii)	The project shall not be commissioned till the requisite water supply and electricity to the project are provided by the PWD/ Electricity Department.	Noted.
(xxiv)	Specific arrangements for rainwater harvesting shall be made in the project design and the rain water so harvested shall be optimally utilized.	Due to high water table rainwater harvesting may not be feasible however possibilities will be explored.
(xxv)	The facilities to be constructed in the CRZ area as part of this project shall be strictly in conformity with the provisions of the CRZ Notification, 2011 and its amendment. The facilities such as office building and residential buildings which do not require water front and foreshore facilities shall not be constructed within the Coastal Regulation Zone area.	Complied. All construction has been done inline to CRZ Notification, 2011 & EC&CRZ clearance obtained.

General Conditions:

(i)	Construction of the proposed structures shall be undertaken meticulously conforming to the existing Central/local rules and regulations including Coastal Regulation Zone Notification 1991 & its amendments. All the construction designs /drawings relating to the proposed construction activities must have approvals of the concerned State Government Departments /Agencies.	Complied All construction has been done inline to CRZ Notification , 2011 & EC&CRZ clearance obtained
(ii)	Adequate provisions for infrastructure facilities such as water supply, fuel, sanitation etc. shall be ensured for construction workers during the construction phase of the project so as to avoid felling of trees/mangroves and pollution of water and the surroundings.	Complied Most of the construction labours are from nearby villages. Construction activities are being carried out in daytime and worker leave the site on daily basis.
(iii)	The project authorities shall make necessary arrangements for disposal of solid wastes and for the treatment of effluents by providing a proper wastewater treatment plant outside the CRZ area. The quality of treated effluents, solid wastes and noise level etc. must conform to the standards laid down by the competent authorities including the Central/State Pollution Control Board and the Union Ministry of Environment and Forests under the Environment (Protection) Act, 1986, whichever are more stringent.	Complied Disposal of solid waste & STP unit is provided in accordance with the CRZ notification. Environment Monitoring is being carried out by NABL accredited agency, Reports for the period April 2018-Sep 18 is enclosed as Annexure -3 All the results are found to be well within the prescribed standard.
(iv)	The proponent shall obtain the requisite consents for discharge of effluents and emissions under the Water (Prevention and Control of Pollution) Act, 1974 and the Air (prevention and Control of Pollution) Act, 1981 from the Tamil Nadu State Pollution Control Board before commissioning of the project and a copy of each of these shall be sent to this Ministry.	Complied. Consents for discharge of effluents and emissions under the Water (Prevention and Control of Pollution) Act, 1974 and the Air (prevention and Control of Pollution) Act, 1981 has been obtained from the Tamil Nadu State Pollution Control Board. CTO under Air and Water act, enclosed as **Annexure – 4.**
(v)	In order to carry out the environmental monitoring during the operational phase of the project, the project authorities shall establish an environmental laboratory well equipped with standard equipment and facilities and qualified manpower to carry out the testing of various environmental	Complied MIDPL is having Environmental Management Cell, staffed with qualified personnel at site supported by team at Head Office in Ahmedabad.

	parameters.	Environment monitoring is being carried out by NABL accredited agency.
(vi)	The proponents shall provide for a regular monitoring mechanism so as to ensure that the treated effluents conform to the prescribed standards. The records of analysis reports must be properly maintained and made available for inspection to the concerned State/Central officials during their visits.	Complied. Domestic Waste water is being treated in STP and inlet and outlet characteristic of water is regularly analysed by NABL accredited agency, the monitoring results for the period April 2018-Sep 2018 is enclosed as **Annexure - 3**. All the results are found to be well within the prescribed standard. Records are made available at site for inspection of State / Central officials during their visit.
(vii)	The sand dunes and mangroves, if any, on the site shall not be disturbed in any way.	No Sand dune and mangroves are present on the site.
(viii)	A copy of the clearance letter will be marked to the concerned Panchayat / local NGO, if any, from whom any suggestion / representation has been received while processing the proposal.	Complied This EC is just a bifurcation of original EC of LTSB.
(ix)	The Tamil Nadu Pollution Control Board shall display a copy of the clearance letter at the Regional Office, District Industries Centre and Collector's Office/Tehsildars Office for 30 days.	The condition does not pertain to project proponent
(x)	The funds earmarked for environment protection measures shall be maintained, in a separate account and there shall be no diversion of these funds for any other purpose. A year-wise expenditure on Environmental safeguards shall be reported to this ministry	complied. Separate budget for the Environment Protection is earmarked every year. All the expenses are recorded in advanced accounting system of the organization. Budget for Environment Management measures for the FY 2018-19 is Rs.71.8 Lakhs. Environmental Expenditure carried out during Apr'18 –Sep'18 is Rs. 18 Lakhs /- Breakup details are as follows; a) Environmental Monitoring – Rs. 6 Lakhs b) O&M of STP – Rs. 6 Lakhs c) Greenbelt & Housekeeping – Rs. 6 Lakhs.
(xi)	Full support shall be extended to the officers (this Ministry's Regional Office at Chennai and the officers of the Central and State Pollution Control Boards by the project	Noted.

	proponents during their inspection for monitoring purposes, by furnishing full details and action plans including the action taken reports in respect of mitigative measures and other environmental protection activities.	
(xii)	In case of deviation or alteration in the project including the implementing agency, a fresh reference shall be made to this ministry for modification in the clearance conditions or imposition of new ones for ensuring environmental protection.	Noted.
(xiii)	This Ministry reserves the right to revoke this clearance, if any of the conditions stipulated are not complied with to the satisfaction of this Ministry.	Noted.
(xiv)	This Ministry or any other competent authority may stipulate any other additional conditions subsequently, if deemed necessary, for environmental protection, which shall be complied with.	Noted.
(xv)	The Project proponents shall inform the Regional Office at Chennai as well as the Ministry the date of financial closure and final approval of the project by the concerned authorities and the date of start of Land Development Work.	Complied by LTSB before bifurcation itself.

EC & CRZ Amendment letter No. 10-130/2007- A.III dated 12.05.2010:

(2. Specific Conditions :)

(i)	The details of combined effect on both the Ports (i.e. Ennore Port and Kattupalli Port) shall be carried out to monitor the impact of the post-dumping. This model study shall be carried out for a period of one year.	Complied M/s LTSB has already carried out detailed modelling study to understand impact of post dumping and report was submitted to Ministry. No dumping was being carried by MIDPL during the period April 2018-Sep 18. MIDPL shall further carry out shoreline studies of the concerned area
(ii)	A comparison between model study and actual dumping shall be carried out to examine the impacts both on North-East and South-West of the Ports and shall be submitted to the Ministry,	Complied Comparison between model study and actual dumping was made to examine the impacts and report was submitted to Ministry by LTSB. No dumping was being carried by

		MIDPL during the period April 2018-Sep 2018. MIDPL shall further carry out shoreline studies of the concerned area
(iii)	No reclamation of the areas outside the Port limit and Buckingham Canal shall be carried out.	Noted.

EC & CRZ Extension of validity letter No. 10-130/2007- XIII dated 17.12.2014:

6. Conditions:

-	The cargo should only include Container (i) 21.60 MTPA, (ii) Ro-Ro - 0.22 MTPA, (iii) Project Cargo 0.44 MTPA, (iv) Break bulk/General Cargo (Barites/Gypsum/Limestone/Granite/Steel cargo)-1.82 MTPA and (v) Edible oil, CFBS Base Oil and Lube oil and non-hazardous liquid cargo - 0.57 MTPA. (ii) All the conditions stipulated by the Tamil Nadu Coastal Zone Management Authority (TNCZMA) vide letter no. 6064/EC.3/2014-1 dated 26.06.2014, shall be strictly complied with. (iii) No additional land should be utilized for the proposed development. (iv) As committed, the local traffic should not be disturbed.	Noted. Compliance to Tamil Nadu Coastal Zone Management Authority (TNCZMA) vide letter no. 6064/EC.3/2014-1 dated 26.06.2014, enclosed as **Annexure -5** Noted. Separate road available for local traffic.
5.	These stipulations would be enforced among other 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, 991, the Hazardous Chemical (Manufacture, storage and Import) Rules, 1989, Solid Waste Management Rules, 2016 and the Coastal Regulation Zone Notification, 2011 and its subsequent amendments made there under from time to time.	Noted
6.	All other statutory clearances such as the approvals for storage of diesel from Chief	Complied. Obtained clearance from Chief

	Controller of Explosives, Fire Department, Civil Aviation Department, Forest Conservation Act, 1980 and Wildlife (Protection) Act 1972, etc shall be Obtained, as applicable by project proponents from the respective competent authorities.	Controller of Explosives, Fire Department, Civil Aviation Department.
7	The project proponent should 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 Clearance and copies of clearance letters are available with the Tamil Nadu Pollution Control Board and may also be seen on the website of the Ministry of Environment and Forests at http://envfonnic.in. The advertisement should be made within 10 days from the date of receipt of the Clearance letter and a copy of the same should be forwarded to the Regional office of this Ministry at Chennai.	Complied
8	Any appeal against this Environmental Clearance shall lie with the National Environment Appellate Authority, if preferred, within a period of 30 **day** as prescribed under section 11 of the National Environment Appellate Act, 1997.	Noted.
9	Status of compliance to the various stipulated environmental conditions and environmental safeguards will be uploaded by the project proponent in its website.	Being complied.
10	This Environmental and CRZ Clearance is valid till 2" July, 2019.	Noted.
11	This issue with the approval of the Competent Authority.	Noted.

Annexure -1

Compliance to RC No. P1/2004/2008, dated 21.10.2008 of Department of Environment, Chennai

Sl. No	Conditions	Compliance
i	The unit shall carry out dumping/ land filling at dredged material only on land which is not covered under CRZ	Noted for Compliance
ii	The unit shall not carry out any ship breaking activity	Not applicable
iii	The unit should design that the waste water should be recycled 100% and to be used for developing greenery etc., and there should not be any waste water let out.	Complied Domestic waste water generated is being treated in STP. Treated water is being reused for Horticulture / green belt purpose
iv	The unit should tie - up with institutions like Centre for Environmental Studies or IIT for the periodical monitoring during construction phase so as to ensure the adoption of Safety measures as per the Environmental Management Plan [EMP].	Complied. LTSB carried out the studies during Construction Phase.
v	Before commencing construction activities, Proper resettlement for the local the unit should ensure the proper resettlement of local inhabitants residing at the project area to the satisfaction of District Collector and submit a report to the Department of Environment.	This EC is just a bifurcation of original EC of LTSB. Rehabilitation & resettlement was carried out completely as per law / State Government at the time of project implementation.
General Conditions		
a	There should not be any extraction of Ground Water in CRZ.	Noted for compliance. Presently unit is procuring desalinated water from M/s. Chennai Metropolitan Water Supply and Sewerage Board, Chennai.
b	The unit should obtain planning permission for their constructions from the CMDA/Department of Environment before commencing the constructions	This EC is bifurcation of original EC of LTSB. Required permission from concerned authorities was taken before commencing the constructions.
c	The proposed activities should not cause coastal erosion and alter the beach configuration	LTSB has been continuously monitoring shoreline studies through Institute of Ocean Management, Anna University, Chennai.

		Further, MIDPL shall further carry out shoreline studies of the concerned area.
d	No fencing or barricading along the pipeline alignment and parallel to the coast is permissible in CRZ.	All activities permissible as per CRZ notification 2011 & EC&CRZ clearance will only be carried out.
e	No blasting or drilling activities in CRZ is permissible.	All activities permissible as per CRZ notification 2011 & EC&CRZ clearance will only be carried out.
f	The proponent should not prevent public from easy access to the beach.	MIDPL will not block the access point to beach for the public.
g	Chemical waste generated and the sewage generated, if any should not be discharged in to the sea.	No chemical waste generated. Sewage waste water generated is being treated in STP for further usage in horticulture / greenbelt
h	The proponent should implement the EMP including the Green Belt as envisaged in the EIA report.	Adequate Greenbelt is being developed and maintained. Since, Project will be undergoing expansion, green belt shall be developed inline to the requirement.
i	The project activity should not affect the coastal ecosystem including marine flora and fauna.	Complied Marine water & Sediment quality are being monitored by NABL accredited laboratory on monthly basis. There is no adverse impact on water quality in the vicinity. The details of Marine Water quality monitoring report for the period April 2018 to September 2018 is enclosed as **Annexure-3**.
j	The proponent should not undertake any activity, which is violate of provisions of CRZ Notification 1991 and the subsequent amendments.	All activities permissible as per CRZ notification 2011 & EC&CRZ clearance will only be carried out.
k	The CRZ Clearance will be revoked if any of the conditions stipulated in not complied with.	Noted for compliance

Marine Infrastructure Developer Private Limited

REGISTERED OFFICE: NO:22, L&T CONSTRUCTION COMPLEX, MOUNT POONAMALLEE ROAD,
MANAPAKKAM, CHENNAI – 600089, TAMIL NADU, INDIA

CIN : U74999TN2016PTC103769 Telephone : 044-2252 6000

MIDPL/TNPCB/GMB/HWR-201806 Date: 28/06/2018

To,

The District Environmental Engineer,

Tamil Nadu Pollution Control Board,

EPIB Building, A.O Block,

Gummidipoondi Industrial Complex,

Gummidipoondi – 601201.

Dear Sir,

Sub: Submission of Annual Hazardous Waste Returns for the year 2017-18

Ref:

1. Hazardous Wastes (Management,Handling & Transboundary Movement) authorization no.4380 Dated 06.12.2013 issued to L&T Shipbuilding (Shipyard cum Minor Port)
2. CRZ & Environmental Clearance for the development of proposed Port at Katupalli, Tiruvallur District of Tamilnadu by M/s Marine Infrastructure Developer Pvt. Limited – bifurcation of EC&CRZ Clearance vide F. No 10-130/2007 – IA.III dtd . 9th February 2018
3. TNPCB's Consent Order No.170629762139 & 170619762139 under Air & Water Acts dated 26/12/17

With reference to captioned subject, **M/s. Marine Infrastructure Developer Private Limited** is submitting the Annual Hazardous Waste Returns in Form IV for the year 2017-18.

We wish to inform that our application for name change from L&T Ship Building to M/s Marine Infrastructure Developer Pvt Ltd for Hazardous waste Authroization is in progress.

Submitted for your kind records.

Kindly acknowledge us the receipt of the same,

For, **M/s. Marine Infrastructure Developer Private Limited**

28/06/18

Marine Infrastructure Developer Pvt. Ltd. Chennai 600 120

Authorized Signatory

Encl: As Above

FORM 4

[See rules 6(5), 13(8), 16(6) and 20 (2)]

FORM FOR FILING ANNUAL RETURNS

[To be submitted to State Pollution Control Board by 30th day of June of every year for the proceeding period April to March]

1	Name and address of facility:	Marine Infrastructure Developer Private Limited Kattupalli Village, Ponneri Taluk , Thiruvallur - 600120
2	Authorisation No. and Date of issue:	No.4380 Dated 06.12.2013
3	Name of the authorised person and full address with telephone, fax number and e-mail:	Capt.Jeyaraj Thamburaj Chief Executive Officer Kattupalli Village, Ponneri Taluk , Thiruvallur - 600120 044 – 2796 9107 Jeyaraj.thamburaj@adani.com
4	Production during the year (product wise), wherever applicable	NA

Part A. To be filled by hazardous waste generators

FY 2017-2018

1	Total quantity of waste generated category wise	**Used oil**	**Waste containing oil**	**Oil contaminated filter element**
	Category	5.1	5.2	5.2
	Quantity	10000L	100Kg	225 Kgs
2	Quantity dispatched	**Used oil**	**Waste containing oil**	**Oil contaminated filter element**
	(i) to disposal facility	13020 L	NIL	1115 Kgs
	(ii) to recycler or co-processors or pre-processor			
	(iii) others			
3	Quantity utilised in-house, if any -	Used oil: NIL Waste containing oil: NIL Oil contaminated filter element: NIL		
4	Quantity in storage at the end of the year –	Used oil: 990 L Waste containing oil: 100Kg Oil contaminated filter element: NIL		

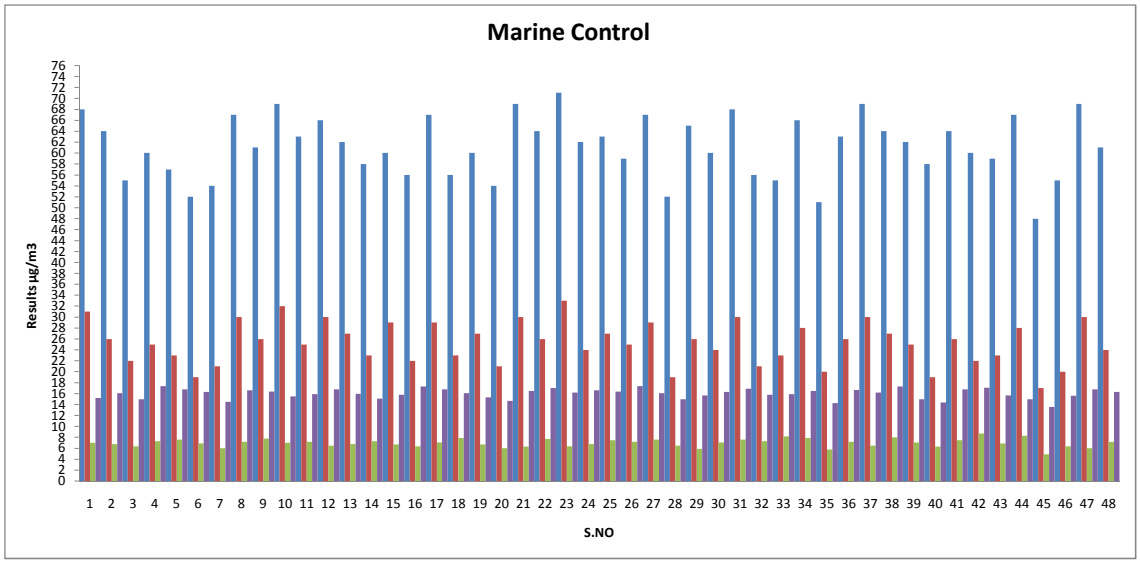
Part B. To be filled by Treatment, Storage and Disposal Facility operators

1	Total quantity received -	N/A
2	Quantity in stock at the beginning of the year -	
3	Quantity treated –	
4	Quantity disposed in landfills as such and after treatment –	
5	Quantity incinerated (if applicable) -	
6	Quantity processed other than specified	

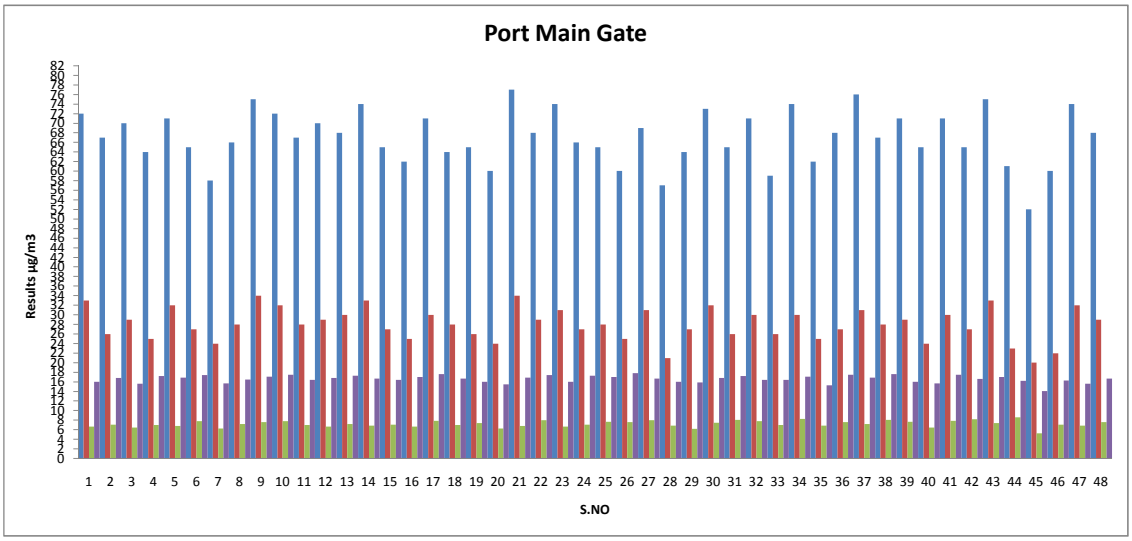
MARINE INFRASTRUCTURE DEVELOPER PRIVATE LIMITED (MIDPL)

Apr - 18 to Sep - 18

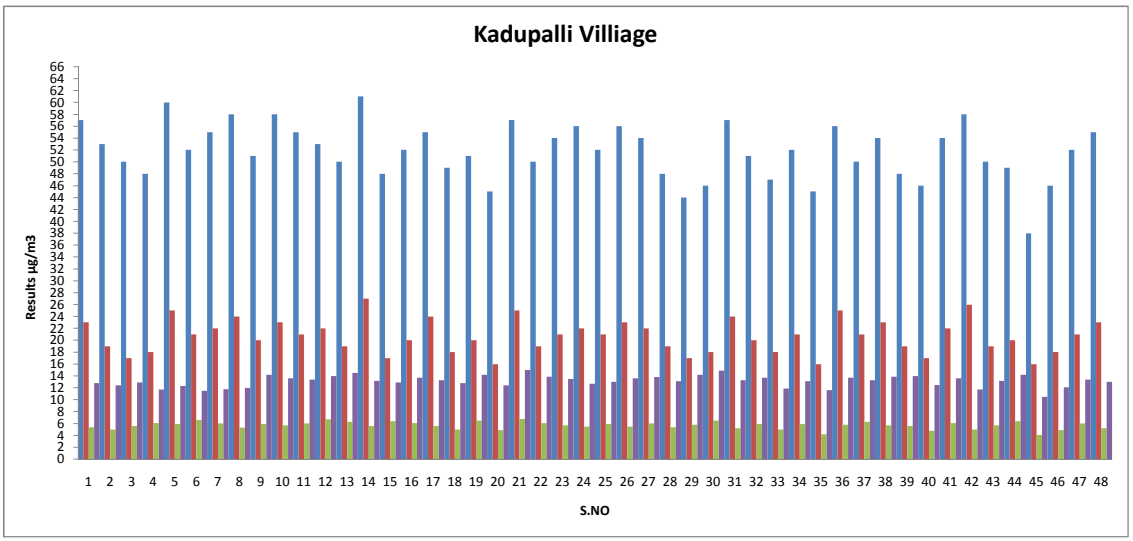
MARINE CONTROL (AAQ1)														
Parameters			Particular matter PM_{10}	Particular matter $PM_{2.5}$	Sulphur dioxide as SO_2	Nitrogen dioxide as NO_2	Lead as Pb	Carbon monoxide as CO	Ozone as O_3	Ammonia as NH_3	Arsenic as As	Nickel as Ni	Benzene as C_6H_6	Benzo (a) pyrene as BaP
Unit			µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	mg/m³	µg/m³	µg/m³	ng/m³	ng/m³	µg/m³	ng/m³
National AAQM Standard			100	60	80	80	1	4	180	400	6	20	5	1
S.No.	Sampling Date	Report Number												
1	02.04.2018	GCS/LAB/S/2121/18-19	68	31	7	15.2	<0.1	<1.0	<10	<2	<2	<2	<1	<0.1
2	06.04.2018	GCS/LAB/S/2121/18-19	64	26	6.8	16.1	<0.1	<1.0	<10	<2	<2	<2	<1	<0.1
3	09.04.2018	GCS/LAB/S/2121/18-19	55	22	6.4	15	<0.1	<1.0	<10	<2	<2	<2	<1	<0.1
4	12.04.2018	GCS/LAB/S/2121/18-19	60	25	7.3	17.4	<0.1	<1.0	<10	<2	<2	<2	<1	<0.1
5	16.04.2018	GCS/LAB/S/2121/18-19	57	23	7.6	16.8	<0.1	<1.0	<10	<2	<2	<2	<1	<0.1
6	20.04.2018	GCS/LAB/S/2121/18-19	52	19	6.9	16.3	<0.1	<1.0	<10	<2	<2	<2	<1	<0.1
7	23.04.2018	GCS/LAB/S/2121/18-19	54	21	6	14.5	<0.1	<1.0	<10	<2	<2	<2	<1	<0.1
8	27.04.2018	GCS/LAB/S/2121/18-19	67	30	7.2	16.6	<0.1	<1.0	<10	<2	<2	<2	<1	<0.1
9	04.05.2018	GCS/LAB/S/2115/18-19	61	26	7.8	16.4	<0.1	<1.0	<10	<2	<2	<2	<1	<0.1
10	07.05.2018	GCS/LAB/S/2115/18-19	69	32	7.0	15.5	<0.1	<1.0	<10	<2	<2	<2	<1	<0.1
11	11.05.2018	GCS/LAB/S/2115/18-19	63	25	7.2	15.9	<0.1	<1.0	<10	<2	<2	<2	<1	<0.1
12	14.05.2018	GCS/LAB/S/2115/18-19	66	30	6.5	16.8	<0.1	<1.0	<10	<2	<2	<2	<1	<0.1
13	18.05.2018	GCS/LAB/S/2115/18-19	62	27	6.8	16.0	<0.1	<1.0	<10	<2	<2	<2	<1	<0.1
14	21.05.2018	GCS/LAB/S/2115/18-19	58	23	7.3	15.1	<0.1	<1.0	<10	<2	<2	<2	<1	<0.1
15	25.05.2018	GCS/LAB/S/2115/18-19	60	29	6.7	15.8	<0.1	<1.0	<10	<2	<2	<2	<1	<0.1
16	28.05.2018	GCS/LAB/S/2115/18-19	56	22	6.4	17.3	<0.1	<1.0	<10	<2	<2	<2	<1	<0.1
17	04.06.2018	GCS/LAB/S/2290/18-19	67	29	7.1	16.8	<0.1	<1.0	<10	<2	<2	<2	<1	<0.1
18	08.06.2018	GCS/LAB/S/2290/18-19	56	23	7.9	16.1	<0.1	<1.0	<10	<2	<2	<2	<1	<0.1
19	11.06.2018	GCS/LAB/S/2290/18-19	60	27	6.7	15.3	<0.1	<1.0	<10	<2	<2	<2	<1	<0.1
20	15.06.2018	GCS/LAB/S/2290/18-19	54	21	6.0	14.7	<0.1	<1.0	<10	<2	<2	<2	<1	<0.1
21	18.06.2018	GCS/LAB/S/2290/18-19	69	30	6.3	16.5	<0.1	<1.0	<10	<2	<2	<2	<1	<0.1
22	22.06.2018	GCS/LAB/S/2290/18-19	64	26	7.7	17.0	<0.1	<1.0	<10	<2	<2	<2	<1	<0.1
23	25.06.2018	GCS/LAB/S/2290/18-19	71	33	6.4	16.2	<0.1	<1.0	<10	<2	<2	<2	<1	<0.1
24	29.06.2018	GCS/LAB/S/2290/18-19	62	24	6.8	16.6	<0.1	<1.0	<10	<2	<2	<2	<1	<0.1
25	02.07.2018	GCS/LAB/S/2354/18-19	63	27	7.5	16.4	<0.1	<1.0	<10	<2	<2	<2	<1	<0.1
26	06.07.2018	GCS/LAB/S/2354/18-19	59	25	7.2	17.4	<0.1	<1.0	<10	<2	<2	<2	<1	<0.1
27	11.07.2018	GCS/LAB/S/2354/18-19	67	29	7.6	16.1	<0.1	<1.0	<10	<2	<2	<2	<1	<0.1
28	13.07.2018	GCS/LAB/S/2354/18-19	52	19	6.5	15.0	<0.1	<1.0	<10	<2	<2	<2	<1	<0.1
29	16.07.2018	GCS/LAB/S/2354/18-19	65	26	5.9	15.7	<0.1	<1.0	<10	<2	<2	<2	<1	<0.1
30	20.07.2018	GCS/LAB/S/2354/18-19	60	24	7.1	16.3	<0.1	<1.0	<10	<2	<2	<2	<1	<0.1
31	23.07.2018	GCS/LAB/S/2354/18-19	68	30	7.6	16.9	<0.1	<1.0	<10	<2	<2	<2	<1	<0.1
32	27.07.2018	GCS/LAB/S/2354/18-19	56	21	7.3	15.8	<0.1	<1.0	<10	<2	<2	<2	<1	<0.1
33	03.08.2018	GCS/LAB/S/2441/18-19	55	23	8.2	15.9	<0.1	<1.0	<10	<2	<2	<2	<1	<0.1
34	06.08.2018	GCS/LAB/S/2441/18-19	66	28	7.9	16.5	<0.1	<1.0	<10	<2	<2	<2	<1	<0.1
35	10.08.2018	GCS/LAB/S/2441/18-19	51	20	5.8	14.3	<0.1	<1.0	<10	<2	<2	<2	<1	<0.1
36	13.08.2018	GCS/LAB/S/2441/18-19	63	26	7.2	16.7	<0.1	<1.0	<10	<2	<2	<2	<1	<0.1
37	17.08.2018	GCS/LAB/S/2441/18-19	69	30	6.5	16.2	<0.1	<1.0	<10	<2	<2	<2	<1	<0.1
38	20.08.2018	GCS/LAB/S/2441/18-19	64	27	8.0	17.3	<0.1	<1.0	<10	<2	<2	<2	<1	<0.1
39	24.08.2018	GCS/LAB/S/2441/18-19	62	25	7.1	15.0	<0.1	<1.0	<10	<2	<2	<2	<1	<0.1
40	27.08.2018	GCS/LAB/S/2441/18-19	58	19	6.3	14.4	<0.1	<1.0	<10	<2	<2	<2	<1	<0.1
41	03.09.2018	GCS/LAB/S/1073/18-19	64	26	7.5	16.8	<0.1	<1.0	<10	<2	<2	<2	<1	<0.1
42	07.09.2018	GCS/LAB/S/1073/18-19	60	22	8.7	17.1	<0.1	<1.0	<10	<2	<2	<2	<1	<0.1
43	10.09.2018	GCS/LAB/S/1073/18-19	59	23	6.9	15.7	<0.1	<1.0	<10	<2	<2	<2	<1	<0.1
44	14.09.2018	GCS/LAB/S/1073/18-19	67	28	8.3	15.0	<0.1	<1.0	<10	<2	<2	<2	<1	<0.1
45	17.09.2018	GCS/LAB/S/1073/18-19	48	17	4.9	13.6	<0.1	<1.0	<10	<2	<2	<2	<1	<0.1
46	21.09.2018	GCS/LAB/S/1073/18-19	55	20	6.4	15.6	<0.1	<1.0	<10	<2	<2	<2	<1	<0.1
47	24.09.2018	GCS/LAB/S/1073/18-19	69	30	6.0	16.8	<0.1	<1.0	<10	<2	<2	<2	<1	<0.1
48	28.09.2018	GCS/LAB/S/1073/18-19	61	24	7.2	16.3	<0.1	<1.0	<10	<2	<2	<2	<1	<0.1



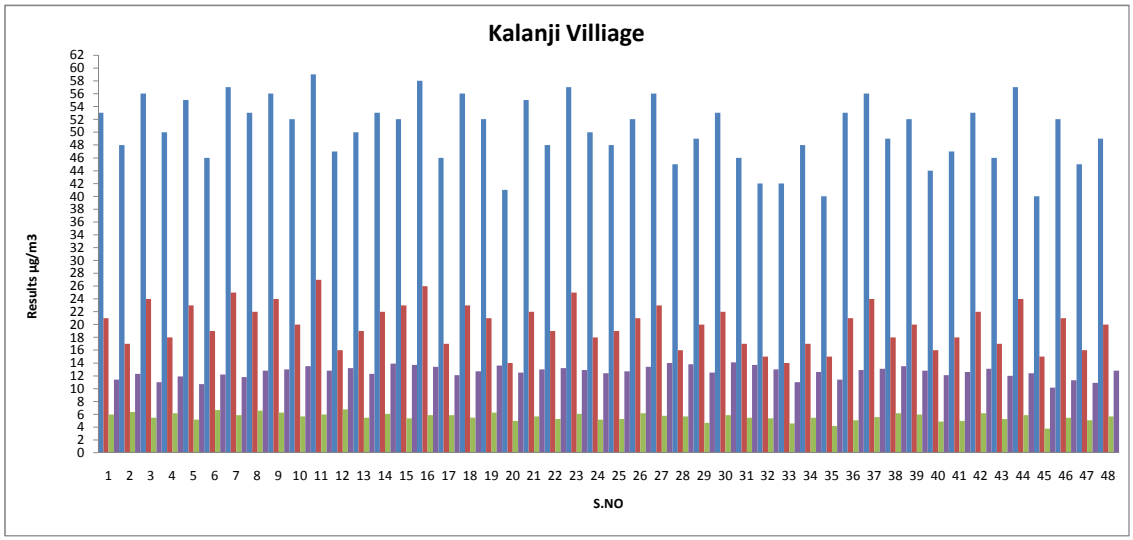
PORT MAIN GATE (AAQ2)														
Parameters			Particular matter PM_{10}	Particular matter $PM_{2.5}$	Sulphur dioxide as SO_2	Nitrogen dioxide as NO_2	Lead as Pb	Carbon monoxide as CO	Ozone as O_3	Ammonia as NH_3	Arsenic as As	Nickel as Ni	Benzene as C_6H_6	Benzo (a) pyrene as BaP
Unit			$\mu g/m^3$	$\mu g/m^3$	$\mu g/m^3$	$\mu g/m^3$	$\mu g/m^3$	mg/m^3	$\mu g/m^3$	$\mu g/m^3$	ng/m^3	ng/m^3	$\mu g/m^3$	ng/m^3
National AAQM Standard			100	60	80	80	1	4	180	400	6	20	5	1
S.No.	Sampling Date	Report Number												
1	02.04.2018	GCS/LAB/S/2121/18-19	72	33	6.7	16.0	<0.1	<1.0	<10	<2	<2	<2	<1	<0.1
2	06.04.2018	GCS/LAB/S/2121/18-19	67	26	7.1	16.8	<0.1	<1.0	<10	<2	<2	<2	<1	<0.1
3	09.04.2018	GCS/LAB/S/2121/18-19	70	29	6.5	15.6	<0.1	<1.0	<10	<2	<2	<2	<1	<0.1
4	12.04.2018	GCS/LAB/S/2121/18-19	64	25	7	17.2	<0.1	<1.0	<10	<2	<2	<2	<1	<0.1
5	16.04.2018	GCS/LAB/S/2121/18-19	71	32	6.8	16.9	<0.1	<1.0	<10	<2	<2	<2	<1	<0.1
6	20.04.2018	GCS/LAB/S/2121/18-19	65	27	7.8	17.4	<0.1	<1.0	<10	<2	<2	<2	<1	<0.1
7	23.04.2018	GCS/LAB/S/2121/18-19	58	24	6.3	15.7	<0.1	<1.0	<10	<2	<2	<2	<1	<0.1
8	27.04.2018	GCS/LAB/S/2121/18-19	66	28	7.2	16.5	<0.1	<1.0	<10	<2	<2	<2	<1	<0.1
9	04.05.2018	GCS/LAB/S/2115/18-19	75	34	7.6	17.1	<0.1	<1.0	<10	<2	<2	<2	<1	<0.1
10	07.05.2018	GCS/LAB/S/2115/18-19	72	32	7.8	17.5	<0.1	<1.0	<10	<2	<2	<2	<1	<0.1
11	11.05.2018	GCS/LAB/S/2115/18-19	67	28	7.0	16.4	<0.1	<1.0	<10	<2	<2	<2	<1	<0.1
12	14.05.2018	GCS/LAB/S/2115/18-19	70	29	6.7	16.8	<0.1	<1.0	<10	<2	<2	<2	<1	<0.1
13	18.05.2018	GCS/LAB/S/2115/18-19	68	30	7.2	17.3	<0.1	<1.0	<10	<2	<2	<2	<1	<0.1
14	21.05.2018	GCS/LAB/S/2115/18-19	74	33	6.9	16.7	<0.1	<1.0	<10	<2	<2	<2	<1	<0.1
15	25.05.2018	GCS/LAB/S/2115/18-19	65	27	7.1	16.4	<0.1	<1.0	<10	<2	<2	<2	<1	<0.1
16	28.05.2018	GCS/LAB/S/2115/18-19	62	25	6.7	17.0	<0.1	<1.0	<10	<2	<2	<2	<1	<0.1
17	04.06.2018	GCS/LAB/S/2290/18-19	71	30	7.9	17.6	<0.1	<1.0	<10	<2	<2	<2	<1	<0.1
18	08.06.2018	GCS/LAB/S/2290/18-19	64	28	7.0	16.7	<0.1	<1.0	<10	<2	<2	<2	<1	<0.1
19	11.06.2018	GCS/LAB/S/2290/18-19	65	26	7.4	16.0	<0.1	<1.0	<10	<2	<2	<2	<1	<0.1
20	15.06.2018	GCS/LAB/S/2290/18-19	60	24	6.3	15.5	<0.1	<1.0	<10	<2	<2	<2	<1	<0.1
21	18.06.2018	GCS/LAB/S/2290/18-19	77	34	6.8	16.9	<0.1	<1.0	<10	<2	<2	<2	<1	<0.1
22	22.06.2018	GCS/LAB/S/2290/18-19	68	29	8.0	17.4	<0.1	<1.0	<10	<2	<2	<2	<1	<0.1
23	25.06.2018	GCS/LAB/S/2290/18-19	74	31	6.7	16.0	<0.1	<1.0	<10	<2	<2	<2	<1	<0.1
24	29.06.2018	GCS/LAB/S/2290/18-19	66	27	7.1	17.3	<0.1	<1.0	<10	<2	<2	<2	<1	<0.1
25	02.07.2018	GCS/LAB/S/2354/18-19	65	28	7.7	17.0	<0.1	<1.0	<10	<2	<2	<2	<1	<0.1
26	06.07.2018	GCS/LAB/S/2354/18-19	60	25	7.6	17.8	<0.1	<1.0	<10	<2	<2	<2	<1	<0.1
27	11.07.2018	GCS/LAB/S/2354/18-19	69	31	8.0	16.7	<0.1	<1.0	<10	<2	<2	<2	<1	<0.1
28	13.07.2018	GCS/LAB/S/2354/18-19	57	21	6.9	16.0	<0.1	<1.0	<10	<2	<2	<2	<1	<0.1
29	16.07.2018	GCS/LAB/S/2354/18-19	64	27	6.2	15.9	<0.1	<1.0	<10	<2	<2	<2	<1	<0.1
30	20.07.2018	GCS/LAB/S/2354/18-19	73	32	7.5	16.8	<0.1	<1.0	<10	<2	<2	<2	<1	<0.1
31	23.07.2018	GCS/LAB/S/2354/18-19	65	26	8.1	17.2	<0.1	<1.0	<10	<2	<2	<2	<1	<0.1
32	27.07.2018	GCS/LAB/S/2354/18-19	71	30	7.8	16.4	<0.1	<1.0	<10	<2	<2	<2	<1	<0.1
33	03.08.2018	GCS/LAB/S/2441/18-19	59	26	7.0	16.4	<0.1	<1.0	<10	<2	<2	<2	<1	<0.1
34	06.08.2018	GCS/LAB/S/2441/18-19	74	30	8.3	17.1	<0.1	<1.0	<10	<2	<2	<2	<1	<0.1
35	10.08.2018	GCS/LAB/S/2441/18-19	62	25	6.9	15.3	<0.1	<1.0	<10	<2	<2	<2	<1	<0.1
36	13.08.2018	GCS/LAB/S/2441/18-19	68	27	7.6	17.5	<0.1	<1.0	<10	<2	<2	<2	<1	<0.1
37	17.08.2018	GCS/LAB/S/2441/18-19	76	31	7.2	16.9	<0.1	<1.0	<10	<2	<2	<2	<1	<0.1
38	20.08.2018	GCS/LAB/S/2441/18-19	67	28	8.1	17.6	<0.1	<1.0	<10	<2	<2	<2	<1	<0.1
39	24.08.2018	GCS/LAB/S/2441/18-19	71	29	7.7	16.0	<0.1	<1.0	<10	<2	<2	<2	<1	<0.1
40	27.08.2018	GCS/LAB/S/2441/18-19	65	24	6.5	15.7	<0.1	<1.0	<10	<2	<2	<2	<1	<0.1
41	03.09.2018	GCS/LAB/S/1073/18-19	71	30	7.9	17.5	<0.1	<1.0	<10	<2	<2	<2	<1	<0.1
42	07.09.2018	GCS/LAB/S/1073/18-19	65	27	8.2	16.6	<0.1	<1.0	<10	<2	<2	<2	<1	<0.1
43	10.09.2018	GCS/LAB/S/1073/18-19	75	33	7.4	17.0	<0.1	<1.0	<10	<2	<2	<2	<1	<0.1
44	14.09.2018	GCS/LAB/S/1073/18-19	61	23	8.6	16.2	<0.1	<1.0	<10	<2	<2	<2	<1	<0.1
45	17.09.2018	GCS/LAB/S/1073/18-19	52	20	5.3	14.1	<0.1	<1.0	<10	<2	<2	<2	<1	<0.1
46	21.09.2018	GCS/LAB/S/1073/18-19	60	22	7.1	16.3	<0.1	<1.0	<10	<2	<2	<2	<1	<0.1
47	24.09.2018	GCS/LAB/S/1073/18-19	74	32	6.9	15.6	<0.1	<1.0	<10	<2	<2	<2	<1	<0.1
48	28.09.2018	GCS/LAB/S/1073/18-19	68	29	7.6	16.7	<0.1	<1.0	<10	<2	<2	<2	<1	<0.1



KATTUPALLI VILLAGE (AAQ3)														
Parameters			Particular matter PM_{10}	Particular matter $PM_{2.5}$	Sulphur dioxide as SO_2	Nitrogen dioxide as NO_2	Lead as Pb	Carbon monoxide as CO	Ozone as O_3	Ammonia as NH_3	Arsenic as As	Nickel as Ni	Benzene as C_6H_6	Benzo (a) pyrene as BaP
Unit			µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	mg/m³	µg/m³	µg/m³	ng/m³	ng/m³	µg/m³	ng/m³
National AAQM Standard			100	60	80	80	1	4	180	400	6	20	5	1
S.No.	Sampling Date	Report Number												
1	02.04.2018	GCS/LAB/S/2121/18-19	57	23	5.4	12.8	<0.1	<1.0	<10	<2	<2	<2	<1	<0.1
2	06.04.2018	GCS/LAB/S/2121/18-19	53	19	5	12.4	<0.1	<1.0	<10	<2	<2	<2	<1	<0.1
3	09.04.2018	GCS/LAB/S/2121/18-19	50	17	5.6	12.9	<0.1	<1.0	<10	<2	<2	<2	<1	<0.1
4	12.04.2018	GCS/LAB/S/2121/18-19	48	18	6.1	11.7	<0.1	<1.0	<10	<2	<2	<2	<1	<0.1
5	16.04.2018	GCS/LAB/S/2121/18-19	60	25	5.9	12.3	<0.1	<1.0	<10	<2	<2	<2	<1	<0.1
6	20.04.2018	GCS/LAB/S/2121/18-19	52	21	6.6	11.5	<0.1	<1.0	<10	<2	<2	<2	<1	<0.1
7	23.04.2018	GCS/LAB/S/2121/18-19	55	22	6	11.8	<0.1	<1.0	<10	<2	<2	<2	<1	<0.1
8	27.04.2018	GCS/LAB/S/2121/18-19	58	24	5.3	12	<0.1	<1.0	<10	<2	<2	<2	<1	<0.1
9	04.05.2018	GCS/LAB/S/2115/18-19	51	20	5.9	14.2	<0.1	<1.0	<10	<2	<2	<2	<1	<0.1
10	07.05.2018	GCS/LAB/S/2115/18-19	58	23	5.7	13.6	<0.1	<1.0	<10	<2	<2	<2	<1	<0.1
11	11.05.2018	GCS/LAB/S/2115/18-19	55	21	6.0	13.4	<0.1	<1.0	<10	<2	<2	<2	<1	<0.1
12	14.05.2018	GCS/LAB/S/2115/18-19	53	22	6.7	14.0	<0.1	<1.0	<10	<2	<2	<2	<1	<0.1
13	18.05.2018	GCS/LAB/S/2115/18-19	50	19	6.3	14.5	<0.1	<1.0	<10	<2	<2	<2	<1	<0.1
14	21.05.2018	GCS/LAB/S/2115/18-19	61	27	5.6	13.2	<0.1	<1.0	<10	<2	<2	<2	<1	<0.1
15	25.05.2018	GCS/LAB/S/2115/18-19	48	17	6.4	12.9	<0.1	<1.0	<10	<2	<2	<2	<1	<0.1
16	28.05.2018	GCS/LAB/S/2115/18-19	52	20	6.1	13.7	<0.1	<1.0	<10	<2	<2	<2	<1	<0.1
17	04.06.2018	GCS/LAB/S/2290/18-19	55	24	5.6	13.3	<0.1	<1.0	<10	<2	<2	<2	<1	<0.1
18	08.06.2018	GCS/LAB/S/2290/18-19	49	18	5.0	12.8	<0.1	<1.0	<10	<2	<2	<2	<1	<0.1
19	11.06.2018	GCS/LAB/S/2290/18-19	51	20	6.5	14.2	<0.1	<1.0	<10	<2	<2	<2	<1	<0.1
20	15.06.2018	GCS/LAB/S/2290/18-19	45	16	4.9	12.4	<0.1	<1.0	<10	<2	<2	<2	<1	<0.1
21	18.06.2018	GCS/LAB/S/2290/18-19	57	25	6.8	15.0	<0.1	<1.0	<10	<2	<2	<2	<1	<0.1
22	22.06.2018	GCS/LAB/S/2290/18-19	50	19	6.1	13.9	<0.1	<1.0	<10	<2	<2	<2	<1	<0.1
23	25.06.2018	GCS/LAB/S/2290/18-19	54	21	5.7	13.5	<0.1	<1.0	<10	<2	<2	<2	<1	<0.1
24	29.06.2018	GCS/LAB/S/2290/18-19	56	22	5.5	12.7	<0.1	<1.0	<10	<2	<2	<2	<1	<0.1
25	02.07.2018	GCS/LAB/S/2354/18-19	52	21	5.9	13.0	<0.1	<1.0	<10	<2	<2	<2	<1	<0.1
26	06.07.2018	GCS/LAB/S/2354/18-19	56	23	5.5	13.6	<0.1	<1.0	<10	<2	<2	<2	<1	<0.1
27	11.07.2018	GCS/LAB/S/2354/18-19	54	22	6.0	13.8	<0.1	<1.0	<10	<2	<2	<2	<1	<0.1
28	13.07.2018	GCS/LAB/S/2354/18-19	48	19	5.4	13.1	<0.1	<1.0	<10	<2	<2	<2	<1	<0.1
29	16.07.2018	GCS/LAB/S/2354/18-19	44	17	5.8	14.2	<0.1	<1.0	<10	<2	<2	<2	<1	<0.1
30	20.07.2018	GCS/LAB/S/2354/18-19	46	18	6.5	14.9	<0.1	<1.0	<10	<2	<2	<2	<1	<0.1
31	23.07.2018	GCS/LAB/S/2354/18-19	57	24	5.2	13.3	<0.1	<1.0	<10	<2	<2	<2	<1	<0.1
32	27.07.2018	GCS/LAB/S/2354/18-19	51	20	5.9	13.7	<0.1	<1.0	<10	<2	<2	<2	<1	<0.1
33	03.08.2018	GCS/LAB/S/2441/18-19	47	18	5.0	11.9	<0.1	<1.0	<10	<2	<2	<2	<1	<0.1
34	06.08.2018	GCS/LAB/S/2441/18-19	52	21	5.9	13.1	<0.1	<1.0	<10	<2	<2	<2	<1	<0.1
35	10.08.2018	GCS/LAB/S/2441/18-19	45	16	4.2	11.6	<0.1	<1.0	<10	<2	<2	<2	<1	<0.1
36	13.08.2018	GCS/LAB/S/2441/18-19	56	25	5.8	13.7	<0.1	<1.0	<10	<2	<2	<2	<1	<0.1
37	17.08.2018	GCS/LAB/S/2441/18-19	50	21	6.3	13.3	<0.1	<1.0	<10	<2	<2	<2	<1	<0.1
38	20.08.2018	GCS/LAB/S/2441/18-19	54	23	5.7	13.9	<0.1	<1.0	<10	<2	<2	<2	<1	<0.1
39	24.08.2018	GCS/LAB/S/2441/18-19	48	19	5.6	14.0	<0.1	<1.0	<10	<2	<2	<2	<1	<0.1
40	27.08.2018	GCS/LAB/S/2441/18-19	46	17	4.8	12.5	<0.1	<1.0	<10	<2	<2	<2	<1	<0.1
41	03.09.2018	GCS/LAB/S/1073/18-19	54	22	6.1	13.6	<0.1	<1.0	<10	<2	<2	<2	<1	<0.1
42	07.09.2018	GCS/LAB/S/1073/18-19	58	26	5.0	11.7	<0.1	<1.0	<10	<2	<2	<2	<1	<0.1
43	10.09.2018	GCS/LAB/S/1073/18-19	50	19	5.7	13.2	<0.1	<1.0	<10	<2	<2	<2	<1	<0.1
44	14.09.2018	GCS/LAB/S/1073/18-19	49	20	6.4	14.2	<0.1	<1.0	<10	<2	<2	<2	<1	<0.1
45	17.09.2018	GCS/LAB/S/1073/18-19	38	16	4.1	10.5	<0.1	<1.0	<10	<2	<2	<2	<1	<0.1
46	21.09.2018	GCS/LAB/S/1073/18-19	46	18	4.9	12.1	<0.1	<1.0	<10	<2	<2	<2	<1	<0.1
47	24.09.2018	GCS/LAB/S/1073/18-19	52	21	6.0	13.4	<0.1	<1.0	<10	<2	<2	<2	<1	<0.1
48	28.09.2018	GCS/LAB/S/1073/18-19	55	23	5.2	13.0	<0.1	<1.0	<10	<2	<2	<2	<1	<0.1

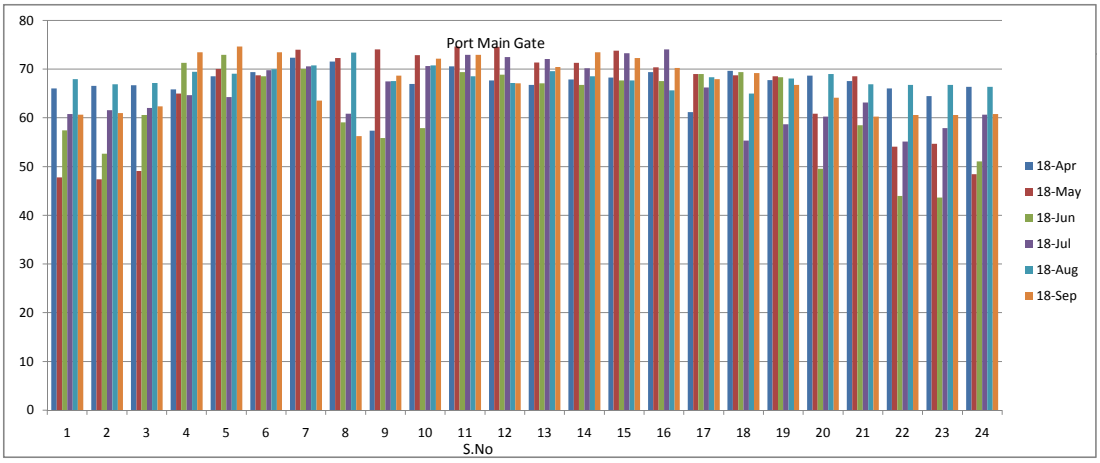


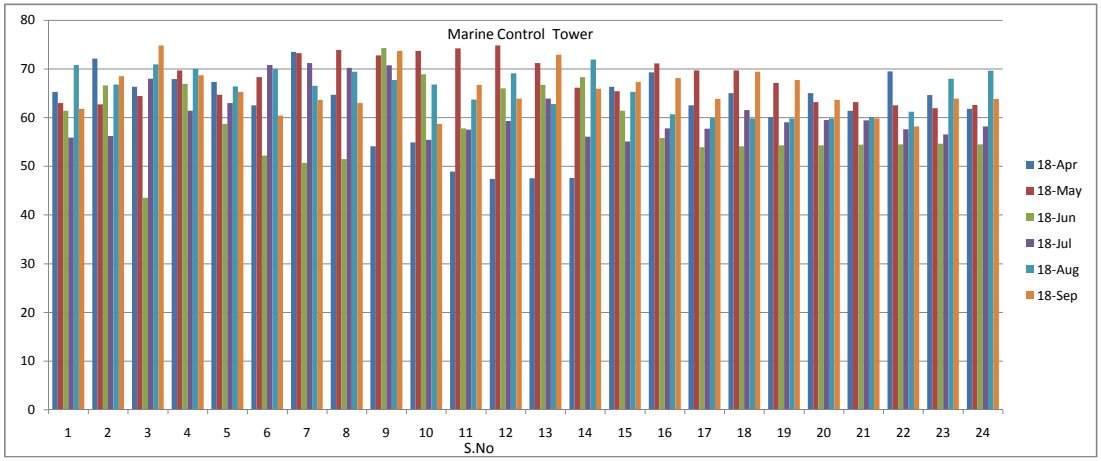
KALANJI VILLAGE (AAQ4)														
Parameters			Particular matter PM_{10}	Particular matter $PM_{2.5}$	Sulphur dioxide as SO_2	Nitrogen dioxide as NO_2	Lead as Pb	Carbon monoxide as CO	Ozone as O_3	Ammonia as NH_3	Arsenic as As	Nickel as Ni	Benzene as C_6H_6	Benzo (a) pyrene as BaP
Unit			µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	mg/m³	µg/m³	µg/m³	ng/m³	ng/m³	µg/m³	ng/m³
National AAQM Standard			100	60	80	80	1	4	180	400	6	20	5	1
S.No.	Sampling Date	Report Number												
1	02.04.2018	GCS/LAB/S/2121/18-19	53	21	6	11.4	<0.1	<1.0	<10	<2	<2	<2	<1	<0.1
2	06.04.2018	GCS/LAB/S/2121/18-19	48	17	6.4	12.3	<0.1	<1.0	<10	<2	<2	<2	<1	<0.1
3	09.04.2018	GCS/LAB/S/2121/18-19	56	24	5.5	11	<0.1	<1.0	<10	<2	<2	<2	<1	<0.1
4	12.04.2018	GCS/LAB/S/2121/18-19	50	18	6.2	11.9	<0.1	<1.0	<10	<2	<2	<2	<1	<0.1
5	16.04.2018	GCS/LAB/S/2121/18-19	55	23	5.2	10.7	<0.1	<1.0	<10	<2	<2	<2	<1	<0.1
6	20.04.2018	GCS/LAB/S/2121/18-19	46	19	6.7	12.2	<0.1	<1.0	<10	<2	<2	<2	<1	<0.1
7	23.04.2018	GCS/LAB/S/2121/18-19	57	25	5.9	11.8	<0.1	<1.0	<10	<2	<2	<2	<1	<0.1
8	27.04.2018	GCS/LAB/S/2121/18-19	53	22	6.6	12.8	<0.1	<1.0	<10	<2	<2	<2	<1	<0.1
9	04.05.2018	GCS/LAB/S/2115/18-19	56	24	6.3	13.0	<0.1	<1.0	<10	<2	<2	<2	<1	<0.1
10	07.05.2018	GCS/LAB/S/2115/18-19	52	20	5.7	13.5	<0.1	<1.0	<10	<2	<2	<2	<1	<0.1
11	11.05.2018	GCS/LAB/S/2115/18-19	59	27	6.0	12.8	<0.1	<1.0	<10	<2	<2	<2	<1	<0.1
12	14.05.2018	GCS/LAB/S/2115/18-19	47	16	6.8	13.2	<0.1	<1.0	<10	<2	<2	<2	<1	<0.1
13	18.05.2018	GCS/LAB/S/2115/18-19	50	19	5.5	12.3	<0.1	<1.0	<10	<2	<2	<2	<1	<0.1
14	21.05.2018	GCS/LAB/S/2115/18-19	53	22	6.1	13.9	<0.1	<1.0	<10	<2	<2	<2	<1	<0.1
15	25.05.2018	GCS/LAB/S/2115/18-19	52	23	5.4	13.7	<0.1	<1.0	<10	<2	<2	<2	<1	<0.1
16	28.05.2018	GCS/LAB/S/2115/18-19	58	26	5.9	13.4	<0.1	<1.0	<10	<2	<2	<2	<1	<0.1
17	04.06.2018	GCS/LAB/S/2290/18-19	46	17	5.9	12.1	<0.1	<1.0	<10	<2	<2	<2	<1	<0.1
18	08.06.2018	GCS/LAB/S/2290/18-19	56	23	5.5	12.7	<0.1	<1.0	<10	<2	<2	<2	<1	<0.1
19	11.06.2018	GCS/LAB/S/2290/18-19	52	21	6.3	13.6	<0.1	<1.0	<10	<2	<2	<2	<1	<0.1
20	15.06.2018	GCS/LAB/S/2290/18-19	41	14	5.0	12.5	<0.1	<1.0	<10	<2	<2	<2	<1	<0.1
21	18.06.2018	GCS/LAB/S/2290/18-19	55	22	5.7	13.0	<0.1	<1.0	<10	<2	<2	<2	<1	<0.1
22	22.06.2018	GCS/LAB/S/2290/18-19	48	19	5.3	13.2	<0.1	<1.0	<10	<2	<2	<2	<1	<0.1
23	25.06.2018	GCS/LAB/S/2290/18-19	57	25	6.1	12.9	<0.1	<1.0	<10	<2	<2	<2	<1	<0.1
24	29.06.2018	GCS/LAB/S/2290/18-19	50	18	5.2	12.4	<0.1	<1.0	<10	<2	<2	<2	<1	<0.1
25	02.07.2018	GCS/LAB/S/2354/18-19	48	19	5.3	12.7	<0.1	<1.0	<10	<2	<2	<2	<1	<0.1
26	06.07.2018	GCS/LAB/S/2354/18-19	52	21	6.2	13.4	<0.1	<1.0	<10	<2	<2	<2	<1	<0.1
27	11.07.2018	GCS/LAB/S/2354/18-19	56	23	5.8	14.0	<0.1	<1.0	<10	<2	<2	<2	<1	<0.1
28	13.07.2018	GCS/LAB/S/2354/18-19	45	16	5.7	13.8	<0.1	<1.0	<10	<2	<2	<2	<1	<0.1
29	16.07.2018	GCS/LAB/S/2354/18-19	49	20	4.7	12.5	<0.1	<1.0	<10	<2	<2	<2	<1	<0.1
30	20.07.2018	GCS/LAB/S/2354/18-19	53	22	5.9	14.1	<0.1	<1.0	<10	<2	<2	<2	<1	<0.1
31	23.07.2018	GCS/LAB/S/2354/18-19	46	17	5.5	13.7	<0.1	<1.0	<10	<2	<2	<2	<1	<0.1
32	27.07.2018	GCS/LAB/S/2354/18-19	42	15	5.4	13.0	<0.1	<1.0	<10	<2	<2	<2	<1	<0.1
33	03.08.2018	GCS/LAB/S/2441/18-19	42	14	4.6	11.0	<0.1	<1.0	<10	<2	<2	<2	<1	<0.1
34	06.08.2018	GCS/LAB/S/2441/18-19	48	17	5.5	12.6	<0.1	<1.0	<10	<2	<2	<2	<1	<0.1
35	10.08.2018	GCS/LAB/S/2441/18-19	40	15	4.2	11.4	<0.1	<1.0	<10	<2	<2	<2	<1	<0.1
36	13.08.2018	GCS/LAB/S/2441/18-19	53	21	5.1	12.9	<0.1	<1.0	<10	<2	<2	<2	<1	<0.1
37	17.08.2018	GCS/LAB/S/2441/18-19	56	24	5.6	13.1	<0.1	<1.0	<10	<2	<2	<2	<1	<0.1
38	20.08.2018	GCS/LAB/S/2441/18-19	49	18	6.2	13.5	<0.1	<1.0	<10	<2	<2	<2	<1	<0.1
39	24.08.2018	GCS/LAB/S/2441/18-19	52	20	6.0	12.8	<0.1	<1.0	<10	<2	<2	<2	<1	<0.1
40	27.08.2018	GCS/LAB/S/2441/18-19	44	16	4.9	12.1	<0.1	<1.0	<10	<2	<2	<2	<1	<0.1
41	03.09.2018	GCS/LAB/S/1073/18-19	47	18	5.0	12.6	<0.1	<1.0	<10	<2	<2	<2	<1	<0.1
42	07.09.2018	GCS/LAB/S/1073/18-19	53	22	6.2	13.1	<0.1	<1.0	<10	<2	<2	<2	<1	<0.1
43	10.09.2018	GCS/LAB/S/1073/18-19	46	17	5.3	12.0	<0.1	<1.0	<10	<2	<2	<2	<1	<0.1
44	14.09.2018	GCS/LAB/S/1073/18-19	57	24	5.9	12.4	<0.1	<1.0	<10	<2	<2	<2	<1	<0.1
45	17.09.2018	GCS/LAB/S/1073/18-19	40	15	3.8	10.2	<0.1	<1.0	<10	<2	<2	<2	<1	<0.1
46	21.09.2018	GCS/LAB/S/1073/18-19	52	21	5.5	11.3	<0.1	<1.0	<10	<2	<2	<2	<1	<0.1
47	24.09.2018	GCS/LAB/S/1073/18-19	45	16	5.1	10.9	<0.1	<1.0	<10	<2	<2	<2	<1	<0.1
48	28.09.2018	GCS/LAB/S/1073/18-19	49	20	5.7	12.8	<0.1	<1.0	<10	<2	<2	<2	<1	<0.1



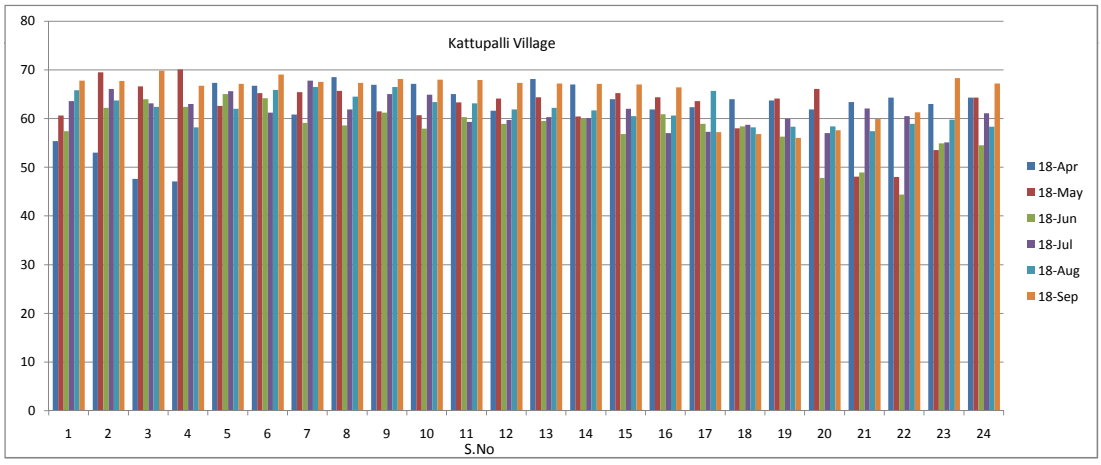
AMBIENT NOISE LEVEL MONITORING

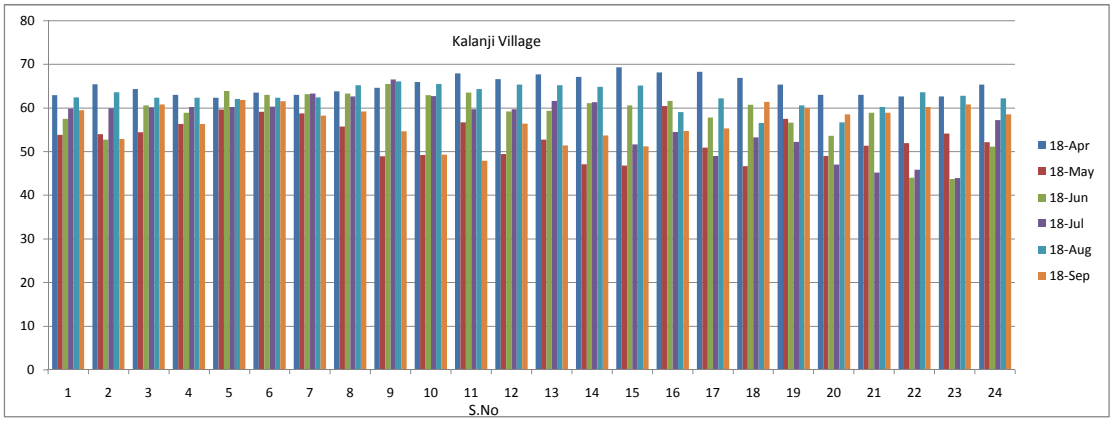
Location		PORT MAIN GATE						MARINE CONTROL					
Month & Year		Apr-18	May-18	Jun-18	Jul - 18	Aug - 18	Sep - 18	Apr-18	May-18	Jun-18	Jul - 18	Aug - 18	Sep - 18
Parameter & Unit		Leq dB(A)	Leq dB(A)	Leq dB(A)	Leq dB(A)	Leq dB(A)	Leq dB(A)	Leq dB(A)	Leq dB(A)	Leq dB(A)	Leq dB(A)	Leq dB(A)	Leq dB(A)
S.No.	Time of Sampling												
1	06.00 – 07.00 (Day)	66.1	47.8	57.5	60.8	68.0	60.7	65.3	63.0	61.4	55.9	70.8	61.8
2	07.00 –08.00	66.6	47.4	52.7	61.6	66.9	61.0	72.1	62.7	66.6	56.2	66.8	68.5
3	08.00 – 09.00	66.7	49.1	60.6	62.1	67.2	62.4	66.3	64.4	43.5	68.0	70.9	74.8
4	09.00 – 10.00	65.9	65	71.3	64.7	69.5	73.5	67.9	69.7	66.9	61.4	70.0	68.7
5	10.00 – 11.00	68.6	70.1	73	64.3	69.1	74.7	67.3	64.7	58.7	63.0	66.4	65.3
6	11.00 – 12.00	69.4	68.8	68.6	69.8	70.0	73.5	62.5	68.3	52.2	70.8	70.0	60.4
7	12.00 – 13.00	72.4	74	70.1	70.6	70.8	63.6	73.5	73.2	50.7	71.2	66.5	63.6
8	13.00 – 14.00	71.6	72.3	59.1	60.9	73.4	56.3	64.7	73.9	51.5	70.2	69.4	63.0
9	14.00 – 15.00	57.4	74.1	55.9	67.5	67.6	68.7	54.1	72.8	74.3	70.7	67.7	73.7
10	15.00 – 16.00	67.0	72.9	57.9	70.7	70.8	72.2	54.9	73.7	68.9	55.4	66.8	58.7
11	16.00 – 17.00	70.6	74.7	69.4	73.0	68.6	73.0	48.9	74.2	57.8	57.5	63.7	66.7
12	17.00 – 18.00	67.7	74.6	68.9	72.5	67.2	67.1	47.4	74.8	66	59.3	69.1	63.9
13	18.00 – 19.00	66.8	71.4	67.1	72.1	69.6	70.5	47.5	71.2	66.7	63.9	62.8	72.9
14	19.00 –20.00	67.9	71.3	66.8	70.2	68.6	73.5	47.6	66.1	68.3	56.1	71.9	65.9
15	20.00 – 21.00	68.3	73.8	67.7	73.3	67.7	72.3	66.3	65.4	61.4	55.1	65.3	67.3
16	21.00 – 22.00	69.4	70.4	67.6	74.1	65.7	70.3	69.3	71.1	55.8	57.8	60.7	68.1
17	22.00 – 23.00 (Night)	61.2	69.0	69	66.3	68.4	68.0	62.5	69.7	53.9	57.7	59.9	63.8
18	23.00 – 00.00	69.7	68.8	69.4	55.4	65.0	69.2	65.0	69.7	54.1	61.5	59.8	69.4
19	00.00 – 01.00	67.8	68.6	68.4	58.7	68.1	66.8	60.1	67.1	54.3	59.0	59.8	67.7
20	01.00 – 02.00	68.7	60.9	49.6	60.3	69.0	64.2	65.0	63.2	54.3	59.5	59.8	63.6
21	02.00 – 03.00	67.6	68.6	58.5	63.2	66.9	60.3	61.4	63.2	54.4	59.4	60.1	59.8
22	03.00 – 04.00	66.1	54.1	44	55.2	66.8	60.6	69.5	62.5	54.5	57.6	61.2	58.2
23	04.00 – 05.00	64.5	54.7	43.7	57.9	66.8	60.6	64.6	61.9	54.6	56.5	68.0	63.9
24	05.00 – 06.00	66.4	48.5	51.1	60.7	66.4	60.8	61.8	62.6	54.5	58.2	69.6	63.8



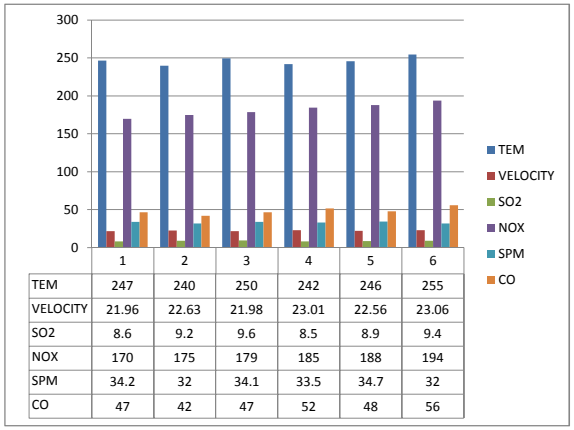


Location		KATTUPALLI VILLAGE						KALANJI VILLAGE					
Month & Year		Apr-18	May-18	Jun-18	Jul - 18	Aug - 18	Sep - 18	Apr-18	May-18	Jun-18	Jul - 18	Aug - 18	Sep - 18
Parameter & Unit		Leq dB(A)	Leq dB(A)	Leq dB(A)	Leq dB(A)	Leq dB(A)	Leq dB(A)	Leq dB(A)	Leq dB(A)	Leq dB(A)	Leq dB(A)	Leq dB(A)	Leq dB(A)
S.No.	Time of Sampling												
1	06.00 – 07.00 (Day)	55.4	60.6	57.4	63.6	65.8	67.8	62.9	53.8	57.5	59.8	62.4	59.5
2	07.00 –08.00	53.0	69.5	62.2	66.1	63.7	67.7	65.4	54.0	52.7	59.9	63.6	52.9
3	08.00 – 09.00	47.6	66.6	64.0	63.1	62.4	69.8	64.3	54.4	60.6	60.1	62.3	60.8
4	09.00 – 10.00	47.1	70.1	62.4	63.0	58.2	66.7	63.0	56.3	58.9	60.2	62.3	56.3
5	10.00 – 11.00	67.3	62.6	65.0	65.6	62.0	67.1	62.3	59.6	63.9	60.2	62.0	61.8
6	11.00 – 12.00	66.7	65.2	64.2	61.2	65.9	69.0	63.5	59.1	63.0	60.3	62.3	61.5
7	12.00 – 13.00	60.8	65.4	59.1	67.8	66.5	67.5	63.0	58.7	63.1	63.3	62.4	58.2
8	13.00 – 14.00	68.5	65.7	58.6	61.9	64.5	67.3	63.8	55.7	63.3	62.6	65.2	59.2
9	14.00 – 15.00	66.9	61.5	61.2	65.0	66.5	68.1	64.6	48.9	65.5	66.5	66.1	54.6
10	15.00 – 16.00	67.1	60.7	57.9	64.9	63.4	68.0	65.9	49.2	62.9	62.7	65.5	49.3
11	16.00 – 17.00	65.0	63.3	60.3	59.3	63.1	67.9	67.9	56.7	63.5	59.7	64.3	47.9
12	17.00 – 18.00	61.6	64.1	58.9	59.7	61.9	67.3	66.6	49.4	59.2	59.7	65.3	56.4
13	18.00 – 19.00	68.1	64.4	59.5	60.3	62.2	67.2	67.7	52.7	59.3	61.6	65.2	51.4
14	19.00 –20.00	67.0	60.4	60.0	60.1	61.7	67.1	67.1	47.1	61.1	61.3	64.8	53.7
15	20.00 – 21.00	64.0	65.2	56.8	62.0	60.5	67.0	69.3	46.8	60.6	51.6	65.1	51.2
16	21.00 – 22.00	61.9	64.4	60.9	57.0	60.6	66.4	68.1	60.4	61.6	54.5	59.0	54.7
17	22.00 – 23.00 (Night)	62.3	63.6	58.9	57.3	65.7	57.2	68.3	50.9	57.8	49	62.2	55.3
18	23.00 – 00.00	64.0	58.0	58.4	58.7	58.2	56.8	66.9	46.6	60.7	53.2	56.5	61.4
19	00.00 – 01.00	63.7	64.1	56.3	60.0	58.3	56.0	65.3	57.5	56.6	52.2	60.6	60
20	01.00 – 02.00	61.9	66.1	47.8	57.0	58.4	57.6	63.0	49.0	53.6	47.0	56.7	58.5
21	02.00 – 03.00	63.4	48.1	48.9	62.1	57.4	59.9	63.0	51.3	58.9	45.2	60.2	58.9
22	03.00 – 04.00	64.3	48.0	44.4	60.5	58.9	61.3	62.6	51.9	44.0	45.8	63.6	60.2
23	04.00 – 05.00	63.0	53.5	54.9	55.1	59.8	68.3	62.6	54.1	43.7	43.9	62.8	60.8
24	05.00 – 06.00	64.3	64.3	54.5	61.1	58.3	67.2	65.3	52.1	51.1	57.2	62.2	58.5

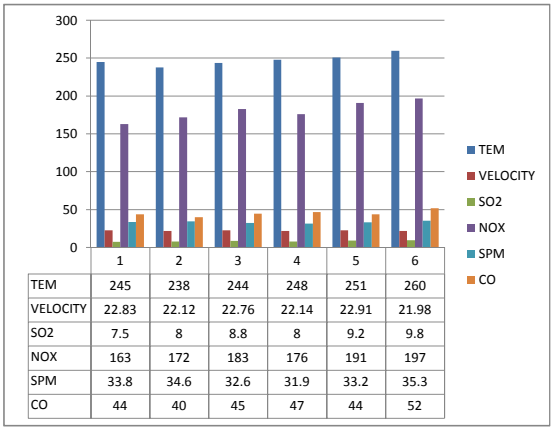




STACK MONITORING													
Location		DG 2000KVA - 1						DG 2000KVA - 2					
Month & Year		Apr-18	May-18	Jun-18	Jul - 18	Aug - 18	Sep - 18	Apr-18	May-18	Jun-18	Jul - 18	Aug - 18	Sep - 18
S.No.	Parameters												
1	Stack Temperature, °C	247	240	250	242	246	255	245	238	244	248	251	260
2	Flue Gas Velocity, m/s	21.96	22.63	21.98	23.01	22.56	23.06	22.83	22.12	22.76	22.14	22.91	21.98
3	Sulphur Dioxide, mg/Nm3	8.6	9.2	9.6	8.5	8.9	9.4	7.5	8	8.8	8	9.2	9.8
4	NOX (as NO2) in ppmv	170	175	179	185	188	194	163	172	183	176	191	197
5	Particular matter, mg/Nm3	34.2	32	34.1	33.5	34.7	32	33.8	34.6	32.6	31.9	33.2	35.3
6	Carbon Monoxide, mg/Nm3	47	42	47	52	48	56	44	40	45	47	44	52
7	Gas Discharge, Nm3/hr	5657	5909	5630	5985	5823	5850	5904	5798	5897	5692	5856	5524

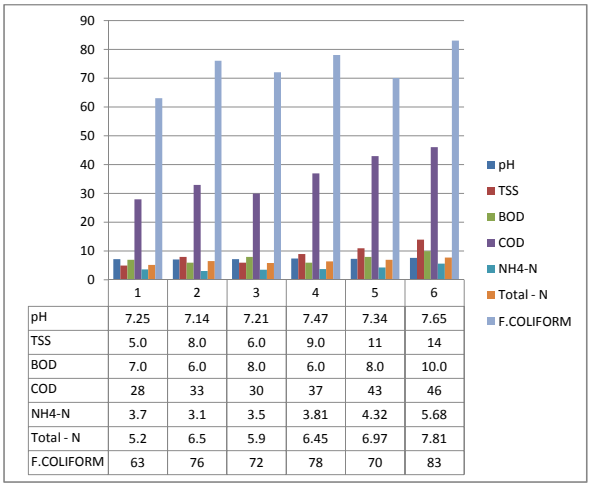


	1	2	3	4	5	6
TEM	247	240	250	242	246	255
VELOCITY	21.96	22.63	21.98	23.01	22.56	23.06
SO2	8.6	9.2	9.6	8.5	8.9	9.4
NOX	170	175	179	185	188	194
SPM	34.2	32	34.1	33.5	34.7	32
CO	47	42	47	52	48	56

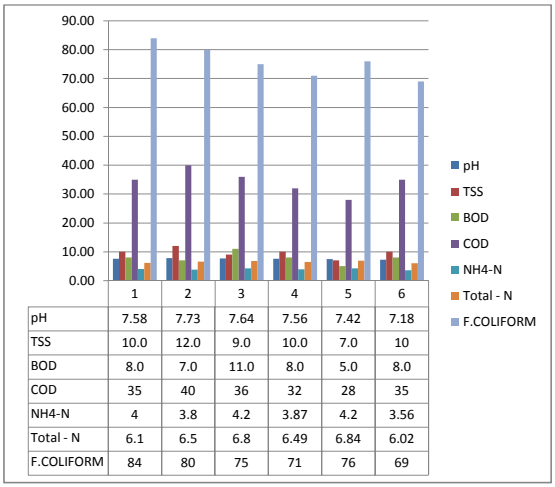


	1	2	3	4	5	6
TEM	245	238	244	248	251	260
VELOCITY	22.83	22.12	22.76	22.14	22.91	21.98
SO2	7.5	8	8.8	8	9.2	9.8
NOX	163	172	183	176	191	197
SPM	33.8	34.6	32.6	31.9	33.2	35.3
CO	44	40	45	47	44	52

STP OUTLET WATER													
Location		STP 30KLD OUTLET						STP 5KLD OUTLET					
Month & Year		Apr-18	May-18	Jun-18	Jul - 18	Aug - 18	Sep - 18	Apr-18	May-18	Jun-18	Jul - 18	Aug - 18	Sep - 18
S.No.	Parameters												
1	pH @ 25°C	7.25	7.14	7.21	7.47	7.34	7.65	7.58	7.73	7.64	7.56	7.42	7.18
2	Total Suspended Solids	5.0	8.0	6.0	9.0	11	14	10.0	12.0	9.0	10.0	7.0	10
3	BOD at 27°C for 3 days	7.0	6.0	8.0	6.0	8.0	10.0	8.0	7.0	11.0	8.0	5.0	8.0
4	COD	28	33	30	37	43	46	35	40	36	32	28	35
5	Ammonical Nitrogen as NH4-N	3.7	3.1	3.5	3.81	4.32	5.68	4	3.8	4.2	3.87	4.2	3.56
6	Total Kjeldahl Nitrogen as N - Total	5.2	6.5	5.9	6.45	6.97	7.81	6.1	6.5	6.8	6.49	6.84	6.02
7	Fecal Coliform	63	76	72	78	70	83	84	80	75	71	76	69



	1	2	3	4	5	6
pH	7.25	7.14	7.21	7.47	7.34	7.65
TSS	5.0	8.0	6.0	9.0	11	14
BOD	7.0	6.0	8.0	6.0	8.0	10.0
COD	28	33	30	37	43	46
NH4-N	3.7	3.1	3.5	3.81	4.32	5.68
Total - N	5.2	6.5	5.9	6.45	6.97	7.81
F.COLIFORM	63	76	72	78	70	83



	1	2	3	4	5	6
pH	7.58	7.73	7.64	7.56	7.42	7.18
TSS	10.0	12.0	9.0	10.0	7.0	10
BOD	8.0	7.0	11.0	8.0	5.0	8.0
COD	35	40	36	32	28	35
NH4-N	4	3.8	4.2	3.87	4.2	3.56
Total - N	6.1	6.5	6.8	6.49	6.84	6.02
F.COLIFORM	84	80	75	71	76	69

DRINKING WATER								
Month & Year		Unit	Apr-18	May-18	Jun-18	Jul - 18	Aug - 18	Sep - 18
S.No.	Parameters							
1	pH @ 25°C	-	6.55	6.69	6.72	6.86	-	6.84
2	Total Hardness as CaCo3	mg/L	16	22	7.8	10.0	-	9.0
3	Chloride as Cl	mg/L	115	96	34	41	-	33
4	Total Dissolved Solids	mg/L	220	189	67	79	-	68
5	Calcium as Ca	mg/L	5.1	4.5	1.56	2.03	-	1.79
6	Sulphate as SO4	mg/L	BDL (DL:1.0)				-	BDL (DL:1.0)
7	Nitrate as No3	mg/L	BDL(DL:1.0)				-	BDL(DL:1.0)
8	Total Alkalinity as $CaCo_3$	mg/L	27	38	13.5	16	-	14
9	Magnesium as Mg	mg/L	0.79	2.58	0.94	1.18	-	1.08
10	Color	Hazen	<1.0				-	<1.0
11	Odour	-	Unobjectionable				-	Unobjectionable
12	Taste	-	Agreeable				-	Agreeable
13	Turbidity	NTU	<0.5				-	<0.5
14	Iron as Fe	mg/L	BDL(DL 0.05)				-	BDL(DL 0.05)
15	Total Residual Chlorine	mg/L	BDL(DL 0.1)				-	BDL(DL 0.1)
16	Copper as Cu	mg/L	BDL(DL 0.05)				-	BDL(DL 0.05)
17	Manganese as Mn	mg/L	BDL(DL 0.05)				-	BDL(DL 0.05)
18	Fluoride as F	mg/L	BDL(DL 0.1)				-	BDL(DL 0.1)
19	Phenolic compounds as C_6H_5OH	mg/L	BDL(DL 0.001)				-	BDL(DL 0.001)
20	Mercury as Hg	mg/L	BDL(DL 0.001)				-	BDL(DL 0.001)
21	Cadmium as Cd	mg/L	BDL(DL 0.003)				-	BDL(DL 0.003)
22	Selenium as Se	mg/L	BDL(DL 0.01)				-	BDL(DL 0.01)
23	Arsenic as As	mg/L	BDL(DL 0.01)				-	BDL(DL 0.01)
24	Lead as Pb	mg/L	BDL(DL 0.01)				-	BDL(DL 0.01)
25	Zinc as Zn	mg/L	BDL(DL 0.05)				-	BDL(DL 0.05)
26	Anionic Detergents as MBAS	mg/L	Nil				-	Nil
27	Total Chromium as Cr	mg/L	BDL(DL 0.05)				-	BDL(DL 0.05)
28	Phenolphthalein Alkalinity as $CaCo_3$	mg/L	Nil				-	Nil
29	Aluminium as Al	mg/L	BDL(DL 0.05)				-	BDL(DL 0.05)
30	Boron as B	mg/L	BDL(DL 0.1)				-	BDL(DL 0.1)
31	Mineral Oil	mg/L	Nil				-	Nil
32	Polynuclear Aromatic Hydrocarbons as [PAH]	mg/L	Nil				-	Nil
33	Pesticides	mg/L	Nil				-	Nil
34	Cyanide as CN	mg/L	BDL (DL : 0.01)				-	BDL (DL : 0.01)
35	E. coli	MPN/100ml	Absence				-	Absence
36	Total Coliform	MPN/100ml	Absence				-	Absence

MARINE WATER														
Location			CB - 1 Surface Water						CB - 2 Surface Water					
Month & Year		Unit	Apr-18	May-18	Jun-18	Jul-18	Aug - 18	Sep - 18	Apr-18	May-18	Jun-18	Jul-18	Aug - 18	Sep - 18
S.No.	Parameters													
1	pH @ 25°C	-	7.72	7.85	7.73	7.86	7.7	7.56	7.81	7.91	7.83	7.68	7.45	7.32
2	Temperature	°C	29	29	29	29	29	29	29	29	29	29	29	29
3	Total Suspended Solids	mg/L	18	21	24	28	25	23	14	20	15	17	13	12
4	BOD at 27 °C for 3 days	mg/L	12	10	13	15	12	10	11	14	12	14	10	8
5	Dissolved oxygen	mg/L	5.1	5.4	5.2	5.6	5	4	4.9	4.5	4.8	5.1	4.7	4.3
6	Salinity at 25 °C	-	35.4	34.8	34.6	33.4	35.8	34.54	34.5	33.7	42.6	40.3	37.9	36.8
7	Oil & Grease	mg/L	BDL(DL 1.0)						BDL(DL 1.0)					
8	Nitrate as No_3	mg/L	7.08	7.96	8.17	8.91	8.76	8.41	5.2	5.8	5.4	5.78	5.62	5.46
9	Nitrite as No_2	mg/L	4.97	4.12	4.23	5.03	4.94	4.76	3	3.6	3.1	4.26	4.14	4.02
10	Ammonical Nitrogen as N	mg/L	BDL(DL 1.0)						BDL(DL 1.0)					
11	Ammonia as NH3	mg/L	BDL(DL 0.01)						BDL(DL 0.01)					
12	Kjeldahl Nitrogen as N	mg/L	BDL(DL 1.0)						BDL(DL 1.0)					
13	Total phosphates as PO4	mg/L	1.89	2.37	2.45	2.75	2.7	2.64	1.73	1.97	1.84	1.47	1.4	1.36
14	Total Nitrogen	mg/L	BDL(DL 1.0)						BDL(DL 1.0)					
15	Total Dissolved Solids	mg/L	41484	40175	41252	40568	39864	38450	41062	40103	41276	40025	38982	37890
16	COD	mg/L	60	71	74	81	67	72	58	65	69	75	86	81
17	Total bacterial count	cfu/ml	59	50	56	63	72	78	70	59	71	60	69	73
18	Coliforms	Per 100 ml	Absence						Absence					
19	Escherichia coli	Per 100 ml	Absence						Absence					
20	Salmonella	Per 100 ml	Absence						Absence					
21	Shigella	Per 100 ml	Absence						Absence					
22	Vibrio cholerae	Per 100 ml	Absence						Absence					
23	Vibrio parahaemolyticus	Per 100 ml	Absence						Absence					
24	Enterococci	Per 100 ml	Absence						Absence					
25	Octane	µg/L	148	155	151	159	147	140	162	168	164	169	157	159
26	Nonane	µg/L	BDL(DL 0.1)						BDL(DL 0.1)					
27	Decane	µg/L	BDL(DL 0.1)						BDL(DL 0.1)					
28	Undecane	µg/L	BDL(DL 0.1)						BDL(DL 0.1)					
29	Tridecane	µg/L	7.3	7.9	7.2	7.7	6.8	6.3	6.9	7.4	7.7	7.3	6.5	6.0
30	Tetradecane	µg/L	BDL(DL 0.1)						BDL(DL 0.1)					
31	Pentadecane	µg/L	BDL(DL 0.1)						BDL(DL 0.1)					
32	Hexadecane	µg/L	BDL(DL 0.1)						BDL(DL 0.1)					
33	Octadecane	µg/L	BDL(DL 0.1)						BDL(DL 0.1)					
34	Nonadecane	µg/L	BDL(DL 0.1)						BDL(DL 0.1)					
35	Elcosane	µg/L	BDL(DL 0.1)						BDL(DL 0.1)					
36	Primary Productivity	mg C/m^3 /hr	8.17	8.78	8.42	8.91	8.79	8.70	8.97	8.03	8.58	8.09	8.14	8.07
37	Chlorophylla	mg $/m^3$	3.94	4.21	4.16	5.26	5.34	5.29	4.9	5.64	5.24	5.73	6.03	6.11
38	Phaeophytin	mg $/m^3$	0.51	0.63	0.54	0.67	0.56	0.51	0.89	0.77	0.81	0.71	0.78	0.83
39	Oxidisable Paticular Organic	mg /L	4.83	3.98	4.7	4.93	4.82	4.76	6	5.48	5.76	5.05	5.21	5.32
PHYTOPLANKTON														
40	Bacteriastrum hyalinum	nos/ml	19	17	20	17	15	18	13	16	14	18	14	12
41	Bacteriastrum varians	nos/ml	15	14	18	15	19	15	11	12	10	12	11	9
42	Chaetoceros didymus	nos/ml	3	8	5	7	10	13	6	9	8	10	8	11
43	Chaetoceros decipiens	nos/ml	5	7	9	10	12	8	9	8	11	14	12	14
44	Biddulphia mobiliensis	nos/ml	10	16	12	16	14	17	4	10	5	9	7	10
45	Ditylum brightwellii	nos/ml	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
46	Gyrosigma sp	nos/ml	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
47	Cladophyxis sps	nos/ml	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
48	Coscinodiscus centralis	nos/ml	8	9	7	9	11	14	12	7	12	13	15	13
49	Coscinodiscus granii	nos/ml	11	12	14	12	16	19	9	11	16	17	13	9
50	Cylcotella sps	nos/ml	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
51	Hemidiscus hardmanianus	nos/ml	6	3	4	6	9	7	7	8	13	15	18	20
52	Laudaria annulata	nos/ml	7	10	12	11	13	10	13	14	17	16	14	16
53	Pyropacus horologicum	nos/ml	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
54	Pleurosigma angulatum	nos/ml	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
55	Leptocylindrus danicus	nos/ml	2	4	3	5	8	12	3	6	4	8	10	8
56	Guinardia flaccida	nos/ml	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
57	Rhizosolenia alata	nos/ml	4	6	5	8	13	16	14	15	18	11	17	15
58	Rhizosolena impricata	nos/ml	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
59	Rhizosolena semispina	nos/ml	9	11	13	10	17	19	10	9	15	17	15	17
60	Thalassionema nitzschioides	nos/ml	12	13	15	19	21	23	18	15	20	21	18	21
61	Triceratium reticulatum	nos/ml	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
62	Ceratium trichoceros	nos/ml	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
63	Ceratium furca	nos/ml	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
64	Ceratium macroceros	nos/ml	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
65	Ceracium longipes	nos/ml	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
ZOOPLANKTONS														
66	Acrocalanus gracilis	nos/ml	9	7	10	12	17	15	15	11	18	20	18	16
67	Acrocalanus sp	nos/ml	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
68	Paracalanus parvus	nos/ml	10	12	15	16	11	8	8	10	6	10	12	15
69	Eutintinus sps	nos/ml	4	6	3	5	10	7	11	13	15	12	15	11
70	Centropages furcatus	nos/ml	3	8	11	13	16	14	13	9	12	14	17	19
71	Corycaeus dana	nos/ml	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
72	Oithona brevicornis	nos/ml	11	9	13	15	12	10	12	13	16	11	8	12
73	Euterpina acutifrons	nos/ml	7	10	8	10	15	17	5	7	9	13	16	14
74	Metacalanus aurivilli	nos/ml	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
75	Copipod nauplii	nos/ml	12	14	12	14	18	13	10	8	13	15	11	9
76	Cirripede nauplii	nos/ml	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
77	Bivalve veliger	nos/ml	16	11	16	17	19	22	9	12	10	16	14	17
78	Gastropod veliger	nos/ml	8	13	9	11	8	11	14	15	17	9	7	13

Location		CB - 1 Bottom Water						CB - 2 Bottom Water					
Month & Year		Unit	Apr-18	May-18	Jun-18	Jul-18	Aug - 18	Sep - 18	Apr-18	May-18	Jun-18	Jul-18	Aug - 18	Sep - 18
S.No.	Parameters													
1	pH @ 25°C	-	7.67	7.74	7.65	7.81	7.96	7.80	7.81	7.69	7.71	7.56	7.67	7.52
2	Temperature	^{o}C	29	29	29	29	29	29	29	29	29	29	29	29
3	Total Suspended Solids	mg/L	15	18	16	18	21	18	11	13	10	12	16	14
4	BOD at 27 °C for 3 days	mg/L	6	9	7	10	8	6	4.9	6	5.6	7	11	9
5	Dissolved oxygen	mg/L	1.9	2.1	1.8	1.7	1.5	1.3	1.7	1.9	1.3	1.5	1	1.5
6	Salinity at 25 °C	-	31.8	32.2	35.1	36	37	36.2	37.2	37.7	36	34.3	35	33.3
7	Oil & Grease	mg/L	BDL(DL 1.0)						BDL(DL 1.0)					
8	Nitrate as No_3	mg/L	7.45	7.68	7.5	7.96	8.13	7.99	5.21	5.96	5.81	6.05	6.2	5.94
9	Nitrite as No_2	mg/L	6.21	5.75	5.61	5.88	6.2	6.1	4.97	4.12	4.04	3.82	3.94	3.78
10	Ammonical Nitrogen as N	mg/L	BDL(DL 1.0)						BDL(DL 1.0)					
11	Ammonia as NH3	mg/L	BDL(DL 0.01)						BDL(DL 0.01)					
12	Kjeldahl Nitrogen as N	mg/L	BDL(DL 1.0)						BDL(DL 1.0)					
13	Total phosphates as PO4	mg/L	0.94	1.27	1.22	1.52	1.7	1.67	1.03	1.48	1.62	1.96	2.07	1.97
14	Total Nitrogen	mg/L	BDL(DL 1.0)						BDL(DL 1.0)					
15	Total Dissolved Solids	mg/L	39456	39926	38984	39425	40287	39639	39208	39964	38928	39627	40175	38521
16	COD	mg/L	51	58	50	62	78	85	46	60	45	55	68	64
17	Total bacterial count	cfu/ml	62	65	63	67	65	60	64	53	62	66	73	70
18	Coliforms	Per 100 ml	Absence						Absence					
19	Escherichia coli	Per 100 ml	Absence						Absence					
20	Salmonella	Per 100 ml	Absence						Absence					
21	Shigella	Per 100 ml	Absence						Absence					
22	Vibrio cholerae	Per 100 ml	Absence						Absence					
23	Vibrio parahaemolyticus	Per 100 ml	Absence						Absence					
24	Enterococci	Per 100 ml	Absence						Absence					
25	Colour	Hazan	5	10	7	10	12	10	4	7	5	8	10	15
26	Odour	-	Unobjectionable						Unobjectionable					
27	Taste	-	Disagreeable						Disagreeable					
28	Turbidity	NTU	19	15	18	12	15	17	15	12	14	10	12	14
29	Calcium as Ca	mg/L	396	407	397	412	421	414	468	451	439	402	408	391
30	Chloride as Cl	mg/L	17619	17818	19424	19918	20353	20026	20596	20867	19912	18964	19226	18434
31	Cyanide as CN	mg/L	BDL(DL 0.01)						BDL(DL 0.01)					
32	Fluoride as F	mg/L	0.43	0.52	0.45	0.53	0.57	0.53	0.71	0.83	0.75	0.63	0.7	0.67
33	Magnesium as Mg	mg/L	1407	1338	1307	1394	1424	1397	1634	1624	1583	1494	1515	1452
34	Total Iron as Fe	mg/L	0.18	0.21	0.19	0.23	0.28	0.24	0.2	0.25	0.22	0.31	0.4	0.35
35	Residual Free Chlorine	mg/L	BDL(DL 0.1)						BDL(DL 0.1)					
36	Phenolic Compounds as C6H5OH	mg/L	BDL(DL 1.0)						BDL(DL 1.0)					
37	Total Hardness as CaCO3	mg/L	6784	6594	6438	6838	6987	6875	7980	7898	7693	7230	7330	7028
38	Total Alkalinity as CaCO3	mg/L	163	186	182	205	210	207	157	170	166	183	192	184
39	Sulphide as H2S	mg/L	BDL(DL 0.5)						BDL(DL 0.5)					
40	Sulphate as SO4	mg/L	3095	3128	3052	2896	2959	2911	3265	3183	3100	3007	3049	2923
41	Anionic surfactants as MBAS	mg/L	BDL(DL 1.0)						BDL(DL 1.0)					
42	Monocrotophos	µg/L	BDL(DL 0.01)						BDL(DL 0.01)					
43	Atrazine	µg/L	BDL(DL 0.01)						BDL(DL 0.01)					
44	Ethion	µg/L	BDL(DL 0.01)						BDL(DL 0.01)					
45	Chiorpyrifos	µg/L	BDL(DL 0.01)						BDL(DL 0.01)					
46	Phorate	µg/L	BDL(DL 0.01)						BDL(DL 0.01)					
47	Mehyle parathion	µg/L	BDL(DL 0.01)						BDL(DL 0.01)					
48	Malathion	µg/L	BDL(DL 0.01)						BDL(DL 0.01)					
49	DDT (o,p and p,p-Isomers of DDT,DDE and DDD	µg/L	BDL(DL 0.01)						BDL(DL 0.01)					
50	Gamma HCH (Lindane)	µg/L	BDL(DL 0.01)						BDL(DL 0.01)					
51	Alppha HCH	µg/L	BDL(DL 0.01)						BDL(DL 0.01)					
52	Beta HCH	µg/L	BDL(DL 0.01)						BDL(DL 0.01)					
53	Delta HCH	µg/L	BDL(DL 0.01)						BDL(DL 0.01)					
54	Endosulfan (Alpha,beta and sulphate)	µg/L	BDL(DL 0.01)						BDL(DL 0.01)					
55	Butachlor	µg/L	BDL(DL 0.01)						BDL(DL 0.01)					
56	Alachlor	µg/L	BDL(DL 0.01)						BDL(DL 0.01)					
57	Aldrin/Dieldrin	µg/L	BDL(DL 0.01)						BDL(DL 0.01)					
58	Isoproturon	µg/L	BDL(DL 0.01)						BDL(DL 0.01)					
59	2,4-D	µg/L	BDL(DL 0.01)						BDL(DL 0.01)					
60	Polychlorinated Biphenyls (PCB)	µg/L	BDL(DL 0.01)						BDL(DL 0.01)					
61	Polynuclear aromatic hydrocarbons (PAH)	µg/L	BDL(DL 0.01)						BDL(DL 0.01)					
62	Arsenic as As	mg/L	BDL(DL 0.01)						BDL(DL 0.01)					
63	Mercury as Hg	mg/L	BDL(DL 0.001)						BDL(DL 0.001)					
64	Cadmium as Cd	mg/L	BDL(DL 0.003)						BDL(DL 0.003)					
65	Total Chromium as Cr	mg/L	BDL(DL 0.05)						BDL(DL 0.05)					
66	Copper as Cu	mg/L	BDL(DL 0.05)						BDL(DL 0.05)					
67	Lead as Pb	mg/L	BDL(DL 0.01)						BDL(DL 0.01)					
68	Manganese as Mn	mg/L	BDL(DL 0.05)						BDL(DL 0.05)					
69	Nickel as Ni	mg/L	BDL(DL 0.05)						BDL(DL 0.05)					
70	Selenium as Se	mg/L	BDL(DL 0.01)						BDL(DL 0.01)					
71	Barium as Ba	mg/L	BDL(DL 0.1)						BDL(DL 0.1)					
72	Silver as Ag	mg/L	BDL(DL 0.01)						BDL(DL 0.01)					
73	Molybdenum as Mo	mg/L	BDL(DL 0.01)						BDL(DL 0.01)					
74	Octane	µg/L	161	153	149	155	151	146	158	169	157	148	159	152
75	Nonane	µg/L	BDL(DL 0.1)						BDL(DL 0.1)					
76	Decane	µg/L	BDL(DL 0.1)						BDL(DL 0.1)					
77	Undecane	µg/L	7	8.2	7.6	8.2	7.6	7.2	7.4	8	7.1	6.4	6.7	6.4
78	Tridecane	µg/L	BDL(DL 0.1)						BDL(DL 0.1)					
79	Tetradecane	µg/L	BDL(DL 0.1)						BDL(DL 0.1)					
80	Pentadecane	µg/L	BDL(DL 0.1)						BDL(DL 0.1)					
81	Hexadecane	µg/L	BDL(DL 0.1)						BDL(DL 0.1)					

Location		CB - 1 Bottom Water							CB - 2 Bottom Water					
Month & Year		Unit	Apr-18	May-18	Jun-18	Jul-18	Aug - 18	Sep - 18	Apr-18	May-18	Jun-18	Jul-18	Aug - 18	Sep - 18
S.No.	Parameters													
82	Heptadecane	µg/L	BDL(DL 0.1)						BDL(DL 0.1)					
83	Octadecane	µg/L	BDL(DL 0.1)						BDL(DL 0.1)					
84	Nonadecane	µg/L	BDL(DL 0.1)						BDL(DL 0.1)					
85	Elcosane	µg/L	BDL(DL 0.1)						BDL(DL 0.1)					
86	Primary Productivity	mg C/m^3 /hr	7.69	7.91	7.76	7.12	7.27	7.2	9.01	8.69	8.84	8.43	8.31	8.24
87	Chlorophyll a	mg /m^3	4.12	4.86	4.52	4.08	3.89	3.81	3.96	4.27	3.96	4.47	5.16	5.08
88	Phaeophytin	mg /m^3	0.64	0.75	0.68	0.79	0.84	0.76	0.72	0.8	0.75	0.83	0.74	0.87
89	Oxidisable Paticular Organic	mg /L	5.15	4.26	5.12	5.49	5.76	5.69	4.48	5.73	4.62	5.18	5.27	5.35
PHYTOPLANKTON														
90	Bacteriastrum hyalinum	nos/ml	16	14	12	14	18	21	20	18	16	16	19	23
91	Bacteriastrum varians	nos/ml	12	13	15	16	13	17	10	15	13	10	14	16
92	Chaetoceros didymus	nos/ml	8	10	7	9	5	9	9	11	15	12	16	14
93	Chaetoceros decipiens	nos/ml	13	11	14	12	10	12	14	12	8	11	9	11
94	Biddulphia mobiliensis	nos/ml	11	12	10	13	17	19	7	9	14	15	13	15
95	Ditylum brightwellii	nos/ml	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
96	Gyrosigma sp	nos/ml	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
97	Cladophyxis sps	nos/ml	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
98	Coscinodiscus centralis	nos/ml	10	15	13	10	14	11	12	10	17	13	17	19
99	Coscinodiscus granii	nos/ml	8	9	7	9	11	7	6	8	5	7	15	14
100	Cylcotella sps	nos/ml	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
101	Hemidiscus hardmanianus	nos/ml	4	6	5	8	6	4	9	7	10	12	10	8
102	Laudaria annulata	nos/ml	9	8	11	14	17	18	12	13	18	19	21	17
103	Pyropacus horologicum	nos/ml	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
104	Pleurosigma angulatum	nos/ml	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
105	Leptocylindrus danicus	nos/ml	7	5	8	10	12	10	5	8	6	7	6	13
106	Guinardia flaccida	nos/ml	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
107	Rhizosolenia alata	nos/ml	18	16	15	12	15	13	13	9	12	9	11	10
108	Rhizosolena impricata	nos/ml	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
109	Rhizosolena semispina	nos/ml	6	7	9	11	19	22	8	12	19	16	18	20
110	Thalassionema nitzschioides	nos/ml	15	10	16	17	16	15	16	14	13	18	22	18
111	Triceratium reticulatum	nos/ml	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
112	Ceratium trichoceros	nos/ml	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
113	Ceratium furca	nos/ml	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
114	Ceratium macroceros	nos/ml	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
115	Ceracium longipes	nos/ml	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
ZOOPLANKTONS														
116	Acrocalanus gracilis	nos/ml	11	9	14	10	13	10	10	8	12	15	12	14
117	Acrocalanus sp	nos/ml	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
118	Paracalanus parvus	nos/ml	13	15	17	18	15	12	12	11	9	12	17	19
119	Eutintinus sps	nos/ml	7	10	8	7	12	9	9	12	16	14	11	13
120	Centropages furcatus	nos/ml	5	7	15	16	14	17	18	14	19	17	15	12
121	Corycaeus dana	nos/ml	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
122	Oithona brevicornis	nos/ml	15	11	7	9	7	6	13	10	14	13	10	15
123	Euterpina acutifrons	nos/ml	12	14	16	14	17	19	8	13	11	15	13	10
124	Metacalanus aurivilli	nos/ml	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
125	Copipod nauplii	nos/ml	8	12	10	12	16	18	14	9	15	17	19	21
126	Cirripede nauplii	nos/ml	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
127	Bivalve veliger	nos/ml	10	13	12	13	11	13	11	15	17	18	16	18
128	Gastropod veliger	nos/ml	6	9	5	8	10	15	9	11	8	10	14	16

SEA SEDIMENT														
Location			CB - 1 Sea Sediment						CB - 2 Sea Sediment					
Month & Year		Unit	Apr-18	May-18	Jun-18	Jul-18	Aug - 18	Sep - 18	Apr-18	May-18	Jun-18	Jul-18	Aug - 18	Sep - 18
S.No.	Parameters													
1	Total organic matter	%	0.34	0.39	0.32	0.36	0.32	0.37	0.4	0.43	0.41	0.35	0.38	0.42
2	% Sand	%	35	31	36	39	34	31	32	31	32	38	35	38
3	%silt	%	10	12	11	14	21	26	15	10	13	14	11	15
4	%Clay	%	55	57	53	47	45	43	53	59	55	48	54	47
5	Iron (as Fe)	mg/kg	17.3	15.1	17.5	18.4	17.6	1732	21	24.7	22	25	20	14
6	Aluminium (as Al)	mg/kg	14752	14056	14658	14055	14224	13089	15095	15425	15028	14961	14670	13980
7	Chromium (as cr)	mg/kg	47	61	54	48	53	50	54	49	56	52	45	43
8	Copper (as cu)	mg/kg	59	50	56	51	58	54	70	64	71	77	70	75
9	Manganese (as Mn)	mg/kg	410	325	412	435	422	431	396	418	424	439	424	430
10	Nickel (as Ni)	mg/kg	13.8	16.4	14.1	13.3	12.8	12.3	14.1	16.2	14.7	15.6	14.2	14.8
11	Lead (as Pb)	mg/kg	32	37	35	39	34	30	45	50	42	44	49	54
12	Zinc (as Zn)	mg/kg	256	298	269	261	278	267	278	301	287	263	250	241
13	Mercury(as Hg)	mg/kg	0.51	0.43	0.54	0.55	0.5	0.46	0.63	0.57	0.6	0.58	0.46	0.4
14	Total phosphorus as P	mg/kg	154	165	157	149	141	134	172	160	163	152	167	159
15	Octane	mg/kg	BDL(DL 0.1)						BDL(DL 0.1)					
16	Nonane	mg/kg	BDL(DL 0.1)						BDL(DL 0.1)					
17	Decane	mg/kg	BDL(DL 0.1)						BDL(DL 0.1)					
18	Undecane	mg/kg	0.19	0.24	0.2	0.28	0.2	0.28	0.21	0.27	0.25	0.27	0.23	0.2
19	Dodecane	mg/kg	BDL(DL 0.1)						BDL(DL 0.1)					
20	Tridecane	mg/kg	BDL(DL 0.1)						BDL(DL 0.1)					
21	Tetradecane	mg/kg	BDL(DL 0.1)						BDL(DL 0.1)					
22	Phntadecane	mg/kg	BDL(DL 0.1)						BDL(DL 0.1)					
23	Hexadecane	mg/kg	BDL(DL 0.1)						BDL(DL 0.1)					
24	Heptadecane	mg/kg	BDL(DL 0.1)						BDL(DL 0.1)					
25	Octadecane	mg/kg	BDL(DL 0.1)						BDL(DL 0.1)					
26	Nonadecane	mg/kg	BDL(DL 0.1)						BDL(DL 0.1)					
27	Elcosane	mg/kg	BDL(DL 0.1)						BDL(DL 0.1)					
I. Nematoda														
28	Oncholaimussp	nos/m^2	22	25	23	25	21	19	19	22	18	22	19	17
29	Tricomasp	nos/m^2	10	13	15	18	15	13	11	16	12	14	17	15
II. Foraminifera														
30	Ammoniabeccarii	nos/m^2	13	15	17	13	10	11	12	14	10	16	14	12
31	Quinqulinasp	nos/m^2	18	14	19	17	14	16	21	17	22	18	20	18
32	Discorbinellasp.,	nos/m^2	11	12	14	11	13	10	16	13	11	13	10	11
33	Bolivinaspathulata	nos/m^2	14	16	12	10	8	12	13	18	15	12	15	10
34	Elphidiumsp	nos/m^2	9	10	6	8	11	14	14	15	19	10	13	16
35	Noniondepressula	nos/m^2	20	17	16	14	16	18	17	12	20	15	18	14
III. Molluscs-Bivalvia														
36	Meretrixveligers	nos/m^2	24	26	24	22	20	22	23	25	22	26	24	26
37	Anadoraveligers	nos/m^2	21	18	21	26	24	20	25	20	24	28	22	24
	Total No. of individuals	nos/m^2	162	166	167	164	152	155	171	172	173	174	172	163
	Shanon Weaver Diversity Index		2.25	2.26	2.25	2.23	2.25	2.27	2.27	2.28	2.26	2.25	2.27	2.26

CONSENT ORDER NO. 1808215430679 DATED: 17/09/2018.

PROCEEDINGS NO.T1/TNPCB/F.0420GMP/RL/GMP/A/2018 DATED: 17/09/2018

SUB: Tamil Nadu Pollution Control Board - RENEWAL OF CONSENT –M/s. MARINE INFRASTRUCTURE DEVELOPER PRIVATE LIMITED , S.F.No. 14-18B, 15, 168-1&2, 169, 170-1&2, 171-1&2, 172-1&2, 173-1&2, 174, 175, 176, 177, 178-1,2,3&4,179-1, 2, 3&4, 180, 181, 182, 183, 184-1, 2&3, 186, 187, 188-1, 2A, 2B& 2C,189, 190,191, 192-1 & 2, 193-1, 2, 3 & 4, 194, 195, 196, 197-1,2&3, 199, 200-1&2, 202-1&2, 203, 206-1,2A,2B,3,4A&4B, 207-2B, 208-2, 209-1,2&3, 210-1&2, 211-1,2,3,4,5,6&7, 212, 213, 214-1,2,3&4,215-1&2,216,217,218-1,2,3,4&5,219-1&2,220, 223-1&2, 224-1,2,3,4&5, 225, 226, 227, 228-1,2,3,4& 5, 229, 230, 231-1,2,3,4&5, 232, 233-1,2,3&4, 234-1,2,3&4, 235-1B, 2-3B, 236-3B, 4, 242-1&2, 243-2B, 244-2, 247-1, 248-1&2, 249-1A2,2B, 198-1, 205-1A,1B,2,5, 1 (part)-4A1 Pt,4A2,4B Pt,5 Pt, 11 (part), 16 (part)-1&2,17 (part)-1, 2, 3A&3B ,143 (part), 151 (part)-1,2,3&4,152 (part), 153 (part), 154 (part)-1&2, 166 (part), 167 (part)-1&2, 204(part)-1,2&3, 221(part), 222 (part)-1&2, 330 (part)-1,2,3&4, 12 (Part),16-3, 198-2, 201, 205-3, 205-4, KATTUPALLI village, Ponneri Taluk and Tiruvallur District - Renewal of Consent for the operation of the plant and discharge of emissions under Section 21 of the Air (Prevention and Control of Pollution) Act, 1981 as amended in 1987 (Central Act 14 of 1981) –Issued- Reg.

REF: 1. PROCEEDINGS NO.T5/TNPCB/F.0661AMB/RL/AMB/W&A/2017 DATED: 09/02/2017.
2. IR.No : F.0420GMP/RL/AE/GMP/2018 dated 16/08/2018.

RENEWAL OF CONSENT is hereby granted under Section 21 of the Air (Prevention and Control of Pollution) Act, 1981 as amended in 1987 (Central Act 14 of 1981) (hereinafter referred to as "The Act") and the rules and orders made there under to

The Chief Executive Officer
M/s.MARINE INFRASTRUCTURE DEVELOPER PRIVATE LIMITED,
S.F.No. 14-18B, 15, 168-1&2, 169, 170-1&2, 171-1&2, 172-1&2, 173-1&2, 174, 175, 176, 177, 178-1,2,3&4,179-1, 2, 3&4, 180, 181, 182, 183, 184-1, 2&3, 186, 187, 188-1, 2A, 2B& 2C,189, 190,191, 192-1 & 2, 193-1, 2, 3 & 4, 194, 195, 196, 197-1,2&3, 199, 200-1&2, 202-1&2, 203, 206-1,2A,2B,3,4A&4B, 207-2B, 208-2, 209-1,2&3, 210-1&2, 211-1,2,3,4,5,6&7, 212, 213, 214-1,2,3&4,215-1&2,216,217,218-1,2,3,4&5,219-1&2,220, 223-1&2, 224-1,2,3,4&5, 225, 226, 227, 228-1,2,3,4& 5, 229, 230, 231-1,2,3,4&5, 232, 233-1,2,3&4, 234-1,2,3&4, 235-1B, 2-3B, 236-3B, 4, 242-1&2, 243-2B, 244-2, 247-1, 248-1&2, 249-1A2,2B, 198-1, 205-1A,1B,2,5, 1 (part)-4A1 Pt,4A2,4B Pt,5 Pt, 11 (part), 16 (part)-1&2,17 (part)-1, 2, 3A&3B ,143 (part), 151 (part)-1,2,3&4,152 (part), 153 (part), 154 (part)-1&2, 166 (part), 167 (part)-1&2, 204(part)-1,2&3, 221(part), 222 (part)-1&2, 330 (part)-1,2,3&4, 12 (Part),16-3, 198-2, 201, 205-3, 205-4,
KATTUPALLI village,
Ponneri Taluk,
Tiruvallur District.

Authorizing the occupier to operate the industrial plant in the Air Pollution Control Area as notified by the Government and to make discharge of emission from the stacks/chimneys.

This is subject to the provisions of the Act, the rules and the orders made there under and the terms and conditions incorporated under the Special and General conditions stipulated in the Consent Order issued earlier and subject to the special conditions annexed.

This RENEWAL OF CONSENT is valid for the period ending March 31, 2019

R. KANNAN Digitally signed by R. KANNAN Date: 2018.09.21 17:42:51 +05'30'

For Member Secretary,
Tamil Nadu Pollution Control Board,
Chennai

SPECIAL CONDITIONS

1. This renewal of consent is valid for operating the facility for the manufacture of products (Col. 2) at the rate (Col. 3) mentioned below. Any change in the products and its quantity has to be brought to the notice of the Board and fresh consent has to be obtained.

Sl. No.	Description	Quantity	Unit
	Product Details		
1.	Containers	1.8	Million TEU / Annum (21.60 MTPA)
2.	Ro-R0 (Nos) (Automobiles)	149899	Nos / Annum (0.22 MTPA)
3.	Project Cargo	440000	MT / Annum (0.44 MTPA)
4.	Breakbulk / General Cargo (Barytes/Gypsum/Limestone/Granite/Steel Cargo)	1820000	MT / Annum (1.82 MTPA)

2. This renewal of consent is valid for operating the facility with the below mentioned emission/noise sources along with the control measures and/or stack. Any change in the emission source/control measures/change in stack height has to be brought to the notice of the Board and fresh consent/Amendment has to be obtained.

I	**Point source emission with stack :**			
Stack No.	**Point Emission Source**	**Air pollution Control measures**	**Stack height from Ground Level in m**	**Gaseous Discharge in Nm3/hr**
1	DG Set 2000 KVA	Acoustic enclosures with stack	34	
2	DG Set 2000 KVA	Acoustic enclosures with stack	34	
II	**Fugitive/Noise emission :**			
Sl. No.	**Fugitive or Noise Emission sources**	**Type of emission**	**Control measures**	
1.	DG Set 2000 KVA-2 nos	Noise	Acoustic Enclosures are Provided	

Additional Conditions:

1. The unit shall operate and maintain the APC measures efficiently and continuously so as to satisfy the Ambient Air Quality / emission standards prescribed by the Board.
2. The unit shall adhere to the Ambient Noise Level standards prescribed by the Board.
3. The unit shall provide one Continuous Ambient Air Quality Monitoring station for the parameters PM 10, PM 2.5 and VOC and shall connect the same to the care Air Centre, TNPCB, Gunidy.
4. The unit shall utilize the Power obtained from the DG Sets for captive use only and shall not supply Power to Grid.
5. The unit shall have the Environmental Management Cell with full fledged laboratory facilities and qualified trained staff with environmental policy for regular monitoring of stack emission and ambient air quality and implementation of environmental management system and to preserve the ecology of that locality.
6. The unit shall ensure that the internal roads shall be paved with concrete/bitumen and provided with water sprinkling arrangement to arrest dust, and the speed of vehicles less than 10 km/hr so as to ensure ambient air quality standards
7. The unit shall liable to pay the consent fee and shall remit the difference in amount in case of any revision of consent fee by the Government.

R. KANNAN Digitally signed by R. KANNAN Date: 2018.09.21 17:43:10 +05'30'

For Member Secretary,
Tamil Nadu Pollution Control Board,
Chennai

To
The Chief Executive Officer,
M/s.MARINE INFRASTRUCTURE DEVELOPER PRIVATE LIMITED,
Kattupalli Port, Post box no: 001, Kattupalli Village,
Pin: 600120

Copy to:

1.The Commissioner, THIRUVALLUR-Panchayat Union, Ponneri Taluk, Tiruvallur District .
2. The District Environmental Engineer, Tamil Nadu Pollution Control Board, GUMMIDIPOONDI.
3. The JCEE-Monitoring, Tamil Nadu Pollution Control Board, Chennai.
4. File

CONSENT ORDER NO. 1808115430679 DATED: 17/09/2018.

PROCEEDINGS NO.T1/TNPCB/F.0420GMP/RL/GMP/W/2018 DATED: 17/09/2018

SUB: Tamil Nadu Pollution Control Board - RENEWAL OF CONSENT – M/s. MARINE INFRASTRUCTURE DEVELOPER PRIVATE LIMITED , S.F.No. 14-18B, 15, 168-1&2, 169, 170-1&2, 171-1&2, 172-1&2, 173-1&2, 174, 175, 176, 177, 178-1,2,3&4,179-1, 2, 3&4, 180, 181, 182, 183, 184-1, 2&3, 186, 187, 188-1, 2A, 2B& 2C,189, 190,191, 192-1 & 2, 193-1, 2, 3 & 4, 194, 195, 196, 197-1,2&3, 199, 200-1&2, 202-1&2, 203, 206-1,2A,2B,3,4A&4B, 207-2B, 208-2, 209-1,2&3, 210-1&2, 211-1,2,3,4,5,6&7, 212, 213, 214-1,2,3&4,215-1&2,216,217,218-1,2,3,4&5,219-1&2,220, 223-1&2, 224-1,2,3,4&5, 225, 226, 227, 228-1,2,3,4& 5, 229, 230, 231-1,2,3,4&5, 232, 233-1,2,3&4, 234-1,2,3&4, 235-1B, 2-3B, 236-3B, 4, 242-1&2, 243-2B, 244-2, 247-1, 248-1&2, 249-1A2,2B, 198-1, 205-1A,1B,2,5, 1 (part)-4A1 Pt,4A2,4B Pt,5 Pt, 11 (part), 16 (part)-1&2,17 (part)-1, 2, 3A&3B ,143 (part), 151 (part)-1,2,3&4,152 (part), 153 (part), 154 (part)-1&2, 166 (part), 167 (part)-1&2, 204(part)-1,2&3, 221(part), 222 (part)-1&2, 330 (part)-1,2,3&4, 12 (Part),16-3, 198-2, 201, 205-3, 205-4, KATTUPALLI village, Ponneri Taluk and Tiruvallur District - Renewal of Consent for the operation of the plant and discharge of sewage and/or trade effluent under Section 25 of the Water (Prevention and Control of Pollution) Act, 1974 as amended in 1988 (Central Act 6 of 1974) – Issued- Reg.

REF: 1. PROCEEDINGS NO.T5/TNPCB/F.0661AMB/RL/AMB/W&A/2017 DATED: 09/02/2017.
2. IR.No : F.0420GMP/RL/AE/GMP/2018 dated 16/08/2018.

RENEWAL OF CONSENT is hereby granted under Section 25 of the Water (Prevention and Control of Pollution) Act, 1974 as amended in 1988 (Central Act, 6 of 1974) (hereinafter referred to as "The Act") and the rules and orders made there under to

The Chief Executive Officer
M/s.MARINE INFRASTRUCTURE DEVELOPER PRIVATE LIMITED,
S.F.No. 14-18B, 15, 168-1&2, 169, 170-1&2, 171-1&2, 172-1&2, 173-1&2, 174, 175, 176, 177, 178-1,2,3&4,179-1, 2, 3&4, 180, 181, 182, 183, 184-1, 2&3, 186, 187, 188-1, 2A, 2B& 2C,189, 190,191, 192-1 & 2, 193-1, 2, 3 & 4, 194, 195, 196, 197-1,2&3, 199, 200-1&2, 202-1&2, 203, 206-1,2A,2B,3,4A&4B, 207-2B, 208-2, 209-1,2&3, 210-1&2, 211-1,2,3,4,5,6&7, 212, 213, 214-1,2,3&4,215-1&2,216,217,218-1,2,3,4&5,219-1&2,220, 223-1&2, 224-1,2,3,4&5, 225, 226, 227, 228-1,2,3,4& 5, 229, 230, 231-1,2,3,4&5, 232, 233-1,2,3&4, 234-1,2,3&4, 235-1B, 2-3B, 236-3B, 4, 242-1&2, 243-2B, 244-2, 247-1, 248-1&2, 249-1A2,2B, 198-1, 205-1A,1B,2,5, 1 (part)-4A1 Pt,4A2,4B Pt,5 Pt, 11 (part), 16 (part)-1&2,17 (part)-1, 2, 3A&3B ,143 (part), 151 (part)-1,2,3&4,152 (part), 153 (part), 154 (part)-1&2, 166 (part), 167 (part)-1&2, 204(part)-1,2&3, 221(part), 222 (part)-1&2, 330 (part)-1,2,3&4, 12 (Part),16-3, 198-2, 201, 205-3, 205-4,
KATTUPALLI Village ,
Ponneri Taluk ,
Tiruvallur District .

Authorising the occupier to make discharge of sewage and /or trade effluent.

This is subject to the provisions of the Act, the rules and the orders made there under and the terms and conditions incorporated under the Special and General conditions stipulated in the Consent Order issued earlier and subject to the special conditions annexed.

This RENEWAL OF CONSENT is valid for the period ending March 31, 2019

R. KANNAN Digitally signed by R. KANNAN Date: 2018.09.21 17:43:45 +05'30'

For Member Secretary,
Tamil Nadu Pollution Control Board,
Chennai

SPECIAL CONDITIONS

1. This renewal of consent is valid for operating the facility for the manufacture of products/byproducts (Col. 2) at the rate (Col 3) mentioned below. Any change in the product/byproduct and its quantity has to be brought to the notice of the Board and fresh consent has to be obtained.

Sl. No.	Description	Quantity	Unit
	Product Details		
1.	Containers	1.8	Million TEU / Annum (21.60 MTPA)
2.	Ro-R0 (Nos) (Automobiles)	149899	Nos / Annum (0.22 MTPA)
3.	Project Cargo	440000	MT / Annum (0.44 MTPA)
4.	Breakbulk / General Cargo (Barytes/Gypsum/Limestone/Granite/Steel Cargo)	1820000	MT / Annum (1.82 MTPA)

2. This renewal of consent is valid for operating the facility with the below mentioned outlets for the discharge of sewage/trade effluent. Any change in the outlets and the quantity has to be brought to the notice of the Board and fresh consent has to be obtained.

Outlet No.	Description of Outlet	Maximum daily discharge in KLD	Point of disposal
Effluent Type : Sewage			
1.	Sewage 1	45.0	On land for gardening
Effluent Type : Trade Effluent			

Additional Conditions:

1. The unit shall operate and maintain the Sewage Treatment Plant efficiently and continuously so as to satisfy the standards prescribed by the Board.
2. The unit shall utilize the treated sewage on its own land for gardening purposes thereby developing green belt.
3. The unit shall analyze the sewage effluent in the TNPCB laboratory and furnish the report periodically.
4. The unit shall ensure that no trade effluent shall be generated from their activity under any circumstances.
5. The unit shall not stake the material Barytes/Gypsum/ Limestone/Steel Cargo in the open yard under any circumstances.
6. The unit shall not carry out any capital dredging under any circumstances.
7. The unit shall ensure that the operation of the port activity will not create any impact on the livelihood of the fishermen.
8. The unit shall ensure that the operation of port activity shall not create any adverse effect on the marine eco system or marine water quality of the sea water intake point of M/s. Chennai Water Desalination Plant.
9. The unit shall ensure that the operation activity of the unit shall not crate any hindrances to the Kattupalli village under any circumstances.
10. The unit shall ensure that no oil spill shall occur in the marine coastal areas due to the operation activities.
11. The unit shall comply with the provisions under Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016.
12. The unit shall adhere to the conditions as stipulated in the Letter No.: 10 – 130 / 2007 – IA.III, Dated: 03.07.2009 , 17.12.2014, 12.05.2010 and 09.02.2018 issued by the Ministry of Environment, Forests and Climate Change, Government of India.
13. The unit shall develop green belt of 25 % of plot area (400 trees/Hec) comprising of tall trees (min.2m height) and various species according to local soil conditions I consultation with local DFO / Horticulture Department / Authorised Consultant and shall furnish the proposal for the same along with the layout map indicating the existing and proposed green belt details within six months.
14. The Port shall ensure that the dredged material arising from dredging operations shall not be dumped in the areas attracting CRZ Notification and the material shall be used for further beneficial use.
15. The Port shall have containment Boom facility with skimmer to contain and recover the spillages of Liquid Cargo in to the sea if any.
16. The Port shall ensure that the dredged material shall not be dumped in the areas attracting CRZ Notification and the material shall be used for further beneficial use.
17. The unit shall maintain the water quality of Marine Sea so as to meet the Marine Water quality prescribed for Harbour Sea Water and ensure that the marine water quality is monitored at regular intervals by engaging competent agencies.
18. The port shall ensure that there shall be no spillage of Marine Liquid in the sea while unloading from ship to pipelines/Road Vessels
19. The unit shall furnish carry out impact assessment study once in a year with respect to marine and land environment and the report shall be furnished to Board.
20. The Port shall ensure that adequate oil spill response equipment shall be made available as per the Appendix B of the Tamil Nadu State Oil Spill Disaster Contingency Plan, September 2016.
21. The Port shall ensure participation in the oil spill combating training along with the State Agencies such as Tamil Nadu Maritime Board organized by the Indian Coast Guard time to time.
22. The port shall ensure the formation and regular functioning of dedicated Environment Cell and Oil Spill Contingency Response Cell in order to have timely response to incidents of oil spill and any other contingency in the Port area.
23. Continuous monitoring of the marine environment shall be under taken by an institute like Faculty of Marine Biology, Annamalai university and to furnish a report to the Board every 6 months.
24. The unit shall not use 'use and throwaway plastics' such as plastic sheets used for food wrapping, spreading on dining table etc., plastic plates, plastic coated tea cups, plastic tumbler, water pouches and packets, plastic straw, plastic carry bag and plastic flags irrespective of thickness, within the industry premises. Instead it shall encourage use of eco friendly alternative such as banana leaf, areca nut palm plate, stainless steel, glass, porcelain plates/cups, cloth bag, Jute bag etc.,
25. The unit shall furnish exact green belt area ear marked/developed in the unit premises and furnish photographs along with latitude and longitude co-ordinates.
26. The unit shall liable to pay the consent fee and shall remit the difference in amount in case of any revision of consent fee by the Government.

R. KANNAN Digitally signed by R. KANNAN Date: 2018.09.21 17:44:03 +05'30'

For Member Secretary,
Tamil Nadu Pollution Control Board,
Chennai

To
The Chief Executive Officer,
M/s.MARINE INFRASTRUCTURE DEVELOPER PRIVATE LIMITED,
Kattupalli Port, Post box no: 001, Kattupalli Village,
Pin: 600120

Copy to:

1.The Commissioner, THIRUVALLUR-Panchayat Union, Ponneri Taluk, Tiruvallur District .
2. The District Environmental Engineer, Tamil Nadu Pollution Control Board, GUMMIDIPOONDI.
3. The JCEE-Monitoring, Tamil Nadu Pollution Control Board, Chennai.
4. File

Annexure – 5

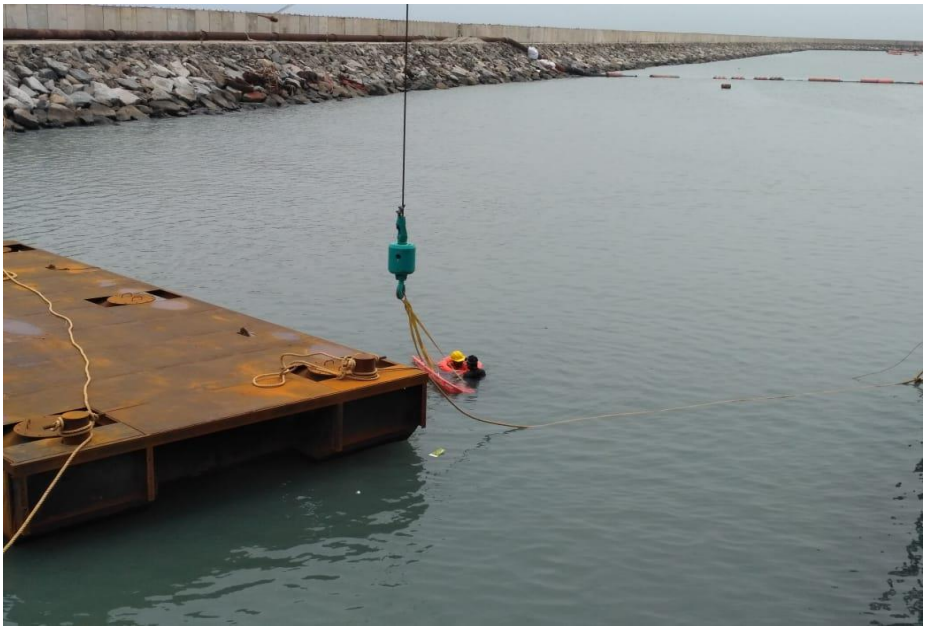
Compliance to Tamil Nadu Coastal Zone Management Authority (TNCZMA) vide letter no. 6064/EC.3/2014-1 dated 26.06.2014

Sl. No	Conditions	Compliance
i	The unit shall compliance with all the conditions stipulated in Environment Clearance issued in No. 10-130/2007-IA-III, Ministry of Environment & Forest, Government of India, dated 3rd July 2009	Being complied
ii	The proposed activities should not cause coastal erosion and alter the beach configuration. The shoreline changes shall be monitored continuously	This EC is just a bifurcation of original EC of LTSB. In past, LTSB has been continuously monitoring shoreline studies through Institute of Ocean Management, Anna University, Chennai. Further, MIDPL shall further carry out shoreline studies of the concerned area.
iii	Chemical waste generated and the sewage generated, if any should not be discharged in to the sea and shall be properly handled	Complied No chemical waste generated. Sewage waste water generated is being treated in STP for further usage in horticulture / greenbelt
iv	The waste water generated shall be collected, treated and reused properly	Complied. Domestic waste water generated is being treated in STP. Treated water is being reused for Horticulture / green belt purpose
v	The proponent shall implement oil spill mitigation measures without fail	Oil Spill contingency plan (OSCP) is being implemented at site. OSCP along with list of Oil spill control equipment already submitted.
vi	Disaster management plan shall be implemented and mock drills shall be carried out properly and periodically.	Complied MIDPL has already formulated detailed Disaster Preparedness & Management Plan to handle any Natural and industrial hazards at site. Regular Mock Drills are conducted as per the Crisis Management Plan. The details of drills conducted towards dock safety for the period Apr 2018 - Sep 2018 is enclosed as **Annexure- 6**

Annexure-5

Mock Drills Oct-2017 to April-2018

S.No.	Date	Time	Scenario	Participants
1	16.04.18	14:45	Fire at backside of CFS warehouse	51
2	28.04.18	10:31	Heat Stroke	22
3	14.05.18	15:44	Men overboard	24
4	24.05.18	12:20	Contractor labour felt unconscious	60
5	25.06.18	16:09	Fire in scrap yard	22
6	22.08.18	14:42	Fire in CFS Admin	52
7	18.09.18	11:05	Men overboard	25
8	18.09.18	08:05	Fire in external Truck	20

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