



காமராஜர் துறைமுக நிறுவனம்
कामराजर पोर्ट लिमिटेड
Kamarajar Port Limited



(A Company of Chennai Port Authority)

Ministry of Ports, Shipping and Waterways - Government of India

KPL/MS/HSE/Env/MoEF&CC

Date: 19.02.2024

To

Dr. M.R.G. REDDY, IFS,

Addl. Principal Chief Conservator of Forests (C),

Ministry of Env., Forest and Climate Change

Regional Office (SEZ), 1st and 11nd Floor,

Handloom Export Promotion Council,

Sir,

Subject: Submission of Half-yearly compliance report on the conditions stipulated vide Environmental Clearance letters issued to various projects of Kamarajar Port - July to December 2023 - reg

Please find enclosed herewith the compliance reports for the period of January to June 2023, on the conditions put forth by Ministry of Environment & Forests and Climate change, in the environmental clearances issued for the following projects.

1. Construction of new Satellite Port at Ennore, near Madras. Ministry's letter Ref: J-16011/9/87-1A, III dated 28.9.1992.
2. Development of Terminals for marine liquids, coal, iron and containers in second phase and associated capital dredging at Ennore port. Ministry's letter F. No. 10-28/2005 1A-III dated 19th May, 2006.
3. Development of Terminals for marine liquids, coal, iron and containers in second phase and associated capital dredging at Ennore port. Ministry's letter F. No. 10-28/2005 1A-III dated 10th September, 2007.
4. CRZ and Environmental clearance for the construction of General Cargo Berth at Ennore port cargo terminal project. MoEF Letter F.No.11-21/2009-1A-III dated 23.7.2009.
5. Expansion and modernization of existing handling of Multicargo container terminal at Kamarajar Port by M/s. Kamarajar Port Limited - Environmental and CRZ clearance (Development of Multicargo berth (270m) and container terminal (730m). MoEF's letter F.No. 10-28/2005-1A III dated 24.12.2014.

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6. Development of additional coal berths (CB3 and CB4) at Kamarajar Port, Tamil Nadu by M/s. KPL Environmental and CRZ clearance - MoEF's Letter F.No. 11-51/2012 IA-III dated 12.03.2015.
7. Development of facilities envisaged in the Port Master Plan (Phase-III) by M/s Kamarajar Port Limited - MoEF's letter F. No. 11-51/2012-IA-III dated 30.10.2018.
8. CRZ Clearance for Establishment of IMLD RO Desalination Plant at M/s.Kamarajar Port Ltd., by M/s. M/s.Kamarajar Port Ltd., Vallur Post, Chennai, Tamilnadu.

While the modification of iron ore terminal to handle coal by M/s SICAL Iron Ore Terminal Ltd, was in progress after grant of Environmental Clearance from Ministry, the Lender to the project M/s YES Bank Ltd, has given notice for 'Event of financial default on M/s SICAL Iron Ore Terminal Ltd., to KPL on 07.11.2020. Accordingly, in line with the license agreement, KPL has served "Notice of Intent to Terminate" to M/s SICAL Iron Ore Terminal Ltd on 20.12.2020. Subsequent to that, the License Agreement No. 20 of 2016 dated 11.7.2016 executed between KPL and M/s SIOTL stands terminated with effect from 19.6.2021 consequent to issuance of Termination Notice dated 22.3.2021 by KPL. As directed by the Committee of Creditors, the liquidation process of M/s SICAL Iron Ore Terminal Ltd., is in progress.

Consequent to that, the project 'Modification of Iron Ore Terminal to handle Coal' is presently stalled due to the above said reasons; hence the half-yearly compliance report for the said project is not included in the above list.

This is for kind information and records please.

Yours faithfully,


Chief Manager (HSE)

Encl: As above.

Cc to: 1. **Regional Director, Scientist-E, Central Pollution Control Board, Regional Office, Chennai, Email:vlaxmi@cpcb.nic.in**

2. **The District Environmental Engineer, RR/A, SIFCOOT Industrial Area, Gummidipoondi, Thiruvattur-601201, Email:deegummidipoondi@gmail.com**

KAMARAJAR PORT LIMITED



Compliance Report

On

Ministry's guidelines

for

“CONSTRUCTION OF NEW SATELLITE PORT AT ENNORE”

CONDITIONS COMPLIED AS PER THE GUIDELINES OF THE MINISTRY OF ENVIRONMENT AND FOREST ISSUED VIDE LETTER DATED 28/09/1992

Ref: J-16011/9/87-IA, III dated 28.9.1992

Ennore Port has been planned and developed for receiving coal exclusively for Thermal Power stations of Tamil Nadu Electricity Board (TANGEDCO). Ennore Port was declared as major port on March 23, 1999. Ennore Port is the first Major Port incorporated as a company under the Companies Act, 1956 on October 11, 1999. Ennore Port has been renamed as Kamarajar Port in the year 2017.

The commercial operation of Port was started on June 22, 2001.

S.No	MoEF Guidelines	Compliance report
(i)	The total land area of the Project should be limited to 400 Ha as proposed	<p>As per Environment clearance letter issued by Ministry of Environment & Forests for the “Construction of new satellite port at Ennore near Madras in Tamilnadu” vide letter dated 28.9.1992, the total land area accorded was 400 ha. Subsequently port has developed new projects under Phase-II and port has developed various new projects phase wise.</p> <p>Port has acquired 950 Acres of land from TIDCO during the year 2002 and was shown for obtaining Environment & CRZ clearance for the development of second phase project at KPL. The stock yard for the coal, iron ore, tank farm for Marine Liquid Terminal were developed in these lands. Ministry of Environment & Forests had accorded Environment and CRZ clearances vide No. 10-28/2005-IA-III dated 19th May 2006.</p> <p>For subsequent developments, Port has acquired 679 Acres of land from Salt Department during the year 2010 & 2014. The lands were meant for the development of stackyard for additional Coal berths (CB3&4). Ministry of Environment & Forests had accorded Environment and CRZ clearances vide letter No. F.No.11-</p>

		51/2012-IA.III dated 12th March 2015. The total land area of port is 2787.29 Acres. The remaining portion of the land is shown in the Development of facilities envisaged in the Port master plan project, for which Environment & CRZ clearance is sought. At present, the total Port area is 1128.45 Ha. The details of land procured by KPL is tabulated enclosed as Annexure-I.
(ii)	Hill features of Karikkal and Bodiparai hills should not be destroyed for the construction of breakwater since this will drastically change the landscape.	No quarrying operation was carried out in Bodiparai hill. After completion of construction of the breakwaters, the quarry was handed over to District Collector, Vellore District by the Chennai Port vide its letter No.11/6828/96/E dated 07.01.2002, along with abandonment certificate for closure of Karikkal quarry issued by Directorate of Mines, Safety Oorgaum.
(iii)	Quarrying operations must be carried out with utmost care giving consideration to the topography, vegetation and drainage system in consultation with expert institutions like Centre for Mining Environment, Indian School of Mines, Dhanbad. Quarrying site must be rehabilitated properly keeping in view such measures as proper terracing, additional top soil and reforestation. Major blasting in the port area should not be undertaken;	Complied with. The Chennai Port Authority had informed that rehabilitation of the quarry site was taken up and restored. Director of Mines safety, Oorgaum has issued Abandonment Certificate for closure of Karikkal quarry.
(iv)	A detailed Environment Management Plan should be prepared for each of the quarry site proposed and proper landscaping should form part of these operations. This should be included as a condition in the contracts. Its full implementation is the responsibility of the project authorities;	Noted and complied with.

(v)	<p>Alternate sources of water supply other than tapping of ground water through bore wells must be explored to avoid intrusion of salt water since fresh water is scarce in the island. A specific study should be undertaken on the ground water potential, recharge capacity, present drawl and future plans in an integrated manner. State/central ground Water Board should be fully involved in this study. The report should be submitted within one year.</p>	<p>Complied with.</p> <p>The water for construction, drinking, etc., is brought in the trucks and no deep bore wells are constructed in the project area.</p>
(vi)	<p>Dredging operations must be undertaken in stages in consultation with some expert institution like CWPRS, in such a way as to ensure that these operations do not deteriorate the surface water quality which must be maintained within the prescribed standards. Water parameters should be measured on regular intervals to monitor water quality. Dredging material should not be used for filling up any water body;</p>	<p>Complied with.</p>
(vii)	<p>Large scale dumping of waste shall not be undertaken by the Project Authorities without clearance from the environment angle. This is to ensure that marine ecology of the area is not affected by dumping in the marshy lagoon/low level areas;</p>	<p>Complied with.</p>

(viii)	<p>A green belt of appropriate width (say 200 meters) must be provided along the periphery of the port excluding the water area. Adequate provision for the initial cost for greening and maintenance has to be made in the project cost and subsequent annual budget for the port;</p>	<p>Complied.</p> <p>In 1992 the port was conceived as a satellite port to handle coal through two coal berths. Environment clearance was issued to develop green belt in an area of 15 Hectares. However, the port diversified into a multi-cargo port and subsequently a land use plan was developed.</p> <p>At present port is having a green belt area of 636.14 acres which includes a green belt (planted) 210.74 acres, green cover (natural) 349.26 and mangroves in an area of 76.14 acres.</p> <p>Port is continuously developing green belt area. The expenditure incurred during last three years for the development of green belt are as below. 2020-21= Rs. 53,23,979 2021-22= Rs.75,16,786 2022-23= Rs.53,90,877</p> <p>Port has planned for increasing the development of green belt to 690.77Acres.</p>
(ix)	<p>Green belt development of 50 ha of land instead of 25 ha proposed inside the port should be developed. This may spread in different pockets in vacant areas and need not be concentrated on one area. Apart from this green belt area of about 5.00 million sq m available in the island should be sustained by providing proper maintenance. Appropriate fund allocation towards initial cost for greening and maintenance of 50 ha of land and 5.00 million sq m available in the island has to be provided in the project cost and in the subsequent annual budget of the port;</p>	<p>Port has acquired additional land from various Government authorities only like TIDCO, TNEB, salt Department, except 31.97 Acres of land which was transferred from private party (patta land). At present total Port area is 1128.45 Ha.</p> <p>At present port is having a green belt area of 636.1 acres which includes a green belt (planted) 210.74 acres, green cover (natural) 349.26 and mangroves in an area of 76.14 acres.</p> <p>Port has planned for increasing the development of green belt to 690.77Acres.</p>

(x)	Suitable low lying areas should be identified for mangrove plantation and provision of the required amount must be made for this purpose in the project cost by the project authorities;	<p>Complied with.</p> <p>Port in association with Tamilnadu Forest Department had identified and planted mangroves along the coast line between Ennore and Pulicat. Tamilnadu Forest Department vide letter no. D2/6240/99 dated 05.09.2003 has informed about to dig channels and planting of mangrove species at Thangal Perungalam (7.75ha) and at Kalanchi (7.5ha) respectively. The same are complied with.</p>
(xi)	The project authorities must ensure that no cutting of trees take up place in the project area.	No cutting of trees was done.
(xii)	With the operation of Ennore Port as a measure of decongestion of Madras port the traffic in Madras port must be gradually reduced. Ministry of Surface Transport, Madras Port Trust and Ennore Port Trust must ensure that adequate measures in this regard are taken.	<p>Complied with.</p> <p>Handling of Thermal coal for TNEB is completely shifted from Chennai port to Kamarajar Port (Ennore port).</p>
(xiii)	<p>To control dust pollution from coal, following measures must be adopted.</p> <p>(a) Totally enclosed continuous loaders / un-loaders and conveyor system should be adopted</p> <p>(b) Dust extraction system should be provided at all transfer points to minimize dust generation during stacking, loading, transferring operations as well as to minimize wind blown dust from the stack yard, proper water spraying should be done.</p>	<p>Complied with.</p> <p>The following measures are taken to control the dust.</p> <p>Dust pollution preventive measures have been taken up by TNEB, the operators of the Berths. Coal from the ship is unloaded through shore based gantry cranes with grab un-loaders and fed to the conveyor system to the thermal power plant. No coal is stored inside the port.</p> <p>In addition to the covered conveyor system, water sprinklers have been provided in the hoppers for suppression of coal dust</p>

		<p>emanating while discharging coal from the vessels. Cleaning up of the operational area/jetty after every unloading operation to prevent pilling up of material is being done.</p> <p>The coal is stored inside North Chennai Thermal Power Station.</p>
(xiv)	<p>Air pollution monitoring stations at strategic locations must be set up in the port area and in the neighborhood for monitoring dust/particulate matter at regular intervals. Adequate funds must be allocated towards this in the project cost.</p>	<p>Complied with.</p> <p>Kamarajar Port is continuously monitoring the environmental air pollution. KPL has engaged M/s. Nitya Laboratories (MoEF & CC and NABL accredited laboratory) to carry out the periodical monitoring, testing and analysis of Ambient air quality, Marine water quality, creek water quality, Noise levels in the port area. Adequate funds are allocated in this project.</p>
(xv)	<p>To contain noise levels within the prescribed standards roofed conveyor belts should be deployed. Noise pollution in the port area should be reduced by putting up sound barriers at suitable locations. To protect the workers from high noise levels ear muffs/plugs should be provided.</p>	<p>Complied with.</p> <p>The coal is unloaded from the ships and transferred to the thermal power station through elevated closed conveyor system. There is no generation of noise pollution during the operations. Noise levels at the work zones were monitored regularly. However workers working in the berth area are also provided PPE like hard hat, ear muffs/plugs etc.</p>
(xvi)	<p>Water pollution monitoring stations at strategic points must be set up in the project area to monitor water quality and marine pollution at regular intervals.</p>	<p>Complied with.</p> <p>Kamarajar Port is continuously monitoring the environment. KPL has engaged M/s. Hubert Enviro Care Systems Pvt. Ltd. Chennai (MoEF & CC/NABL certified) to carry out the periodical monitoring, testing and analysis of Marine water quality, creek surface water quality in the port area.</p>

(xvii)	To contain accidental spillage of oil, the project authorities should deploy oil booms, multipurpose anti pollution craft, oil recovery cum reception craft, chemical dispersant and other equipment such as shovels, swabs, waste collection bags, etc.	<p>Complied with.</p> <p>KPL falls under category B. Port is having oil spill contingency plan prepared in line with NOS-DCP. Necessary chemicals, booms, dispersants, etc. are readily available for containment of any accidental spill of Tier-I category.</p>
(xviii)	An environment division must be set up in Ennore port headed by Environment Manager with appropriate strength of Environment Engineers, Forest officers, forest guards and other laboratory staff. An environmental laboratory for Air Water and solid waste monitoring must be set up with adequate equipment and qualified staff. Adequate fund for establishment of laboratory must be provided in the project cost. The annual recurring cost for the laboratory and Environmental Division must be provided for in the annual budget of the port.	<p>Complied with.</p> <p>Port is having Environmental Cell under HSE-Division of Marine Services Department, headed by General Manager (MS). The compliance of Environmental Management Plan of the Port is monitoring by Environmental Cell of HSE division.</p> <p>Port has engaged M/s. Nitya Laboratories, an MoEF & CC recognized and NABL accredited laboratory to carry out the regular sampling and testing of various environmental parameters.</p> <p>Tamilnadu Pollution Control Board also monitors the Ambient Air Quality and Noise levels inside the port. The air quality level are found well within the limits. A copy of the report is enclosed herewith.</p> <p>The details of expenditure incurred towards Environmental management by KPL during the compliance period is Rs.68,84,925/- (Excl.GST), furnished herewith as below:</p> <ol style="list-style-type: none"> 1. Environmental Monitoring = Rs. 6,92,900/- (Excl. GST). 2. Solid Waste Management = Rs. 21,45,225/- (Excl. GST). 3. Statutory fee payments= Rs. 40,46,800/-.

(xix)	The Ennore Port Trust authorities must draw up a Disaster Management Plan and get it approved by the nodal department of the state Government and forwards it to the Ministry for approval.	<p>Complied with.</p> <p>Port is having a Crisis Management Plan and Disaster management Plan. However, with the subsequent development of various new projects phase wise, Port has updated the Disaster Management Plan in line with National Disaster Management Authority Guidelines 2019 and forwarded it to Indian Register of Shipping for vetting.</p>
(xx)	Adequate measure must be taken to protect the Pulicat Lake, a bird sanctuary for several species of resident and migratory water birds and having potential for fishing as an important economic activity of the area.	<p>Complied with.</p> <p>The Pulicat lake is situated about 20KM away from the location of the Kamarajar port.</p>
(xxi)	A Monitoring Committee will be set up by the project authorities to review the implementation of the above conditions with representatives from MoEF, State forest Department, State pollution Control Board and representative of Port Authority.	<p>Complied with.</p> <p>A monitoring committee with representatives from MoEF, State Forest department, State Pollution Control Board, Tamilnadu Electricity Board and Port officials was constituted then. They conducted ten Environmental Monitoring committee meetings and reviewed the implementation of MoEF conditions.</p>
(xxii)	The quality of treated effluents, solid wastes, emissions and noise levels, etc., must confirm to the standards laid down by the competent authorities including Central/State Pollution Control Board and under the Environment (Protection) Act 1986 whichever area more stringent.	<p>Complied with.</p> <p>KPL has engaged M/s. Nitya Laboratories, an MoEF & CC recognized and NABL accredited laboratory to carry out the periodical monitoring, testing and analysis of Air, Noise, Marine water quality, creek water quality, sediment quality and ground water quality in the port area. The environmental parameters are found to be well within the standards prescribed by Central / State Pollution Control Boards.</p> <p>Tamilnadu Pollution Control Board is also monitoring the Ambient Air Quality and Noise levels inside the port. All the parameters are found to be well within the</p>

		limits. A copy of the report is enclosed herewith.
(xxiii)	The project authorities must ensure that project out sees if any must be adequately compensated and rehabilitated.	Complied with. The Project outsees were properly compensated and rehabilitated at the time of land acquisition by the TNEB, Govt of Tamilnadu.
3.	Adequate financial provision must be made in the Project estimates and the annual budget to meet the financial requirement for the implementation of aforesaid safeguards. The funds so provided item wise should not be diverted for any other purpose.	Complied with. The details of expenditure incurred towards Environmental management by KPL during the compliance period is Rs.68,84,925/- (Excl.GST), furnished herewith as below: 1. Environmental Monitoring = Rs. 6,92,900/- (Excl. GST). 2. Solid Waste Management = Rs. 21,45,225/- (Excl. GST). 3. Statutory fee payments= Rs. 40,46,800/-.
4.	In case of any deviations/alterations in the project proposal from those submitted to this Ministry for clearance and on the basis of EIA findings these stipulations may be modified and/or new ones imposed for ensuring environmental protection.	The deviations / alterations in the approved Project proposal have been ratified by the MoEF. A report was sent to MoEF on 17.02.2001.The deviation was ratified by MoEF & CC vide letter no. J-16001/9/87-IA-III, dated 03.01.2001.

Annexure-I**KAMARAJAR PORT LIMITED**
(A company of Chennai Port Trust)**Details of Land Owned by Kamarajar Port Limited**

S.No	Descriptions	Extent	Handed over on
1.	Land transferred from Tamil Nadu Electricity Board	995.05 Acres	28.10.1994
2.	Poramboke land (Govt. of Tamilnadu) TNEB	97.15 Acres	28.10.1994
3.	Poramboke land (Govt. of Tamilnadu) TIDCO	2.36 Acres	29.05.2002
4.	Land transferred from TIDCO	947.65 Acres	29.05.2002
5.	Land transferred from Private Party (Patta land) Vallur village	31.97 Acres	08.03.2005
6(i).	Land transferred from Salt Department	29.76 Acres	07.09.1996
6(ii).	Land transferred from Salt Department	35.00 Acres	31.05.2010
6(iii).	Land transferred from Salt Department	647.66 Acres	28.02.2014
7.	Land transferred railway siding (Athipattu Village)	0.69 Acres	21.10.2014
	Total	2787.29 Acres (1128.45 Ha)	

**KAMARAJAR PORT LIMITED - COAL BERTHS CB1 & CB2
ENVIRONMENTAL STATEMENT FOR THE FINANCIAL YEAR ENDING THE 31ST
MARCH-2023**

PART - A

S. No	Description	Remarks
1.	Name and address	Kamarajar Port Limited, Vallur Post, Near NCTPS, Chennai-120.
2.	Type of Cargo handled	Coal for Thermal Power Plants of TANGEDCO
3.	Industry category Primary (STC Code) Secondary (SIC Code)	Major port under the administrative control of Ministry of shipping, GOI.
4.	Cargo handling capacity as per CTO	16 Million Metric Tons Per Annum
5.	Date of start of commercial operation	22.06.2001

PART - B

(1) Water and Raw Material Consumption

Water consumption m³/d: 7KL per Day for this terminal.

Process/sprinkling: Water sprinklers are put in place to suppress the dust rises if any. The cargo unloaded from the ships is directly transferred to the stackyards of NCTPS (TANGEDCO units) through closed elevated conveyors. No process is takes place inside the port.

Cooling: Nil.

Domestic: Nil

Any other: Nil

Name of Cargo handled	Process water consumption per unit of product output.(per Annum)	
	During the previous financial year (2021-22)	During the Current financial year (2022-23)
Thermal Coal	Coal is handled at the terminal for the exclusive use of Thermal Power Plants of TANGEDCO	

(2) Raw Material Consumption (if applicable)

*Name of raw materials	Name of Products	Consumption of raw material per unit of output	
		During the financial year 2021-22	During the financial Year 2022-23
Coal	Coal	13.52 MTPA	15.53 MTPA

*Industry may use codes if disclosing details of raw material would violate contractual obligations, otherwise all industries have to name the raw materials used.

PART - C**Pollution discharged to environment/unit of output
(Parameter as specified in the consent issued)**

Pollutants	Quantity of pollutants discharged (mass/day)	Concentrations of pollutants in discharges (mass/volume)	Percentage of variation from prescribed standards with reasons
Water	No wastes are discharged into the marine/surface water bodies. Port is monitoring the surface and marine water quality through M/s. Hubert Enviro Care Systems Pvt. Ltd. Chennai (MoEF & CC/ NABL certified laboratory) on quarterly basis. The results of analysis are found to be well within the prescribed standards by the CPCB. The reports are submitted to Tamilnadu Pollution Control Board.		
Air	<p>No stacks are there in port. The cargo unloaded from the ships is directly transferred to the stackyards of NCTPS (TANGEDCO units) through closed elevated conveyors. All dust suppression measures are put in place to control dust emissions if any.</p> <p>KPL is monitoring the various environmental parameters through M/s. Hubert Enviro Care Systems Pvt. Ltd., Chennai, an MoEF & CC recognised and NABL accredited laboatory). The ambient air quality is monitored at eight different locations inside the port area. The results of analysis are found to be well within the prescribed standards by the CPCB. The monthly monitoring reports are submitted to Tamilnadu Pollution Control Board.</p> <p>Tamil Nadu Pollution Control Board is also monitors the Ambient Air Quality and Noise Quality standards in the terminal annually. The results of analysis are found to be well within the prescribed standards by the CPCB.</p>		

PART – D
Hazardous Wastes

(As specified under Hazardous and other wastes Transboundary Rules, 2016)

Hazardous Wastes	Total Quantity (Kg.)	
	During the previous Financial Year 2021-22	During the Financial year 2022-23
Source of Hazardous waste generation	No hazardous wastes are generated.	
Disposal procedure	Not Applicable.	
Quantity disposed	Not Applicable.	
Any other details	The cargo unloaded from the ships is directly transferred to the stackyards of NCTPS (TANGEDCO units) through closed elevated conveyors. Water sprinklers are put in place to suppress the dust rises if any.	

PART – E
Solid Wastes

Solid Wastes	Total Quantity (M ³)	
	During the Financial Year period Apr'21 to Mar'22.	During the Financial Year Apr'22 to Mar'23.
Quantity collection	The total collected quantity from terminal and ships calling at the terminal is about 250 Cu.M (Apr'21 to Mar'22).	The collected total quantity from terminal and ships calling at the terminal is about is 262 Cu.M (Apr'22 to Mar'23).
a) Source of solid waste generation	Solid waste generated in the port is of domestic wastes likes, paper, packing material, water bottles, etc. Ship generated wastes include paper, plastic cans, metal drums, e-wastes, food waste, ropes, wooden packing material, etc.,	
Disposal procedure	As per MARPOL regulations, every port has to provide reception facility for the disposal of ship generated wastes. Accordingly port has engaged a contractor for the collection of wastes from the ships. The collected wastes are segregated into different species and sent to various recyclers for further beneficial use.	
Quantity disposed	The disposed quantity from port and ships is 250 Cu.M (Apr'21 to Mar'22).	The disposed quantity from port and ships is 262 Cu.M (Apr'22 to Mar'23).
Any other details	NIL	

PART – F

Please specify the characterizations (in terms of composition of quantum) of hazardous as well as solid wastes and indicate disposal practice adopted for both these categories of wastes.

Port has Waste Oil, sewage & Other Wastes Reception Facilities Policy, 2019. The generated oily wastes from the ships are disposed off through CPCB/SPCB approved recyclers.

Solid waste generated in the port is of domestic wastes like paper, packing material, water bottles, etc. and ship generated wastes including paper, plastic cans, metal drums, e-wastes, food waste, ropes, wooden packing material, etc.

As per MARPOL regulations, reception facility port has facilitated for the collection and disposal of ship generated wastes. The collected waste are segregated into different categories and sent to various recyclers for further beneficial use.

PART – G

Impact of pollution abatement measures taken towards conservation of natural resources and the cost of production

The cargo unloaded from the ships is directly transferred to the stackyards of NCTPS (TANGEDCO units) through closed elevated conveyors system operated by electrical power rather than the conventional mode of transportation through trucks operated by diesel power thereby reducing the fossil fuel consumption.

Moreover, Port has developed a green belt of 636.14 acres inside and outside the custom bound areas which acts as barrier for dust emissions and pollutants.

PART – H

Additional measures/investment proposal for environmental protection including abatement of pollution, prevention of pollution

Port's Environmental Management Plan (EMP) is aimed at mitigating the possible adverse impacts of projects and for ensuring to maintenance of the existing environmental quality.

Port has facilitated the ships with reception facilities as per MARPOL regulations for ships for disposal of wastes under Annexure- I (oil) and Annexure- V (Garbage). The septic wastes are disposed through waste through tanks/soak pits.

Workers are provided with PPEs like ear protection devices, masks, gloves and helmets. Emergency/Crisis Response Plan that covers situations such as cyclones, marine accidents, bomb threats, fire, explosion and accidents is in place. Port is having oil spill contingency plan prepared in line with National Oil Spill Disaster Contingency plan (NOS-DCP).

PART – I

Any other particulars for improving the quality of the environment.

Nil



Kamarajar Port Limited

Vallur Post, Chennai-600 120, Tamil Nadu, India

Reports on Environmental Monitoring of Kamarajar Port Limited



Study Period: July 2023

Prepared By



NITYA LABORATORIES

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Test Reports of Ambient Air Quality Monitoring



GOVERNMENT OF INDIA

(MINISTRY OF HEALTH)

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BUILDING & ROAD, MATERIAL, SOIL, ENVIRONMENTAL & CALIBRATION TESTING LAB

10/05/2023

Report To: M/s. Kamaldeep Plast Trust
Vafar Road, Gurgaon, India

Test Report No.: NLAB/2023/001

Sample Particulars:

Name of the Sample:

Purpose of Monitoring:

Sampling Location:

Method of Sampling:

Monitoring Conducted By:

Sampling Duration (If Any):

Reference for Quality Monitoring:

Test Method and Reference Limit:

Mark Size:

IS 1502 (Part 1):

0.075mm:

75µm:

Analysis Report

Sl. No.	Date of Sampling	L.R. No.	Concentration	
			Moisture (%)	
1	03/05/2023	001301000110	60	
2	07/05/2023	001301000110	60	
3	10/05/2023	001301000110	60	
4	14/05/2023	001301000110	60	
5	16/05/2023	001301000110	60	
6	21/05/2023	001301000110	60	
7	26/05/2023	001301000110	60	
8	28/05/2023	001301000110	60	
9	31/05/2023	001301000110	60	
Test Method:			PC Based Moisture Analyser	

Notes:
1. All test results are subject to change without notice if the test method used is not as per the standard.
2. The test results are based on the sample received and tested as per the test method used.
3. The test results are based on the sample received and tested as per the test method used.



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(ENVIRONMENTAL)

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BUILDING & ROAD, MATERIAL, SOIL, ENVIRONMENTAL & CALIBRATION TESTING LAB



Issued To: **M/s Karamveer Road Trust**
 Vafar Road, Gurgaon, India

Test Report No.: **00000002**

Sample Particulars

Nature of the Sample:

Purpose of Monitoring:

Sampling Location:

Method of Sampling:

Monitoring Conducted By:

Sampling Device (If Any):

Ambient Air Quality Monitoring

To Check the Pollution Level

Around Building

IS 3100 Part 1A

Mr. Anoop

Q/110

Analysis Report

Sl. No.	Date of Sampling	SAR No	Concentration	
			Microg/m ³	
1	08/07/2022	000000001E	ND	
2	07/07/2022	000000001E	ND	
3	10/07/2022	000000001E	ND	
4	08/07/2022	000000001E	ND	
5	17/07/2022	000000001E	ND	
6	21/07/2022	000000001E	ND	
7	24/07/2022	000000001E	ND	
8	26/07/2022	000000001E	ND	
9	27/07/2022	000000001E	ND	
Test Method			PM 10 Standard Method Analyser	

Note:

1. This report is valid only for the purpose mentioned. It is not valid for any other purpose.
 2. The results are subject to the accuracy of the equipment used and the competence of the personnel.
 3. The results are subject to the accuracy of the equipment used and the competence of the personnel.



(AUTHORIZED SIGNATURE)
(ANIL KUMAR MITAL)

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BUILDING & ROAD, MATERIAL, SOIL, ENVIRONMENTAL & CALIBRATION TESTING LAB

1

Issued To: M/s Ramanga Plast Plast
 Water Plast, Chennai, India

Test Report No.: 2019/0001

Sample Particulars

Nature of the Sample:
Purpose of Monitoring:
Sampling Location:
Method of Sampling:
Monitoring Conducted By:
Sampling Duration (No.):

- 1. Ambient Air Quality Monitoring
- 2. To Check the Pollution Level
- 3. Report Issue
- 4. IS 5182 (Part 14)
- 5. Mr. Arunachal
- 6. 2019

Analysis Report

Sl. No.	Date of Sampling	S.A. No.	Concentration	
			Microgram (µg)	
1	01/01/2019	0000000111		40
2	01/01/2019	0000000112		40
3	11/01/2019	0000000113		40
4	14/01/2019	0000000114		40
5	17/01/2019	0000000115		40
6	20/01/2019	0000000116		40
7	24/01/2019	0000000117		40
8	28/01/2019	0000000118		40
9	31/01/2019	0000000119		40
Test Method			ISO 5050 Method Analyser	

NOTE: These reports are for information purposes only. They are not to be used for legal purposes.
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(PROFESSOR DR. S. S. SURESH)
(DIRECTOR NITYA)

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BUILDING & ROAD, MATERIAL, TOL, ENVIRONMENTAL & CALIBRATION TESTING LAB

11/2024

Issued To: **M/s. Kamaljeet Post Trust**
 Water Point, Ghaziabad, India

Test Report No.: **2024/0001**

Sample Particulars

Name of the Sample:

Purpose of Monitoring:

Sampling Location:

Method of Sampling:

Monitoring Conducted By:

Sampling Duration (hrs.):

Realtime Air Quality Monitoring

To Check the Pollution Load

Frequency:

24 Hrs (Real Time)

At: Station:

24 Hrs.

Analysis Report

Sl. No.	Date of Sampling	ID No.	Concentration	
			Microg (µg)	
1	18/07/2024	00307000114		90
2	18/07/2024	00307000114		90
3	18/07/2024	00307000114		90
4	18/07/2024	00307000114		90
5	18/07/2024	00307000114		90
6	18/07/2024	00307000114		90
7	18/07/2024	00307000114		90
8	18/07/2024	00307000114		90
9	18/07/2024	00307000114		90

Test Method: **PM 10 Realtime Analyzer**

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BUILDING & ROAD, MATERIAL, SOIL, ENVIRONMENTAL & CALIBRATION TESTING LAB



Issued To: **M/s. Karmaveer Plast Trade**
Water Proof, Chemical, India

Test Report No.: **00000000**

Sample Particulars

Nature of the Sample:

Purpose of Monitoring:

Sampling Location:

Method of Sampling:

Monitoring Conducted By:

Sampling Duration (hrs.):

Ambient Air Quality Monitoring

PCO Chem. No. (Station Code):

General Usage Book:

IS 11032 (Part 14)

Mr. Anshul

20 hrs.

Analysis Report

Sl. No.	Date of Sampling	GC No.	Concentration
			Method (%)
1	04/07/2023	00000000010	NO
2	07/07/2023	00000000010	NO
3	10/07/2023	00000000010	NO
4	14/07/2023	00000000010	NO
5	17/07/2023	00000000010	NO
6	21/07/2023	00000000010	NO
7	24/07/2023	00000000010	NO
8	28/07/2023	00000000010	NO
9	31/07/2023	00000000010	NO
Test Method:			PC Based Nephelometry Analyzer

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BUILDING & ROAD, MATERIAL, SOIL, ENVIRONMENTAL & CALIBRATION TESTING LAB

Issued To: **Mr. Parvatharaj Reddy Prasad**
 Water Test Chennai - 600 011

Test Report Date: 05/06/2024



Sample Particulars

Name of the Sample
 Purpose of Monitoring
 Sampling Location
 Method of Sampling
 Monitoring Conducted By
 Sampling Duration (hrs)

- Ambient Air Quality Monitoring
- To Check PM Pollution Level
- Car Parking
- In Street Area (A)
- In Street
- In City

Analysis Report

Sl. No.	Date of Sampling	Lab No.	Concentration
			Microg (µg)
1	04/06/2024	00040100116	ND
2	04/06/2024	00040100116	ND
3	04/06/2024	00040100116	ND
4	04/06/2024	00040100116	ND
5	04/06/2024	00040100116	ND
6	04/06/2024	00040100116	ND
7	04/06/2024	00040100116	ND
8	04/06/2024	00040100116	ND
9	04/06/2024	00040100116	ND
Test Method			PM 10 Based Method Analysis

NOTE: Results shown in this report are only for the purpose of information. They do not constitute a warranty or a guarantee. The laboratory is not responsible for any errors or omissions. The results are valid only for the purpose and conditions specified in the report. The laboratory is not responsible for any errors or omissions. The results are valid only for the purpose and conditions specified in the report.



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BUILDING & ROAD, MATERIAL, SOIL, ENVIRONMENTAL & CALIBRATION TESTING LAB

Issued To: M/s Ramrajapuri Port Trust
 Water Point, Chennai - 600 022

Test Report No.: 2024/0010



- Sample Particulars
- Nature of the Sample
- Place of Monitoring
- Sampling Location
- Method of Sampling
- Monitoring Coordinator / By
- Sampling Duration (Date)

- Ambient Air Quality Monitoring
- To Check the Pollutant Load
- Fine Dust
- SO₂ (Part 4)
- NO_x (Sum)
- O₃ (g)

Analysis Report

Sl. No.	Date of Sampling	Location	Concentration				
			Particulate Matter (PM ₁₀) (µg/m ³)	Particulate Matter (PM _{2.5}) (µg/m ³)	Ozone (ppb) (ppb)	Sulphur Dioxide (ppb) (ppb)	Carbon Monoxide (ppm) (ppm)
1	24/07/2024	Thiruvalluvar Street	22.12	24.50	18.20	21.20	ND
2	24/07/2024	Thiruvalluvar Street	22.40	22.10	17.20	20.20	ND
3	24/07/2024	Thiruvalluvar Street	24.10	20.40	18.20	21.20	ND
4	24/07/2024	Thiruvalluvar Street	27.40	44.40	18.20	20.20	ND
5	24/07/2024	Thiruvalluvar Street	21.20	20.20	18.20	20.20	ND
6	24/07/2024	Thiruvalluvar Street	19.40	20.10	18.20	20.20	ND
7	24/07/2024	Thiruvalluvar Street	22.40	22.10	17.20	20.20	ND
8	24/07/2024	Thiruvalluvar Street	20.20	41.10	17.20	21.20	ND
9	24/07/2024	Thiruvalluvar Street	21.40	20.20	18.20	20.20	ND
NACM Standard			80	100	80	80	1
Test Method			IS: 3101 Appendix L Part 03 (Part 4) Continuous	IS: 3101 IS: 3102	IS: 3102 IS: 3103	IS: 3102 IS: 3103	IS: 3102 IS: 3103

Quality Control System is being followed as per ISO 9001:2015. Calibration is done as per ISO 17025:2017. All test results are subject to the limitations of the test methods used. The laboratory is not responsible for any errors or omissions in the test results. The test results are valid only for the purpose and conditions specified in the test report.



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BUILDING & ROAD, MATERIAL, SOIL, ENVIRONMENTAL & CALIBRATION TESTING LAB

Issued To: M/s. Beverage Park Trust
 1010 Park, Chennai, India.

Test Report No.: 100000000

Sample Particulars

Nature of the Sample:

Process of Monitoring:

Sampling Location:

Method of Sampling:

Monitoring Conducted By:

Sampling Operator (Name):

- Ambient Air Quality Monitoring
- To Check for Polluted Load
- Free Station
- IS 3585 (Part 1A)
- Mr. Prakash
- 20/10/20

Analysis Report

Sr. No.	Date of Sampling	SLR No.	Concentration	
			Nitrogen (%)	
1	04/07/2020	2000000010	ND	
2	04/07/2020	2000000011	ND	
3	04/07/2020	2000000012	ND	
4	04/07/2020	2000000013	ND	
5	04/07/2020	2000000014	ND	
6	21/07/2020	2000000015	ND	
7	04/07/2020	2000000016	ND	
8	04/07/2020	2000000017	ND	
9	21/07/2020	2000000018	ND	
Test Method			FD Based Nitrogen Analyser	

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(RAYINDER MITAL)

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Test Reports of Wastewater (STP)



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Kamarajar Port Limited

Vallur Post, Chennai-600 120, Tamil Nadu, India

Reports on Environmental Monitoring of Kamarajar Port Limited



Study Period: August 2023

Prepared By



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Laboratories | Faridabad (Haryana) | Jammu (J&K) | Mangalore (Karnataka) |

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Test Reports of Ambient Air Quality Monitoring



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Issued To: M/s. Ramnagar Party Trust
Kasturba Road, Chennai, India

Test Report Date: 05/05/2022

Service Parameters

Nature of the Service:

Purpose of Monitoring:

Sampling Location:

Method of Sampling:

Monitoring Conducted By:

Sampling Duration (hrs.):

Ambient Air Quality Monitoring

To Check the Pollution Level

Plant Name:

IS 3102 (Part 14)

Mr. Srinivas

24 hrs

Analysis Report

Sr. No.	Date of Sampling	M.P.N. No.	Concentration				
			Particulate Matter (PM ₁₀) µg/m ³	Particulate Matter (PM _{2.5}) µg/m ³	Sulphur Dioxide (SO ₂) µg/m ³	Ozone (O ₃) µg/m ³	Carbon Monoxide (CO) µg/m ³
1	14/05/2022	TC000000000000004411	24.70	25.20	9.80	14.30	ND
2	15/05/2022	TC000000000000004411	18.00	10.70	10.00	22.70	ND
3	16/05/2022	TC000000000000004411	21.20	17.20	11.70	18.00	ND
4	14/05/2022	TC000000000000004411	21.40	14.20	8.80	20.00	ND
5	15/05/2022	TC000000000000004411	18.40	10.20	10.10	20.70	ND
6	16/05/2022	TC000000000000004411	16.80	10.20	11.70	21.40	ND
7	20/05/2022	TC000000000000004411	17.80	21.30	8.80	20.70	ND
8	20/05/2022	TC000000000000004411	21.30	19.40	10.00	22.20	ND
IS 3102 Maximum			ND	ND	ND	ND	ND
Test Method			IS 3102 Appendix L Plus IS 3102 Conditions	IS 3102 (P-02)	IS 3102 (P-03)	IS 3102 (P-04)	IS 3102 (P-05)

NOTE: Results reported in this report are based on the test results obtained from the samples submitted to the laboratory. The laboratory is not responsible for any errors or omissions in the data or for any consequences arising from the use of the data. The laboratory is not responsible for any errors or omissions in the data or for any consequences arising from the use of the data.



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Report To: M/s. Narmada Port Trust
 (Water Flow) Chennai, India

Test Report Date: 05/06/2022

Sample Particulars

Nature of the Sample:

Purpose of Monitoring:

Sampling Location:

Method of Sampling:

Monitoring Conducted By:

Sampling Duration (hrs.):

Analysis As Quality Monitoring

To Check the Pollution Level

Client Name:

(M/s. Narmada Port Trust)

At: Chennai

24 hrs.

Analysis Report

Sl. No.	Date of Sampling	SLR No.	Concentration
			Metres (%)
1	04/06/2022	00000000011	NO
2	07/06/2022	00000000011	NO
3	11/06/2022	00000000011	NO
4	14/06/2022	00000000011	NO
5	18/06/2022	00000000011	NO
6	21/06/2022	00000000011	NO
7	24/06/2022	00000000011	NO
8	28/06/2022	00000000011	NO
Total Method			NO (Good Water) Analyser

Note:

Sample Name/Number should be given. Samples should be taken from clean container and in a clean environment.
 It is necessary to use the same container for a particular material to be analysed. Material used for the purpose of analysis.
 Sample should be kept in a cool, dry place and should be analysed immediately after collection.



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BUILDING & ROAD, MATERIAL, SOIL, ENVIRONMENTAL & CALIBRATION TESTING LAB

Client To: M/s. Nangra Properties Pvt. Ltd.
 Gurgaon Road, Gurgaon, Haryana

Test Report No.: NR/17/2022

Sample Particulars

Name of the Sample:
 Purpose of Monitoring:
 Sampling Location:
 Method of Sampling:
 Monitoring Conducted By:
 Sampling Station (If any):

Ambient Air Quality Monitoring

To Check the Pollution Level
 From Building
 (Gurgaon Road, Gurgaon)
 At: Gurgaon
 In: Haryana

Analysis Report

Sl. No.	Date of Sampling	S/L No.	Concentration
			Microg/m ³
1	14/06/2022	0000000110	40
2	00/06/2022	0000000112	50
3	14/06/2022	0000000113	50
4	14/06/2022	0000000114	40
5	14/06/2022	0000000115	40
6	00/06/2022	0000000116	40
7	00/06/2022	0000000117	40
8	00/06/2022	0000000118	40
Test Method			PM 10 Based Method Analyser

NOTE: Results are based on the sample received. The laboratory is not responsible for any error in the sample or the test. The results are for information only and should not be used for legal or other purposes. The results are subject to the accuracy of the test method used. The results are subject to the accuracy of the test method used.



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BUILDING & ROAD, MATERIAL, SOIL, ENVIRONMENTAL & CALIBRATION TESTING LAB



Issued To: **M/s. Shreejanee Plast Traders**
 (Water Proof Chemicals, India)

Test Report Date: **04/09/2024**

Sample Particulars

- ☐ Nature of the Sample
- ☐ Purpose of Monitoring
- ☐ Sampling Location
- ☐ Method of Sampling
- ☐ Monitoring Configuration for Sampling Duration (hrs.)

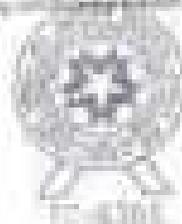
Addressed Air Quality Monitoring

- ☐ To Check the Pollution Level
- ☐ Signal Station
- ☐ AQ Index (Real Time)
- ☐ AQ Monitor
- ☐ PM 10

Analysis Report

Sl. No.	Date of Sampling	L&T No.	Concentration				
			Particulate Matter (PM10) (µg/m ³)	Particulate Matter (PM2.5) (µg/m ³)	Sulphur Dioxide (SO ₂) (ppm)	Nitrogen Dioxide (NO ₂) (ppm)	Carbon Monoxide (CO) (ppm)
1	04/09/2024	TC00002000000000000000	24.41	42.22	11.2	18.15	0.1
2	07/09/2024	TC00002000000000000000	24.72	49.41	9.84	18.22	0.1
3	11/09/2024	TC00002000000000000000	18.52	47.22	11.20	18.40	0.1
4	14/09/2024	TC00002000000000000000	18.62	44.22	10.90	18.40	0.1
5	18/09/2024	TC00002000000000000000	18.78	51.22	12.25	18.81	0.1
6	21/09/2024	TC00002000000000000000	17.22	55.22	9.12	19.49	0.1
7	25/09/2024	TC00002000000000000000	25.22	47.22	11.15	24.11	0.1
8	28/09/2024	TC00002000000000000000	14.22	44.22	11.15	18.41	0.1
NAACB Standards			42	100	30	44	2
Test Method			IS: 3106 Appendix 1, Part 02-CPOB Guidelines	IS: 3106 (P-22)	IS: 3106 (P-2)	IS: 3106 (P-4)	IS: 3106 (P-05)

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BUILDING & ROAD, MATERIAL, SOIL, ENVIRONMENTAL & CALIBRATION TESTING LAB

1/2024

Issued To: Mr. Kamranj Prat Trust
Sector 42, Gurgaon, India

Test Report No.: 1800002

Sample Particulars

Nature of the Sample:
Number of Monitoring:
Sampling Location:
Method of Sampling:
Monitoring Conducted by:
Sampling Duration (hrs.):

Ambient Air Quality Monitoring

To Check the Pollution Level

Signal Station

IS 5182 (Part 14)

Mr. Kamranj

24 hrs.

Analysis Report

Sl. No.	Date of Sampling	LAB No	Concentration
			Microg/m ³
1	01/01/2024	1800004 (1)	ND
2	01/01/2024	1800005 (1)	ND
3	01/01/2024	1800006 (1)	ND
4	01/01/2024	1800007 (1)	ND
5	01/01/2024	1800008 (1)	ND
6	01/01/2024	1800009 (1)	ND
7	01/01/2024	1800010 (1)	ND
8	01/01/2024	1800011 (1)	ND
Total Number			ND (Based on Method Analyzed)

This report is valid only for the purpose mentioned above. It is not valid for any other purpose. The laboratory is not responsible for any damage or loss of sample or any other material. The laboratory is not responsible for any delay in the report. The laboratory is not responsible for any error in the report. The laboratory is not responsible for any misinterpretation of the report. The laboratory is not responsible for any misuse of the report. The laboratory is not responsible for any other reason.



BUILDING & ROAD, MATERIAL, SOIL, ENVIRONMENTAL & CALIBRATION TESTING LAB

Send To: Mr. Manoj Kumar Reddy
 Water For: Chennai, India

Test Report No.: 16-04-2019

Sample Particulars

Name of the Sample
 Purpose of Monitoring
 Sampling Location
 Method of Sampling
 Monitoring Conducted By
 Sampling Number (P/N)

Ambient Air Quality Monitoring
 To Check the Pollution Level
 General Usage Name
 G.D.102 (Part 14)
 In: Street
 In: Yes

Analysis Report

Sl. No.	Date of Sampling	Lab No.	Concentration
			Microg/m ³
1	20/04/2019	2004040119	90
2	20/04/2019	2004040219	90
3	21/04/2019	2004040319	90
4	22/04/2019	2004040419	90
5	23/04/2019	2004040519	90
6	24/04/2019	2004040619	90
7	25/04/2019	2004040719	90
8	26/04/2019	2004040819	90
Test Method			90 Based Method Applied

Notes:
 1. The test results shown in this report are based on the test results of the sample as received.
 2. The test results are subject to change if the sample is re-tested.
 3. The test results are subject to change if the sample is re-tested.



BUILDING & ROAD, MATERIAL, CIVIL, ENVIRONMENTAL & CALIBRATION TESTING LAB



Issued To: **M/s Karamvir Road Trust**
 Gurgaon Road, Gurgaon, Haryana

Test Report Date: **05/05/2019**

Sample Particulars
 Nature of the Sample
 Purpose of Monitoring
 Sampling Location
 Method of Sampling
 Monitoring Conducted By
 Sampling Duration (hrs)

Ambient Air Quality Monitoring
 To check Air Pollution level
 Car Parking
 02/01/2019 (PM) 14
 Air Quality
 24 hrs

Analysis Report

Sr. No.	Date of Sampling	S.R. No.	Concentration
			Microg/m ³
1	05/05/2019	0000000119	60
2	05/05/2019	0000000219	60
3	05/05/2019	0000000319	60
4	05/05/2019	0000000419	60
5	05/05/2019	0000000519	60
6	05/05/2019	0000000619	60
7	05/05/2019	0000000719	60
8	05/05/2019	0000000819	60
Test Method			FD Based Nephelometer Analyser

NOTE: Values reported here represent average for the 24 hrs. Period. ISO 11631-1:2005, 4th Edition
 ©: Standard Unit for Road Environment & Air Quality (SUAQ) Institute, Gurgaon, Haryana
 Sample received after 24 hrs. retention at 4°C in cooling. (PM) 02/01/2019 (PM) 14


(AUTHORISED SIGNATURE)
(NITYA NITYALAB)

BUILDING & ROAD, MATERIAL, SOIL, ENVIRONMENTAL & CALIBRATION TESTING LAB



Issued To: Mrs. Manojkumar Patel (Youth)
Address: Sector-14, Gurgaon, India

Test Report Code: 16/09/2022

Sample Particulars
 Name of the Sample
 Purpose of Monitoring
 Sampling Location
 Method of Sampling
 Monitoring Committee To
 Sampling Duration (If any)

Analyzed As: Quality Monitoring
 To Check the Pollution Level
 For Station
 Station (Part No)
 M. Station
 At Site

Analysis Report

Sl. No.	Date of Sampling	L&R No.	Concentration
			Microg/m ³
1	16/09/2022	202209160117	40
2	17/09/2022	202209170117	40
3	18/09/2022	202209180117	40
4	19/09/2022	202209190117	40
5	20/09/2022	202209200117	40
6	21/09/2022	202209210117	40
7	22/09/2022	202209220117	40
8	23/09/2022	202209230117	40

Test Method: IS 5950 Method 4015

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 We are also ISO 45001:2018 certified. It is a leading provider of laboratory services with a strong reputation for quality.
 Sample Reference: Nitya Lab/2022/09/16-23/22





Test Reports of Wastewater (STP)



NOTE: The report is valid only for the purpose mentioned. It is not valid for any other purpose. The report is valid only for the purpose mentioned. It is not valid for any other purpose. The report is valid only for the purpose mentioned. It is not valid for any other purpose.



Kamarajar Port Limited

Vallur Post, Chennai-600 120, Tamil Nadu, India

Reports on Environmental Monitoring of Kamarajar Port Limited



Study Period: September 2023

Prepared By



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Test Reports of Ambient Air Quality Monitoring



(AUTHENTIC SIGNATURE)
(DR. VIKAS MITAL)

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BUILDING & ROAD, MATERIAL, SOIL, ENVIRONMENTAL & CALIBRATION TESTING LAB

Issued To: Mr. Kamranjir Park Road
 White Field, Bengaluru, India

Total Report Date: 07/12/2022

- Sample Particulars**
- Name of the Sample
 - Purpose of Monitoring
 - Sampling Location
 - Method of Sampling
 - Monitoring Component No
 - Sampling Duration (hrs)

- Assess Air Quality Monitoring
- To Check the Pollution Load
- Site Name
- 100 Feet (4)
- 01 - Sampler
- 24 hrs

Analysis Report

Sr. No.	Date of Sampling	LER No.	Concentration				
			Particulate Matter (PM10) (µg/m ³)	Particulate Matter (PM2.5) (µg/m ³)	Sulphate (as SO ₄) (µg/m ³)	Nitrogen Dioxide (as NO ₂) (µg/m ³)	Ozone Monoxide (as O ₃) (µg/m ³)
1	07/12/2022	YCH0000000000049	24.20	10.20	10.20	10.20	ND
2	08/12/2022	YCH0000000000050	28.70	10.40	14.00	26.20	ND
3	09/12/2022	YCH0000000000051	21.50	11.20	11.20	16.20	ND
4	11/12/2022	YCH0000000000052	21.80	10.20	11.40	24.70	ND
5	14/12/2022	YCH0000000000053	20.40	10.20	11.20	12.20	ND
6	16/12/2022	YCH0000000000054	20.70	10.20	14.00	14.70	ND
7	20/12/2022	YCH0000000000055	21.20	10.20	12.40	14.20	ND
8	22/12/2022	YCH0000000000056	18.20	12.20	10.40	11.20	ND
MAJOR Standards			88	100	60	80	2
Test Method			IS 3025 Appendix C Part 63-CPCB Guidelines	IS 3025 (P-12)	IS 3025 (P-8)	IS 3025 (P-9)	IS 3025 (P-10)

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(KAMRANJIR PARK ROAD)
(KAMRAN MITAL)

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BUILDING & ROAD, MATERIAL, SOIL, ENVIRONMENTAL & CALIBRATION TESTING LAB

Issued To: **M/s. Karmajit Path (Pvt)**
 (Water Treat. Chemical, India)

Test Report No: **NTY/00002**

Sample Particulars

Nature of the Sample:

Purpose of Monitoring:

Sampling Location:

Method of Sampling:

Monitoring Conducted By:

Sampling Division (if any):

☐ Ambient Air Quality Monitoring

☐ To Check the Pollution Load

☐ Map Data

☐ IS 3100 (Part 14)

☐ Mr. Engineer

☐ 24 hrs.

Analysis Report:

Sl. No.	Date of Sampling	Test Report No.	Concentration
			Within (%)
1	01/06/2021	000000010	40
2	04/06/2021	000000010	40
3	08/06/2021	000000010	40
4	11/06/2021	000000010	40
5	15/06/2021	000000010	40
6	18/06/2021	000000010	40
7	22/06/2021	000000010	40
8	25/06/2021	000000010	40
Test Method			ISO Based Wetness Analyser

Notes:
 1. This report is valid only for the purpose mentioned in the report. It is not valid for any other purpose.
 2. The laboratory is not responsible for the accuracy of the data provided by the client. The client is responsible for the accuracy of the data provided.
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BUILDING & ROAD, MATERIAL, SOIL, ENVIRONMENTAL & CALIBRATION TESTING LAB



Issued To: **M/s Ramrajgarh Port Trust**
Sector Head, Chemical India

Test Report No: **NTYR0002**

Sample Particulars

Name of the Sample:

Purpose of Monitoring:

Sampling Location:

Method of Sampling:

Monitoring Conducted By:

Sampling Duration (hrs.):

- Ambient Air Quality Monitoring
- To Check the Pollution Level
- Good House
- IS 3100 (Part 1)
- As Specified
- 24 hrs

Analysis Report

Sr. No.	Date of Sampling	Test Report No.	Concentration
			Methane (%)
1	08/06/2025	0000000011	ND
2	08/06/2025	0000000011	ND
3	08/06/2025	0000000011	ND
4	10/06/2025	0000000011	ND
5	14/06/2025	0000000011	ND
6	20/06/2025	0000000011	ND
7	20/06/2025	0000000011	ND
8	20/06/2025	0000000011	ND
Test Method			ND Based Methane Analyzer

Note: Results obtained are for the only purpose specified in the report. They are not to be used for any other purpose. All these concentrations are in compliance with the corresponding national standards. Sample preservation and storage are as per the company's standard operating procedures.



(AUTHORIZED SIGNATORY)
(RAVINDER NITTA)

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BUILDING & ROAD, MATERIAL, SOIL, ENVIRONMENTAL & CALIBRATION TESTING LAB

Issued To: **Mrs Namangal Post Trust**
Vafar Post, Chhatar, India

Test Report Date: 27/10/2023

Sample Particulars

Nature of the Sample:

Purpose of Monitoring:

Sampling Location:

Method of Sampling:

Monitoring Conducted By:

Sampling Duration (hrs.):

Ambient Air Quality Monitoring

To Check the Pollution Load

Admin Building

at Vafar (Post 14)

By: Operator

24 hrs

Analysis Report

Sl. No.	Date of Sampling	Test Report No.	Concentration
			Methane (%)
1	26/10/2023	202309040110	40
2	26/10/2023	202309040110	40
3	26/10/2023	202309040110	40
4	12/09/2023	202309180110	40
5	12/09/2023	202309180110	40
6	27/09/2023	202309260110	40
7	20/09/2023	202309200110	40
8	20/09/2023	202309200110	40
Test Method			PM 1000 Method as per Analyst

Notes

All test results depend on data provided. Laboratory does not take any responsibility for any error in the test results. It is the responsibility of a customer to get a complete and accurate report from the test monitoring system. Laboratory will not be responsible for any error in the test results.



(AUTHOGRAPHED SIGNATURE)

(NAMANGAL MITTAL)

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BUILDING & ROAD, MATERIAL, SOIL, ENVIRONMENTAL & CALIBRATION TESTING LAB



Issued To: **M/s Karamveer Road Trust**
 Vaidh Road, Chennai, India

Test Report Code: **011000001**

Sample Particulars

- ✓ Nature of the Sample
- ✓ Purpose of Monitoring
- ✓ Sampling Location
- ✓ Method of Sampling
- ✓ Monitoring Conducted by
- ✓ Sampling Duration (hrs)

- ✓ Ambient Air Quality Monitoring
- ✓ To Check the Pollution Level
- ✓ Report Status
- ✓ IS:1182 (Part 1)
- ✓ Mr. Anand
- ✓ 24 hrs

Analysis Report

Sr. No.	Date of Sampling	SAR No.	Concentration				
			Particulate Matter (PM ₁₀) (µg/m ³)	Particulate Matter (PM _{2.5}) (µg/m ³)	Ozone (as O ₃) (ppb)	Ammonia (as NH ₃) (ppb)	Total Microbials (as CFU/m ³)
1	10/06/2024	TC000100000000011	12.10	15.10	12.50	17.20	60
2	10/06/2024	TC000100000000012	11.20	15.20	14.10	16.10	60
3	10/06/2024	TC000100000000013	11.40	14.70	14.80	16.70	60
4	11/06/2024	TC000100000000014	11.50	14.30	17.20	16.60	60
5	11/06/2024	TC000100000000015	11.40	14.50	14.20	16.10	60
6	11/06/2024	TC000100000000016	11.50	14.10	13.70	15.40	60
7	12/06/2024	TC000100000000017	11.20	13.40	11.20	17.60	60
8	12/06/2024	TC000100000000018	11.50	14.10	14.40	14.70	60
NALM Standards			40	40	60	50	2
Test Method			IS:1182 Appendix 1 Part 12 (PM ₁₀) Guidelines	IS:1182 (PM _{2.5})	IS:1182 (O ₃)	IS:1182 (NH ₃)	IS:1182 (PM ₁₀)

NITYA LABORATORIES is an ISO 9001:2015 certified organization. The test results are valid only if the sample is collected and analyzed as per the test method specified in the report. The test results are valid only if the sample is collected and analyzed as per the test method specified in the report.



NITYA LABORATORIES
(PVT) LTD.

Issued To: **M/s. Knowledge Park Trust**
 Water/Water Treatment

Test Report Date: 07/08/2015

Sample Particulars

Name of the Sample:

Purpose of Monitoring:

Sampling Location:

Method of Sampling:

Monitoring Conducted by:

Sampling System (If any):

Ambient Air Quality Monitoring

To Check the Pollution Level

Open Station

IS-302 (Part-IV)

As Specified

IS-102

Analysis Report

Sl. No.	Date of Sampling	Test Report No.	Concentration
			Microg (µg)
1	06/08/2015	0000000115	ND
2	06/08/2015	0000000115	ND
3	06/08/2015	0000000115	ND
4	07/08/2015	0000000115	ND
5	07/08/2015	0000000115	ND
6	07/08/2015	0000000115	ND
7	07/08/2015	0000000115	ND
8	07/08/2015	0000000115	ND
Test Method			PM 10 and Monitor Station

Notes:
 1. All test results are subject to the accuracy of the test methods used and the quality of the samples.
 2. Samples and test results are subject to the accuracy of the test methods used and the quality of the samples.
 3. All test results are subject to the accuracy of the test methods used and the quality of the samples.



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Issued To: **M/s. Kamangal Port Trust**
Vidya Road, Chennai, India

Test Report No: **021000002**

Sample Particulars

Name of the Sample:
Purpose of Monitoring:
Sampling Location:
Method of Sampling:
Monitoring Conducted by:
Sampling Station (If any):

Air Quality Monitoring
To Check the Pollutant Load
From: **city**
IS 3100 (Part 14)
By: **Shreeya**
On: **14/05/2014**

Analysis Report

Sr. No.	Date of Sampling	Test Report No.	Concentration
			Microg/m ³
1	14/05/2014	02100000114	45
2	14/05/2014	02100000114	45
3	14/05/2014	02100000114	45
4	14/05/2014	02100014014	45
5	14/05/2014	02100014014	45
6	14/05/2014	02100014014	45
7	14/05/2014	02100000114	45
8	14/05/2014	02100000114	45
Test Method			PM Based Microg. Analyser

Notes:

1. All test results are based on the test results of the sample as received. The results are not valid if the sample is not properly stored or if the test results are not within the specified limits. The test results are not valid if the test results are not within the specified limits.



Issued To: **M/s. Kaverajpur Path Trust**
 Water Road, Gurgaon, Haryana

Test Report No.: **2023000010**

Sample Particulars

Name of the Sample:
 Purpose of Monitoring:
 Sampling Location:
 Method of Sampling:
 Monitoring Conducted by:
 Sampling Duration (hrs):

- Ambient Air Quality Monitoring
- To Check the Pollutant Load
- General Check from
- IS 4160 (Part 1)
- Mr. Shreshth
- 24 hrs

Analysis Report

Sl. No.	Date of Sampling	Test Report No.	Concentration
			Microg / m ³
1	01/01/2023	202300001015	40
2	01/01/2023	202300001015	50
3	01/01/2023	202300001015	40
4	01/01/2023	202300101015	50
5	01/01/2023	202300102015	40
6	01/01/2023	202300103015	40
7	01/01/2023	202300104015	40
8	01/01/2023	202300105015	40
Test Method			PM 10 Based Method - Ambient

Notes:
 1. Sample collection is done as per the standard procedure of IS 4160 (Part 1) (Ambient Air Quality - Part 1) and the results are reported as per the standard procedure. The results are not certified unless the sample is collected and analyzed under the supervision of a qualified person.
 2. Sample collection and analysis are done as per the standard procedure of IS 4160 (Part 1) (Ambient Air Quality - Part 1) and the results are reported as per the standard procedure.





Issued To: Mr. Kamaljeet Paul Thakur
Village Head, Chhatra, India

Test Report Date: 07/03/2023

Sample Particulars

Nature of the Sample:

Purpose of Monitoring:

Sampling Location:

Method of Sampling:

Monitoring Conducted By:

Sampling Number (S/N):

Analysis for Quality Monitoring

To Check the Pollution Level

Gas Testing

IS 15032 (Part 1) &

IS 15031

IS 1503

Analysis Report

Sl. No.	Date of Sampling	S/LR No.	Concentration
			Metres (%)
1	05/03/2023	00000000176	ND
2	05/03/2023	00000000178	ND
3	05/03/2023	00000000179	ND
4	14/03/2023	00000000176	ND
5	14/03/2023	00000000178	ND
6	22/03/2023	00000000176	ND
7	22/03/2023	00000000178	ND
8	28/03/2023	00000000176	ND
Test Method			ISO 15032 Method Analytical

Note:

1. All test results are subject to change. We reserve the right to modify the test methods and procedures without prior notice.
2. We do not accept any responsibility for any loss or damage to the samples or equipment caused by fire, theft or any other cause.
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BUILDING & ROAD, MATERIAL, SOIL, ENVIRONMENTAL & CALIBRATION TESTING LAB

Issued To: **M/s. Anandraj Park Trust**
Village Road, Chandra, Haryana

Test Report Date: 07/07/2022

Sample Particulars

Nature of the Sample:

Purpose of Monitoring:

Sampling Location:

Method of Sampling:

Monitoring Conducted By:

Sampling Duration (hrs.):

Apparent Air Quality Monitoring

To Check the Pollution Level

For Station

IS 1821 Part 1A

at Station

24 hrs

Analysis Report

Sl. No.	Date of Sampling	Test Report No.	Concentration
			Microg/m ³
1	07/07/2022	20220707011	40
2	07/07/2022	20220707021	40
3	07/07/2022	20220707031	40
4	07/07/2022	20220707041	40
5	07/07/2022	20220707051	40
6	07/07/2022	20220707061	40
7	07/07/2022	20220707071	40
8	07/07/2022	20220707081	40
Total Method			PM 2.5 Based Method Analyser

NOTE: This report is valid only for the purpose for which it is issued. It is not valid for any other purpose. The client is responsible for the accuracy of the data provided. The laboratory is not responsible for the accuracy of the data provided. The laboratory is not responsible for the accuracy of the data provided.



Test Reports of Noise Monitoring



Issued To: **M/s. Karamdeep Pulp Board**
 Water Road, Chhambal, India

Lab No: **TC0840000004/TOP-01/007**
 Test Report Date: **18/08/2018**

Sample Particulars
 Nature of the Sample:
 Parameter Tested:
 Instrument Used:
 Sampling Location (Ifs):

Analyst Name:
 Name Level: **Log 05 (A)**
 Sound Level Meter:
 01116

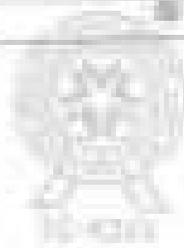
Analysis Report

Sl. No.	Location	Date of Sampling	Test Result (dBA) Day Time	Test Result (dBA) Night Time
1	Main Gate	12/08/2018	61.88	62.76
2	Gate House	12/08/2018	58.88	60.12
3	Admin Building	12/08/2018	62.48	63.68
4	Signal Station	12/08/2018	67.76	68.41
5	Feeder Jct	12/08/2018	68.88	68.88
6	Nearby Canal Area	12/08/2018	62.14	62.88
7	Car Parking	12/08/2018	64.87	66.33
8	Fire Station	12/08/2018	62.88	63.88
Permissible Limit as per IS:16253 for Industrial Area			75 (dBA)	70 (dBA)

1. All the measurements were taken in accordance with the standard procedure as per IS:16253 (Part 1) 2014 (IS:16253-1:2014) (Sound Power Level).

Note: The Noise Limits for Quality Standards are given for reference.

Area Class	Category of Area	Limits (dB (A)) Limit	
		Day Time (8AM - 6PM)	Night Time (10PM - 6AM)
A	Industrial Area	75	70
B	Commercial Area	65	60
C	Residential Area	55	50
D	Source Area	55	50



CORPORATE OFFICE & CENTRAL LABORATORIES :-

Test Reports of Wastewater (STP)



(AUTHORISED SIGNATORY)

(NAME OF NITYA)



Test Reports of Surface Water



NITYA LABORATORIES
(PVT) LIMITED

COMPANY OFFICE & CENTRAL LABORATORIES :-

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Issued To: **M/s. Narmada Port Trust**
 (Water Road, Okhla, India)

SLP No.: **SCHEM0000001000-01-001**
 Test Report No.: **00000000**

Sample Particulars

Station of the Sample:
 Sample Quantity & Packaging:
 Sample Received at Lab:
 Test Started On:
 Test Completed On:
 Method of Sampling:
 Date of Sampling:
 Monitoring Conducted By:
 Sample Retention:

Surface Water

3.0 Ltr. Sterilized Pet Bottle (Date):
 16/08/2023
 16/08/2023
 20/08/2023
 60/100-1
 16/08/2023
 Mr. Shreshth
 0940-0000000
 0940-0000000
 16/08/2023
Analysis Report

Sl. No.	Parameters	Unit	Test Results			Protocol
			Run-1	Run-2	Avg	
1	pH	-	7.88	7.20	7.54	IS 3025 (P-1)
2	Temperature	°C	26.1	26.2	26.15	IS 3025 (P-4)
3	Dissolved Oxygen	mg/l	20.10	19.28	19.69	IS 3025 (P-10)
4	Turbidity	NTU	4.1	4.1	4.1	APHA (2110)
5	Total Dissolved Solids	mg/l	2000	80	110	IS 3025 (P-16)
6	Ammonia as NH ₃	mg/l	0.11	0.01	0.06	APHA (2110)
7	Nitrate as NO ₃	mg/l	0.35	4.27	4.30	IS 3025 (P-24)
8	Total Ammonia	mg/l	0.38	0.02	0.20	IS 3025 (P-24)
9	Total Suspended Solids	mg/l	25	10	17	IS 3025 (P-17)
10	Dissolved Oxygen as DO	mg/l	4.1	3.2	3.6	IS 3025 (P-10)
11	Biological Oxygen Demand	mg/l	25	1	1	IS 3025 (P-14)
12	Chemical Oxygen Demand	mg/l	110	10	11	IS 3025 (P-10)
13	Copper as Cu	mg/l	0.08	0.02	0.05	APHA (2110)
14	Iron as Fe	mg/l	20.18	0.01	0.04	APHA (2110)
15	Zinc as Zn	mg/l	0.08	0.01	0.02	APHA (2110)
16	Manganese as Mn	mg/l	ND (DL-0.05)	ND (DL-0.05)	ND (DL-0.05)	APHA (2110)
17	Arsenic as As	mg/l	ND (DL-0.05)	ND (DL-0.05)	ND (DL-0.05)	APHA (2110)
18	Cadmium as Cd	mg/l	ND (DL-0.05)	ND (DL-0.05)	ND (DL-0.05)	APHA (2110)
19	Cobalt as Co	mg/l	0.01	0.01	0.01	APHA (2110)
20	Fluoride as F ⁻	MPM (DL)	0.01	0.01	0.01	IS 1502

Report No. NITYA/2023/00000000

(AUTHORIZED SIGNATORY)
 (JYOTI BHASORIA)



(AUTHORIZED SIGNATORY)
 (PRAVEEN MITTAL)

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BUILDING & ROAD, MATERIAL, SOIL, ENVIRONMENTAL & CALIBRATION TESTING LAB



Issued To: **M/s. Naveenagar Port Trust**
 Malviya Road, Okhla, India

Test Report No.: **NDL/20113-110**
 Test Report Date: **22/08/2023**

Sample Particulars:

- ☐ Nature of the Sample
- ☐ Sample Quantity & Packaging
- ☐ Sample Received at Lab
- ☐ Test Started On
- ☐ Test Completed On
- ☐ Method of Sampling
- ☐ Date of Sampling
- ☐ Monitoring Conducted by
- ☐ Sample Description

- ☐ **Surface Water**
- ☐ **Soil Lab: Described Per Below (If Any)**
- ☐ **WATER**
- ☐ **INDUSTRIAL**
- ☐ **DOMESTIC**
- ☐ **DISINFECTED**
- ☐ **CONDENSED**
- ☐ **Mr. Naveen**
- ☐ **Soil: Fresh Moist**
- ☐ **Soil: Clay - In Moist State**
- ☐ **Soil: Clay - In Dry State**

Analysis Report

Sl. No.	Parameters	Unit	Test Results			Remark
			Run 1	Run 2	Run 3	
1	Temperature (°C)	°C	NDL/20113-110	NDL/20113-110	NDL/20113-110	APHA 2015A
2	Dissolved O ₂	mg/l	1.10	0.80	0.80	APHA 2015A
3	Hardness	mg/l	10.00	10.00	10.00	APHA 2015A
4	Salinity	ppt	0.75	1.00	1.00	IC Meter
5	Water in Oil	mg/l	NDL/20113-110	NDL/20113-110	NDL/20113-110	IS 3025 (1966)
6	Total Nitrogen as N	mg/l	0.10	0.20	0.20	IS 3025 (1966)
7	Inorganic Phosphorus	mg/l	0.02	0.20	0.20	IS 3025 (1966)
8	Total Phosphorus as P	mg/l	0.20	0.20	0.20	IS 3025 (1966)

Method: IS 3025 (1966)

(AUTHORIZED SIGNATORY)
(NITYA LABS)



(AUTHORIZED SIGNATORY)
(RANJAN NITYA)

COMPANY OFFICE & CENTRAL LABORATORIES:

Plot No. 118, Church Road, Behind Railway Station, Market Area, Malviya Nagar, New Delhi - 110017, India

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Test Reports of Marine Water



CORPORATE OFFICE & CENTRAL LABORATORIES :-

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www.nityalabs.com



Issued To: **Mr. Harpreet Paul Singh**
 Water Test, Chemical, India

Test Report No.: **2024070001-101**
 Test Report Date: **2024/07/01**

Sample Particulars

Nature of the Sample
 Sample Quantity & Packaging
 Sample Preservation Lab
 Test Started On
 Test Completed On
 Method of Sampling
 Date of Reporting
 Monitoring / Detected By
 Sample Description

Water Water
 1.5 Liter, Sterilized Pet Bottle (Ready)
 1000000
 1000000
 1000000
 1000000
 1000000
 1000000
 Mr. Harpreet
 89401, Near OCB (Bachchan)
 89401, Near OCB (Bachchan 1, Ind)

Analysis Report

Sl. No.	Parameters	Unit	Test Results		Standard	IS/Class/IS reference Standard
			MS-1	MS-2		
1	pH	-	8.05	8.04	6.5-8.5 (P-11)	-
2	Temperature	°C	28.4	28.7	10-30 (P-10)	-
3	Electrical Conductivity	µmhos	28100	28000	50000 (P-12)	-
4	Turbidity	NTU	11	11	500 (P-13)	-
5	Total Dissolved Solids	mg/l	23540	23600	5000 (P-15)	-
6	Sulphate as SO ₄	mg/l	1000	1000	400 (P-16)	-
7	Chloride as Cl ₂	mg/l	7.40	7.35	250 (P-14)	-
8	Total Arsenic	mg/l	0.12	0.11	0.05 (P-18)	-
9	Total Suspended Solids	mg/l	4	11	5000 (P-17)	-
10	Dissolved Oxygen as O ₂	mg/l	8.7	8.5	10.0 (P-19)	1.0
11	Biological Oxygen Demand	mg/l	10	8	10.0 (P-44)	3.0
12	Chemical Oxygen Demand	mg/l	60	60	10.0 (P-46)	-
13	Iron as Fe	mg/l	0.04	0.03	0.3 (P-56)	-
14	Manganese as Mn	mg/l	0.11	0.12	0.1 (P-58)	-
15	Zinc as Zn	mg/l	0.70	0.20	0.1 (P-59)	-
16	Mercury as Hg	mg/l	ND (DL-0.001)	ND (DL-0.001)	0.01 (P-61)	-
17	Arsenic as As	mg/l	ND (DL-0.01)	ND (DL-0.01)	0.01 (P-62)	-
18	Cadmium as Cd	mg/l	ND (DL-0.01)	ND (DL-0.01)	0.01 (P-63)	-
19	Chromium as Cr	mg/l	ND	ND	0.05 (P-64)	-
20	Fluoride as F ⁻	mg/l	ND (DL-0.05)	ND (DL-0.05)	0.1 (P-65)	-
21	Copper as Cu	mg/l	1.30	1.34	0.1 (P-66)	-
22	Lead as Pb	mg/l	10	10.00	0.1 (P-67)	-
23	Nitrate	mg/l	27.0	26.5	50 (P-68)	-
24	Nitrite as NO ₂	mg/l	0.00	ND (DL-0.05)	10.0 (P-69)	-
25	Total Nitrogen as N	mg/l	0.70	0.65	10.0 (P-70)	-
26	Ammonia Phosphate	mg/l	0.40	0.70	10.0 (P-71)	-
27	Total Phosphate as P	mg/l	0.20	0.20	10.0 (P-72)	-
28	Fecal Coliform	MPN/100 ml	440	440	10000	MPN/100 ml

(AUTHORIZED SIGNATORY)
(NITYA LABS)

(AUTHORIZED SIGNATORY)
(HARPREET MITAL)

NOTE: This report is valid only for the purpose mentioned. It is not valid for any other purpose. The results are based on the sample received and tested as per the method specified. The laboratory is not responsible for the accuracy of the data provided by the client. The results are subject to the accuracy of the instruments used and the skill of the operator. The results are not valid if the sample is not properly preserved and transported. The results are not valid if the sample is not properly labeled and identified. The results are not valid if the sample is not properly stored and handled. The results are not valid if the sample is not properly analyzed and reported. The results are not valid if the sample is not properly reviewed and approved. The results are not valid if the sample is not properly signed and sealed. The results are not valid if the sample is not properly stored and handled. The results are not valid if the sample is not properly analyzed and reported. The results are not valid if the sample is not properly reviewed and approved. The results are not valid if the sample is not properly signed and sealed.

BUILDING & ROAD, MATERIAL, SOIL, ENVIRONMENTAL & CALIBRATION TESTING LAB

Issued To: **Mrs. Namratha Patel (Treasurer)**
Vastav Path, Chhanna, India

Test Request No.: **20240412001102**
Test Report Date: **20240408**

Sample Particulars:

Nature of the Sample:
Sample Quantity & Packaging:
Sample Received at Lab:
Test Requested On:
Test Completed On:
Method of Sampling:
Date of Sampling:
Monitoring/Compliance By:
Sample Description:

Marine Water
1 Liter (Filtered For BOD & DO)
1000003
1000003
20240408
20240408
1000003
M. Sharma
SWT - Near PCB (Surface)
BOD - Near PCB (Surface 1.5 m)

Analysis Report

Sl. No.	Parameters	Test Results		Remarks
		Std. I	Std. II	
1	Physicochemical (200 ml water)			
	BOD ₅	0.0	0.0	APHA 2015E
	DO	0.1	0.0	
	pH	Particular organic Tolerant organisms		Qualitative analysis. Negative result.
2	Microbiology (200 ml water)			
	BOD ₅	0.00	0.00	APHA 2015E
	DO	0.3	0.4	
	pH	Fungi Bacteria, Hydrocarbon Large Amoeboid protozoa		Light microscopy. Substrate used. Estimate value
3	Residual			
	SS	Aqua sand, Sphaerotrichia, Clavate microfungi		APHA 2015E Microscopic method. Negative result. Apparent chloride


(AUTHORISED SIGNATORY)
(NITYA LABORATORY)


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(NITYA LABORATORY)



Issued To: **M/s. Nanyang Port Trust**
 Water Port, Chennai, India

Test Report No: **20000130124 LAB**
 Test Report Date: **200000000**

Sample Particulars
 Name of the Sample
 Sample Quantity & Packaging
 Sample Received at Lab
 Test Conducted On
 Test Completed On
 Method of Sampling
 Date of Sampling
 Monitoring Conducted By
 Sample Description

Market Status
 1.0 Ltr. (Standard Pot Bottle (Mark)
 1000000
 1000000
 2000000
 1000000
 1000000
 M. Prasad
 1000. Near M.T. Bury (Bhubai)
 1000. Near M.T. Bury (Bhubai-1 Bury)

Analysis Result

Sr. No.	Parameter	Test Results		Remarks
		Std. I	Std. II	
1	Phosphate ³⁻ (ppm as PO ₄)			
	Result	4.2	1.2	APPA.2011.02
	Method	0.2	1.0	
	Notes:	Phosphate nitrogen As per method Fluorapatite content	Standardize value, Reference system	
2	Sulphate ²⁻ (ppm as SO ₄)			
	Result	0.00	0.04	APPA.2011.02
	Method	1.2	2	
	Notes:	Barium chloride Chloride As per method method	As per method & standard method. (As per method)	
3	Ammonia ³⁻			
	Result	As per method method, As per method method	As per method method, As per method method	APPA.2011.02

(NITYA LABORATORIES)
 (MAY 2000 000000)

(NITYA LABORATORIES)
 (MAY 2000 000000)

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BUILDING & ROAD, MATERIAL, CIVIL, ENVIRONMENTAL & CALIBRATION TESTING LAB



Issued To: **M/s. Homepage Plast Trade**
 Nagar Park, Chennai, India

Test Report No.: **20220410001/100**
 Test Report Date: **20220410**

Sample Particulars

Article of the Sample
 Sample Quantity & Packaging
 Sample Preservation/Lab
 Test Conducted On
 Test Completed On
 Method of Sampling
 Date of Sampling
 Monitoring Conducted By
 Sample Description

Water
 1.0 Liter (Filtered For Total Hardness)
 14000000
 14000000
 20220000
 20220000
 20220000
 M. Shivan
 MVR: Test Report Only (Surface)
 MVR: Test Report Only (Bottom 1 & 2)
Analysis Report

Sr. No.	Parameters	Unit	Test Results		Method	IS Code/IV Standard
			Obs'd	Req'd		
1	pH	-	8.26	7.01	IS 3025 (P-17)	8.5-9.5
2	Temperature	°C	26	25.1	IS 3025 (P-18)	-
3	Electrical Conductivity	µS/cm	1940	1940	IS 3025 (P-19)	-
4	Turbidity	NTU	1	1	APHA 2170A	-
5	Total Dissolved Solids	mg/l	2176	2400	IS 3025 (P-20)	-
6	Bromide as Cl ⁻	mg/l	172	1740	APHA 2171A	-
7	Nitrate as NO ₃ ⁻	mg/l	11.26	0.24	IS 3025 (P-24)	-
8	Total Ammonia	mg/l	0.14	0.28	IS 3025 (P-25)	-
9	Total Suspended Solids	mg/l	0	1	IS 3025 (P-27)	-
10	Dissolved Oxygen as O ₂	mg/l	8.8	8.8	IS 3025 (P-36)	7.0
11	Biological Oxygen Demand	mg/l	0	12	IS 3025 (P-40)	0.5
12	Chemical Oxygen Demand	mg/l	60	60	IS 3025 (P-48)	-
13	Copper as Cu	mg/l	0.14	0.16	APHA 2175A	-
14	Iron as Fe	mg/l	0.25	0.28	APHA 2176A	-
15	Zinc as Zn	mg/l	0.26	0.28	APHA 2177A	-
16	Mercury as Hg	mg/l	ND (DL - 0.01)	ND (DL - 0.01)	APHA 2178A	1
17	Lead as Pb	mg/l	ND (DL - 0.01)	ND (DL - 0.01)	APHA 2179A	-
18	Cadmium as Cd	mg/l	ND (DL - 0.01)	ND (DL - 0.01)	APHA 2179A	-
19	Cobalt as Co	mg/l	ND	ND	APHA 2179A	-
20	Potassium Hydroxide	mg/l	ND (DL - 0.01)	ND (DL - 0.01)	APHA 2179A	-
21	Chlorophyll A	mg/l	2.4	2.1	APHA 2179A	-
22	Phosphophyt	mg/l	17.1	17.2	APHA 2179A	-
23	Silica	mg/l	26.4	26.3	IS 3025	-
24	Nickel as Ni	mg/l	0.26	ND (DL - 0.01)	IS 3025 (P-34)	-
25	Total Nitrogen as N	mg/l	11.75	6.60	IS 3025 (P-34)	-
26	Organic Phosphate	mg/l	0.26	0.26	IS 3025 (P-31)	-
27	Total Phosphate as P	mg/l	0.41	0.41	IS 3025 (P-31)	-
28	Fixed Carbon	mg/l (ISO 91)	0.11	0.16	IS 3025	0.010 (or)

ANALYST:

(JAYANTH BABU)
(JAYANTH BABU)

AUTHORISED SIGNATORY:

(VAISHALI MITTAL)

NOTE: This report is valid only for the purpose mentioned in the report. It is not valid for any other purpose. The user is responsible for the proper use of the report. The user is also responsible for the proper use of the report. The user is also responsible for the proper use of the report.



Issued To: **M/s. Kaveripet Pet Products**
Address: **Chennai, Tamil Nadu, India**

Test Report No.: **2024/18025-101**
Test Report Date: **20/09/2024**

Sample Particulars

Name of the Sample
Sample Quantity & Packaging
Sample Received at Lab
Test Requested On
Test Completed On
Method of Sampling
Date of Sampling
Monitoring Conducted By
Sample Description

Market Name

100% Pure Pet Products (Batch)
1000000
1000000
20240920
20240920
1000000
1000000
M: Director
M/S: M/s. Kaveripet Pet Products
M/S: M/s. Kaveripet Pet Products (Batch 1000000)

Analysis Report

Sl. No.	Parameter	Test Results		Remarks
		Std. I	Std. II	
1	Phosphate* (ppm as P)			
	Result	1.00	1.1	APHA 2011 G
	Std. I	1.1	1.1	
Specs	1.0000000000000000 Chloride free	1.0000000000000000 Chloride free, No. of days. Chloride free sample		
2	Sulphate* (ppm as SO4)			
	Result	0.00	0.00	APHA 2011 G
	Std. I	0.0	0.0	
Specs	Maximum allowable Turbidity coefficient, Fertilizer grade	Fertilizer grade, Chloride Equivalent		
3	Water*			
	Specs	Chloride free, Maximum allowable	Amphibole free, Arsenic free, Turbidity free	APHA 2011 G


QUALIFIED SIGNATORY
SHYAM BANSARI


QUALIFIED SIGNATORY
RAJESH MITAL

COMPONENTS OFFICE & CENTRAL LABORATORIES :-

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✉ info@nityalab.com

🌐 www.nityalab.com



Issued To: M/s Navneet Plast Plast
 Sector 141, Noida, India

Test Report No.: 2023010001729
Test Report Date: 28/01/2023

Sample Particulars

Nature of the Sample:
Sample Quantity & Packaging:
Sample Received at Lab:
Test Started On:
Test Completed On:
Method of Sampling:
Date of Sampling:
Monitoring Executed By:
Sample Description:

Matrix Water

1.2 Ltr. Sterilized For Bacteriology
 14002001
 14002002
 20230203
 20230203
 14002001
 M. Greater
 Meter: Outer South West Drain Water (Surface)
 Meter: Outer South West Drain Water (Bottom 1.5m)

Analysis Report

Sl. No.	Parameter	Unit	Test Results		Standard	SIS Class/ISIRI Standard/IS
			MP-1	MP-2		
1	pH	-	7.29	7.27	IS: 20225 (P-11)	5.5-8.5
2	Temperature	°C	25.4	27.8	IS: 20225 (P-12)	-
3	Electrical Conductivity	µmhos	2000	2000	IS: 20225 (P-13)	-
4	Turbidity	NTU	1	1	IS: 20225 (P-14)	-
5	Total Dissolved Solids	mg/l	2257	2240	IS: 20225 (P-15)	-
6	Sulphate as SO ₄	mg/l	71.5	67.5	IS: 20225 (P-16)	-
7	Chloride as Cl ₂	mg/l	1.45	1.40	IS: 20225 (P-17)	-
8	Total Hardness	mg/l	8.14	8.0	IS: 20225 (P-18)	-
9	Total Suspended Solids	mg/l	19	12	IS: 20225 (P-19)	-
10	Dissolved Oxygen as DO ₂	mg/l	8.9	8.4	IS: 20225 (P-20)	5.0
11	Biological Oxygen Demand	mg/l	18	14	IS: 20225 (P-21)	5.0
12	Chemical Oxygen Demand	mg/l	40	40	IS: 20225 (P-22)	-
13	Copper as Cu	mg/l	0.14	0.21	IS: 20225 (P-23)	-
14	Iron as Fe	mg/l	0.24	0.20	IS: 20225 (P-24)	-
15	Zinc as Zn	mg/l	0.40	0.70	IS: 20225 (P-25)	-
16	Mercury as Hg	mg/l	ND (DL: 0.01)	ND (DL: 0.01)	IS: 20225 (P-26)	-
17	Arsenic as As	mg/l	ND (DL: 0.01)	ND (DL: 0.01)	IS: 20225 (P-27)	-
18	Lead as Pb	mg/l	ND (DL: 0.01)	ND (DL: 0.01)	IS: 20225 (P-28)	-
19	Cadmium as Cd	mg/l	ND	ND	IS: 20225 (P-29)	-
20	Hexavalent Chromium	mg/l	ND (DL: 0.01)	ND (DL: 0.01)	IS: 20225 (P-30)	-
21	Cyanide as C ₂	mg/l	1.1	1.1	IS: 20225 (P-31)	-
22	Fluoride	mg/l	18	17.44	IS: 20225 (P-32)	-
23	Nitrate	mg/l	26.3	22.2	IS: 20225 (P-33)	-
24	Nitrite as NO ₂	mg/l	ND (DL: 0.01)	ND (DL: 0.01)	IS: 20225 (P-34)	-
25	Total Nitrogen as N	mg/l	4.72	5.75	IS: 20225 (P-35)	-
26	Ammonia Nitrogen	mg/l	0.45	0.30	IS: 20225 (P-36)	-
27	Total Phosphorus as P	mg/l	0.81	0.88	IS: 20225 (P-37)	-
28	Total Solids	MPH/100 ml	219	111	IS: 20225	MPH/100 ml

(AUTHORIZED SIGNATORY)
 JYOTI BHASORIA

(AUTHORIZED SIGNATORY)
 RAMESH MITTAL

BUILDING & ROAD, MATERIAL, SOIL, ENVIRONMENTAL & CALIBRATION TESTING LAB



Issued To: Mr. Manoj Kumar Pillai
Vaidya Puthi, Changanassery

Test Report No: 20240000001128
Test Report Date: 20240322

Sample Particulars
Nature of the Sample
Sample Quantity & Packaging
Details Received at Lab
Test Standard On
Test Completed On
Method of Sampling
Date of Sampling
Monitoring Conducted By
Sample Description

Water Sample
1) 1 Lit. Distilled Water (Dist)
2) 1 Lit. Distilled Water (Dist)
3) 1 Lit. Distilled Water (Dist)
4) 1 Lit. Distilled Water (Dist)
5) 1 Lit. Distilled Water (Dist)
6) 1 Lit. Distilled Water (Dist)
7) 1 Lit. Distilled Water (Dist)
8) 1 Lit. Distilled Water (Dist)
9) 1 Lit. Distilled Water (Dist)
10) 1 Lit. Distilled Water (Dist)

Analysis Report

Sl. No.	Parameters	Test Results		Remark
		SI Unit	SI Unit	
1	Temperature (24 cm depth)			APHA 2100
	Temp	24	27	
	Density	1.0	1.0	
2	Temperature (24 cm depth)			APHA 2100
	Temp	28	28	
	Density	1.0	1.0	
3	BOD	Acetic Acid, Ferrous Sulphate, Sodium Carbonate	Phosphate Buffer, Bromine solution	APHA 5100
		Phenylmercuric Sulphate	Hydrogen Peroxide, Zinc Solution	

Manoj Kumar Pillai
(Authorized Signatory)
(NITYA LABS)

NITYA LABORATORIES
(NITYA LABS)

BUILDING & ROAD, MATERIAL, SOIL, ENVIRONMENTAL & CALIBRATION TESTING LAB

Issued To: **M/s Kaveriagar Post Trust**
 Village: **Post, Charnok, India**

Test Report No: **202201010101**
 Test Report Code: **20220101**

Sample Particulars

Name of the Sample:
 Sample Quantity & Packaging:
 Sample Received at Lab:
 Test Started On:
 Test Completed On:
 Method of Sampling:
 Date of Sampling:
 Laboratory Conducted By:
 Sample Description:

Matrix Water

10 Ltrs. Separated Per Bottle (Each)

10200003

10200003

20200003

20200003

10200003

Mr. Dhanraj

M001: Clear Mouth-Fast Flow Water (Surface)

M010: Clear Mouth-Fast Flow Water (Bottom 1.5m)

Analysis Report

Sl. No.	Parameters	Unit	Test Results		Protocol	IS: 4550:19
			Obs. Val.	Req. Val.		
1	pH	-	7.50	7.50	IS: 4550:19-19	6.5-8.5
2	Temperature	°C	26	26.7	IS: 4550:19-19	-
3	Dissolved Oxygen	mg/L	24.00	20.00	IS: 4550:19-19	-
4	Turbidity	NTU	11	11	IS: 4550:19-19	-
5	Total Dissolved Solids	mg/L	10100	10100	IS: 4550:19-19	-
6	Sulphate as SO ₄	mg/L	10100	10100	IS: 4550:19-19	-
7	Chloride as Cl ⁻	mg/L	4.41	4.00	IS: 4550:19-19	-
8	Total Alkalinity	mg/L	40	40	IS: 4550:19-19	-
9	Total Suspended Solids	mg/L	8	17	IS: 4550:19-19	5-15
10	Dissolved Copper as Cu	mg/L	0.8	0.8	IS: 4550:19-19	1.0
11	Dissolved Copper Element	mg/L	12	10	IS: 4550:19-19	1.0
12	Dissolved Copper Element	mg/L	0.2	0.2	IS: 4550:19-19	-
13	Copper as Cu	mg/L	0.12	0.10	IS: 4550:19-19	-
14	Iron as Fe	mg/L	0.00	0.00	IS: 4550:19-19	-
15	Iron as Fe	mg/L	0.00	0.10	IS: 4550:19-19	-
16	Manganese as Mn	mg/L (0.05)	NO DATA	NO DATA	IS: 4550:19-19	-
17	Arsenic as As	mg/L (0.01)	NO DATA	NO DATA	IS: 4550:19-19	-
18	Lead as Pb	mg/L (0.01)	NO DATA	NO DATA	IS: 4550:19-19	-
19	Cadmium as Cd	mg/L	NO	NO	IS: 4550:19-19	-
20	Fluoride as F ⁻	mg/L (0.01)	NO DATA	NO DATA	IS: 4550:19-19	-
21	Chloride as Cl ⁻	mg/L	1.00	1	IS: 4550:19-19	-
22	Fluoride as F ⁻	mg/L	0.41	0.50	IS: 4550:19-19	-
23	Sulphate	mg/L	10.1	10.0	IS: 4550:19-19	-
24	Sulphate	mg/L	4.41	4.00	IS: 4550:19-19	-
25	Total Nitrogen as N	mg/L (0.01)	0.00	0.15	IS: 4550:19-19	-
26	Nitrogen Phosphate	mg/L	0.00	0.00	IS: 4550:19-19	-
27	Total Phosphate as P	mg/L	0.00	0.00	IS: 4550:19-19	-
28	Water Quality	mg/L (0.01)	17	20	IS: 4550:19-19	-

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Issued To: **Mrs. Namrata Paul Triast**
Vastu Post, Chennai, India

Test Report No.: **200007/2019/101**
Test Report Date: **2019/05/01**

Sample Particulars

Nature of the Sample
Sample Quantity & Packaging
Sample Received at Lab
Year Analyzed On
Year Collected On
Method of Sampling
Type of Sampling
Monitoring Conducted By
Sample Description

Matrix Water

10 Litre, Sterilized Poly Bottle (Each)
H0000001
H0000002
2019/0003
001500-2
1/2019/0003
N/ Sample
MMS, Outer South-East Road Near River (Surface)
MMS, Inner South-East Road Near (Under 1.5 m)

Sample Report

Sl. No.	Parameters	Test Results		Protocol
		SW 10	SW 15	
1	Hydrocarbon* (44 ion mode)			ISPM 2011/04
	Benzene	24	48	
	Toluene	24	24	
	Others	Non-detectable, Benzene, Toluene, Xylene, Styrene, Ethylbenzene	Non-detectable, Benzene, Toluene, Xylene, Styrene, Ethylbenzene	
2	Organic* (201 ion mode)			ISPM 2011/04
	Benzene	1004	1001	
	Toluene	18	22	
	Others	1,1,1-trichloroethane, Methylene chloride, p-xylene	Trichloroethylene, Tricloroethylene, p-xylene, Toluene, Ethylbenzene	
3	Metals*			ISPM 2011/04
	Copper	Arsenic, cadmium, Copper, Lead, Nickel	Polychlorinated biphenyls	


NITYA DABBURI
NITYA LABORATORIES


RAVINDER MITTAL
NITYA LABORATORIES



Issued To: **Ms. Anandhika Parth Prasad**
 Value Point Chemicals

Test Report No.: **20230100141-100**
 Test Report Date: **03/01/2023**

Sample Particulars

Name of the Sample
 Sample Quantity & Packaging
 Sample Received at Lab
 Test Standard
 Test Completed On
 Method of Sampling
 Date of Sampling
 Monitoring Conducted By
 Sample Description

Material Name

1.2 Liter, Overhead Tank Water (Distt)
 10000002
 10000003
 10000004
 10000005
 10000006
 10000007
 10000008
 10000009
 10000010
 10000011
 10000012
 10000013
 10000014
 10000015
 10000016
 10000017
 10000018
 10000019
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 10000099
 10000100

Analysis Result

Sl. No.	Particulars	Test Results		Remark
		04/11	05/11	
1	Hydrochloric Acid (100 ml each)			APHA 20° Pl
	Sample	0.4	0.0	
	Blank	0.0	0.0	
2	Ammonium Chloride (100 ml each)			APHA 20° Pl
	Sample	0.00	0.00	
	Blank	0.0	0.0	
3	Water	Highly turbid, Yellowish color, Chlorine residue	Highly turbid, Yellowish color, Chlorine residue	APHA 20° Pl

(Signature)
 AUTHORIZED SIGNATURE
 JAYSHAM BANSODE

(Signature)
 AUTHORIZED SIGNATURE
 JAYSHAM BANSODE

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Test Reports of Marine Sediment



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Issued To: **M/s. Nityaagar Fort Trust**
Address: **White Willow, Gurgaon, India**

Test Report No: **202207010119**
Test Report Date: **22/07/2022**

Sample Particulars

- ✓ Nature of the Sample
- ✓ Sample Quantity & Packaging
- ✓ Sample Received at Lab
- ✓ Test Standard
- ✓ Test Environment
- ✓ Method of Sampling
- ✓ Date of Sampling
- ✓ Monitoring Conducted By
- ✓ Sample Description

Matrix Substrate Details

- ✓ 1.0 kg, Polyethylene (PE)
- ✓ 1000/2000
- ✓ 1000/2000
- ✓ 2200/2000
- ✓ BOPIS/D.O
- ✓ 1000/2000
- ✓ M: 20/01/20
- ✓ 01: New Project Job
- ✓ 02: New Machine Liquid Terminal (MLT)
- ✓ 03: New General Cargo Centre
- ✓ 04: Clean Matrix

Analysis Report

Sl. No.	Parameter	Unit	Test Results			
			SI	SI	SI	SI
1	Polychlorinated Biphenyls	mg/kg	0.08	0.07	0.08	0.04
2	Organic Carbon	%	20.50	19.9	19.4	19.8
3	Organic Nitrogen	%	10.20	10.4	10.30	10.10
4	Copper as Cu	mg/kg	4.50	6.00	3.90	6.0
5	Lead as Pb	mg/kg	1.00	2.10	2.00	1.80
6	Cadmium as Cd	mg/kg	60	60	60	60
7	Mercury	mg/kg	60	60	60	60
8	Arsenic	mg/kg	60	60	60	60

Notes: _____



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Kamarajar Port Limited

Vallur Post, Chennai-600 120, Tamil Nadu, India

Reports on Environmental Monitoring of Kamarajar Port Limited



Study Period: October 2023

Prepared By



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Test Reports of Ambient Air Quality Monitoring



(AUTHORISED SIGNATURE)

(RAVINDER NITYAL)

BUILDING & ROAD, MATERIAL, SOIL, ENVIRONMENTAL & CALIBRATION TESTING LAB

12/0001

Issued To: **Mr. Kamender Park Trust**
Vafar Park, Chennai, India

Test Report Date: 05/11/2023

Sample Particulars

Name of the Sample:

Purpose of Monitoring:

Sampling Location:

Method of Sampling:

Monitoring Conducted by:

Sampling Duration (If any):

Ambient Air Quality Monitoring:

To Check the Pollution Level

Quart No./Use

② 0102 (Part 14)

Mr. Kamender

04 No.

Analysis Report

Sr. No.	Date of Sampling	SLR No.	Concentration
			Microgms (µg)
1	05/10/2023	00010000111	ND
2	06/10/2023	00010000111	ND
3	08/10/2023	00010000111	ND
4	12/10/2023	00010000111	ND
5	16/10/2023	00010000111	ND
6	20/10/2023	00010000111	ND
7	24/10/2023	00010000111	ND
8	27/10/2023	00010000111	ND
Test Method			FD Quartz Wetness Analyser

Notes:

1. Results are valid only if the sample is properly preserved and analyzed within the specified time period. 2. Results are valid only if the sample is properly preserved and analyzed within the specified time period. 3. Results are valid only if the sample is properly preserved and analyzed within the specified time period. 4. Results are valid only if the sample is properly preserved and analyzed within the specified time period.



(**ANVINDER MITTAL**)

NOTE: The laboratory is not responsible for the accuracy of the results if the sample is not properly preserved and analyzed within the specified time period. The results are valid only if the sample is properly preserved and analyzed within the specified time period. The results are valid only if the sample is properly preserved and analyzed within the specified time period. The results are valid only if the sample is properly preserved and analyzed within the specified time period.

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BUILDING & ROAD, MATERIAL, SOIL, ENVIRONMENTAL & CALIBRATION TESTING LAB

Issued To: **M/s Hindalco Port Trust**
Vidya Port, Chennai, India

Test Report No: **00110023**



Sample Particulars

Nature of the Sample

Purpose of Monitoring

Sampling Location

Method of Sampling

Monitoring Conducted By

Sampling Duration (Mts.)

Appoint to Quality Monitoring

To Check the Pollution Level

Admin Building

IS 3102 (Part-1a)

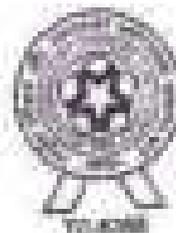
M. Sharma

28 Mts.

Analysis Report

Sl. No.	Date of Sampling	ICR No	Concentration				
			Particulate Matter (PM ₁₀) (µg/m ³)	Particulate Matter (PM _{2.5}) (µg/m ³)	Sulphur Dioxide (as SO ₂) (µg/m ³)	Nitrogen Dioxide (as NO ₂) (µg/m ³)	Carbon Monoxide (as CO) (mg/m ³)
1	08/10/2023	TC08023000004700	28.20	48.20	12.00	23.40	ND
2	09/10/2023	TC08023000004800	30.10	52.20	14.00	27.20	ND
3	09/10/2023	TC08023000004900	23.00	41.20	10.00	20.00	ND
4	12/10/2023	TC08023000005100	25.40	43.20	12.20	18.20	ND
5	16/10/2023	TC08023000005300	20.00	38.20	10.00	18.20	ND
6	20/10/2023	TC08023000005400	27.20	45.20	12.00	20.00	ND
7	24/10/2023	TC08023000005500	27.40	46.20	11.00	20.20	ND
8	27/10/2023	TC08023000005600	20.00	38.20	11.00	21.00	ND
MAQOM Standards			80	100	80	80	1
Test Method			IS-3102 Appendix L, Part 02 (PCB Substation)	IS-3102 (P-03)	IS-3102 (P-05)	IS-3102 (P-06)	IS-3102 (P-10)

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BUILDING & ROAD, MATERIAL, SOIL, ENVIRONMENTAL & CALIBRATION TESTING LAB

Issued To: **Mr. Kanchanraj Puri Trust**
Vallur Post, Chennai, India

Test Report Date: **02/11/2023**

Sample Particulars

Nature of the Sample:

Purpose of Monitoring:

Sampling Location:

Method of Sampling:

Monitoring Conducted By:

Sampling Duration (hrs.):

1. **Ambient Air Quality Monitoring**

2. **To Check the Pollution Load**

3. **Aerosol Sampling**

4. **IS-3142 (Part 14)**

5. **No. of Sample:**

6. **28 Nos.**

Analysis Report

Sr. No.	Date of Sampling	ILR No.	Concentration
			Methane (%)
1	02/11/2023	202310200112	ND
2	02/11/2023	202310200212	ND
3	02/11/2023	202310200312	ND
4	12/11/2023	202310200412	ND
5	16/11/2023	202310200512	ND
6	20/11/2023	202310200612	ND
7	24/11/2023	202310200712	ND
8	27/11/2023	202310200812	ND
Test Method			ND Based Methane Analyser

Notes:

1. ND (Not Detected) means that the concentration of the substance being tested is below the detection limit.
2. Detection limit is the lowest amount of a substance that can be reliably measured under the test conditions.
3. Results reported under these circumstances should not be used for compliance or enforcement purposes.



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BUILDING & ROAD, MATERIAL, SOIL, ENVIRONMENTAL & CALIBRATION TESTING LAB

Issued To: **Mrs. Kawajal Park Trust**
(Gaur Park, Ghaziabad, India)

Test Report Date: 08/11/2023

Sample Particulars

Nature of the Sample:

Purpose of Monitoring:

Sampling Location:

Method of Sampling:

Monitoring Conducted By:

Sampling Duration (hrs.):

Ambient Air Quality Monitoring

To Check the Pollution Load

Signal Station

IS 3102 (Part 14)

MR. SYDNEY

24 Hrs.

Analysis Report

Sl. No.	Date of Sampling	LQR No.	Concentration
			Microg/m ³
1	08/11/2023	202100000118	50
2	08/11/2023	202100000118	50
3	08/11/2023	202100000118	50
4	10/11/2023	202100000118	50
5	10/11/2023	202100000118	50
6	09/11/2023	202100000118	50
7	20/11/2023	202100000118	50
8	27/11/2023	202100000118	50
Test Method			FD Based Microg Analyser

Notes:

1) All the Ambient Air Quality Stations / Signals are under the purview of the Government of India. The data generated by these stations is used for the purpose of monitoring the air quality in the country. The data generated by these stations is used for the purpose of monitoring the air quality in the country. The data generated by these stations is used for the purpose of monitoring the air quality in the country.



(AFFILIATED TO THE SOCIETY)
(PRADEEP MITAL)

1) All the data generated by these stations is used for the purpose of monitoring the air quality in the country. The data generated by these stations is used for the purpose of monitoring the air quality in the country. The data generated by these stations is used for the purpose of monitoring the air quality in the country.

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BUILDING & ROAD, MATERIAL, SOIL, ENVIRONMENTAL & CALIBRATION TESTING LAB

Issued To: **M/s Kumbhgar Post Trust**
Vastu Plan: **Chemical Test**

Test Report Date: **03/11/2023**



Sample Particulars

Name of the Sample:

Purpose of Monitoring:

Sampling Location:

Method of Sampling:

Monitoring Conducted By:

Sampling Duration (hrs):

1. Ambient Air Quality Monitoring

2. To Check the Pollution Level

3. Project Job

4. IS 3102 (Part 14)

5. 08. Synthetic

6. 24 hrs.

Analysis Report

Sl. No.	Date of Sampling	SLM No.	Concentration				
			Particulate Matter (PM ₁₀) µg/m ³	Particulate Matter (PM _{2.5}) µg/m ³	Sulphur Dioxide (as SO ₂) µg/m ³	Nitrogen Dioxide (as NO ₂) µg/m ³	Carbon Monoxide (as CO) mg/m ³
1	03/11/2023	TC00000300000004181F	18.30	21.40	18.30	20.30	ND
2	03/11/2023	TC00000300000004181F	20.30	20.30	21.30	18.30	ND
3	03/11/2023	TC00000300000004181F	18.30	20.40	18.30	18.30	ND
4	12/11/2023	TC00000300000004181F	18.30	44.20	18.30	18.30	ND
5	16/11/2023	TC00000300000004181F	20.30	46.20	20.30	20.40	ND
6	20/11/2023	TC00000300000004181F	20.30	44.20	20.30	20.40	ND
7	24/11/2023	TC00000300000004181F	20.40	41.30	20.30	20.40	ND
8	27/11/2023	TC00000300000004181F	20.30	20.30	18.30	20.30	ND
Maximum Observed			44	100	40	30	2
Test Method			IS 3102 Appendix I Part 10 CPCal Optical	IS 3102 (P-2)	IS 3102 (P-3)	IS 3102 (P-4)	IS 3102 (P-5)

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BUILDING & ROAD, MATERIAL, SOIL, ENVIRONMENTAL & CALIBRATION TESTING LAB

Client To: **M/s Kamranpur Port Trust**
 (Water Poll. Control, India)

Test Report Date: **03/11/2023**

Sample Particulars:

Source of the Sample:

Process of Monitoring:

Sampling Location:

Method of Sampling:

Monitoring Conducted By:

Sampling Duration (hrs.):

1. Ambient Air Quality Monitoring

2. To Check the Pollution Load

3. Car Parking

4. IS 5182 (Part 14)

5. 60' Diameter

6. 24 Hrs

Analysis Report:

Sl. No.	Date of Sampling	MLM No.	Concentration
			Method (%)
1	03/10/2023	202310000116	ND
2	06/10/2023	202310000116	ND
3	09/10/2023	202310000116	ND
4	12/10/2023	202310000116	ND
5	15/10/2023	202310000116	ND
6	18/10/2023	202310000116	ND
7	24/10/2023	202310000116	ND
8	27/10/2023	202310000116	ND
Test Method			FD Based Malvern Analyser

Notes:

1. All test results are subject to the accuracy of the test method used. The results are for information only and should not be used for legal or regulatory purposes. The results are for information only and should not be used for legal or regulatory purposes. The results are for information only and should not be used for legal or regulatory purposes.



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BUILDING & ROAD, MATERIAL, SOIL, ENVIRONMENTAL & CALIBRATION TESTING LAB

Issued To: **Shri Ramrajgarh Farm Trust**
Upper Road, Chharsia, INDIA

Test Report Date: **02/11/2022**

Sample Particulars

Nature of the Sample

Purpose of Monitoring

Sampling Location

Method of Sampling

Monitoring Conducted By

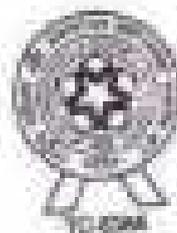
Sampling Duration (hrs.)

- 1. Ambient Air Quality Monitoring
- 2. To Check the Pollution Level
- 3. Fire Station
- 4. IS 102 (Part 14)
- 5. Mr. Sindher
- 6. 24 hrs.

Analysis Report

Sl. No.	Date of Sampling	SLR No.	Concentration				
			Particulate Matter (PM ₁₀) µg/m ³	Particulate Matter (PM _{2.5}) µg/m ³	Sulphur Dioxide (SO ₂) µg/m ³	Nitrogen Dioxide (NO ₂) µg/m ³	Carbon Monoxide (CO) mg/m ³
1	02/11/2022	TC00000000000004190F	23.62	23.62	18.18	21.88	40
2	08/11/2022	TC00000000000004202F	21.91	20.40	18.30	21.30	40
3	09/11/2022	TC00000000000004191F	25.40	21.40	18.40	22.30	40
4	12/11/2022	TC00000000000004197F	26.70	45.70	20.10	28.80	40
5	15/11/2022	TC00000000000004198F	21.30	40.00	14.00	20.40	40
6	20/11/2022	TC00000000000004199F	28.70	38.70	17.00	20.70	40
7	24/11/2022	TC00000000000004200F	25.40	42.00	18.00	21.40	40
8	27/11/2022	TC00000000000004201F	20.00	41.20	18.00	22.00	40
NAACM Standard			60	100	80	88	1
Test Method			IS 102 Appendix C Part 14 (Part 14) Guidelines	IS 102 (P-2)	IS 102 (P-2)	IS 102 (P-2)	IS 102 (P-10)

NAACM Standard for Ambient Air Quality Monitoring, New Delhi (Revised for 1st time) 2010/2012
IS 102 (Part 14) Guidelines for Ambient Air Quality Monitoring, Appendix C, Part 14 (Part 14) Guidelines
Ambient Air Quality Monitoring for the purpose of IS 102 (Part 14) Guidelines



NOTE: The laboratory is not responsible for the accuracy of the results if the sample is not properly prepared, stored, transported, or analyzed. The laboratory is not responsible for the accuracy of the results if the sample is not properly prepared, stored, transported, or analyzed. The laboratory is not responsible for the accuracy of the results if the sample is not properly prepared, stored, transported, or analyzed. The laboratory is not responsible for the accuracy of the results if the sample is not properly prepared, stored, transported, or analyzed.

BUILDING & ROAD, MATERIAL, SOI, ENVIRONMENTAL & CALIBRATION TESTING LAB



Issued To: **Sh. Kamender Park Trust**
 Your Ref: **Chemical/1001**

Test Report Date: **03/11/2023**

Sample Particulars:

Name of the Sample:

Purpose of Monitoring:

Sampling Location:

Method of Sampling:

Monitoring Conducted By:

Sampling Duration (hrs.):

Ambient Air Quality Monitoring

To Check the Pollution Load

Free Station

IS 5182 (Part 14)

M. Singhal

24 hrs.

Analyses Report

Sl. No.	Date of Sampling	SLP No.	Concentration
			Metres (%)
1	03/10/2023	202310030111	ND
2	04/10/2023	202310040111	ND
3	04/10/2023	202310040111	ND
4	12/10/2023	202310120111	ND
5	16/10/2023	202310160111	ND
6	20/10/2023	202310200111	ND
7	24/10/2023	202310240111	ND
8	27/10/2023	202310270111	ND
Test Method			FD Based Method Analyser

Note:

1. Sample concentration is subject to accuracy of instrument used. Periodic check of instrument is done. All the instrument used are calibrated with certified reference material.
 2. Concentration is based on the mass of a substance. The sample is weighed in a certified reference material.
 Sample impurities can affect the accuracy of the instrument. OPCS (Over Pressure Control System)



(AUTHORIZED SIGNATURE)

(KAMINDER MITTA)

NOTE: The laboratory is not responsible for the accuracy of the data reported in this report if the sample is not properly preserved or if the sample is not properly labeled. The laboratory is not responsible for the accuracy of the data reported in this report if the sample is not properly preserved or if the sample is not properly labeled. The laboratory is not responsible for the accuracy of the data reported in this report if the sample is not properly preserved or if the sample is not properly labeled.

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Test Reports of Wastewater (STP)



AUTHORIZED LABORATORY

(REGISTERED NITYA)

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Kamarajar Port Limited
Vedar Post, Chennai-600 125, Tamil Nadu, India

Reports on Environmental Monitoring of Kamarajar Port Limited



Study Period: November 2023

Prepared By



NITYA LABORATORIES

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BUILDING & ROAD, MATERIAL, SOIL, ENVIRONMENTAL & CALIBRATION TESTING LAB

Introduction

Karnataka Port Trust is the first corporatized Port in India and the 12th Major Port. It Works on the model of 'Landlord' terminal. KPT's policy is to manage the port in a proactive manner to minimize any impacts from port operations or new developments. Karnataka port handles coal for Tamil Nadu Electric Board, PCL, products and export of automobiles. Data generation on environmental quality constitute the basis for environmental appraisal of the project. Thus, data on environmental quality has to be periodically monitored and also to comply with the TNPCB / KSEEP conditions.

With this background and need Karnataka Port Limited has appointed M/s. Nitya Laboratories to undertake the same. KPL has awarded the work to M/s. Nitya Laboratories vide work order No. KPL/AM/HR/ENV/000003 dated 10.07.2023.

Accordingly, environmental quality data on Ambient Air and Effluent (Sewage) for the month of October 2023 is presented in this report.

2.0 Scope and Methodology

The scope of work, works carried out and methodology adopted for the survey are described below.

2.1 Ambient Air Quality

As a part of study, Ambient Air Quality Parameters were measured during the monitoring days date of PM₁₀, PM_{2.5}, SO₂, NO₂, Methane and CO were monitored.



BUILDING & ROAD, MATERIAL, SOIL, ENVIRONMENTAL & CALIBRATION TESTING LAB

AMBIENT AIR QUALITY MONITORING:

Ambient air quality was monitored at different locations inside the port. The study area covers the periphery of Port and different parts of the port. A Total of 8 Ambient Air Quality Monitoring Stations covering both upwind and downwind were monitored during November 2023.

Table: Detail of Ambient Air Quality Monitoring Locations

Sr. No	Station Code	Sampling Locations
1	AACM-1	Security Man Gate
2	AACM-2	Inside Port Administrative Building
3	AACM-3	Signal Station
4	AACM-4	Finger Jetty
5	AACM-5	At Car Parking Yard
6	AACM-6	At General Cargo Berth
7	AACM-7	At Fire Station
8	AACM-8	Guest House

Ambient Air Quality Monitoring was carried out with a frequency of two samples per week i.e. at 8 Locations. A Total of 32 Samples each of PM₁₀, SPM₁₀, Samples of SO₂, NO₂, Methane and CO each were monitored by using Respirable Dust sampler, Fine Particulate Sampler, Methane & CO Analyser.



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Test Reports of Ambient Air Quality Monitoring



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BUILDING & ROAD, MATERIAL, SOIL, ENVIRONMENTAL & CALIBRATION TESTING LAB

Issued To: Shri Kankaraj Patel Trust
Vidya Park, Ghaziabad

Test Report Date: 04/12/2023

Sample Particulars

Address of the Sample
Purpose of Monitoring
Sampling Location
Method of Sampling
Monitoring Conducted By
Sampling Duration (hrs)

Ambient Air Quality Monitoring
To Check the Pollution Level
Main Gate
IS 3163 (Part-III)
Mr. Sankar
24 hrs

Analysis Report

Sl. No.	Date of Sampling	Project No.	Concentration
			Methane (%)
1	04/12/2023	0023190019	ND
2	04/12/2023	0023190019	ND
3	04/12/2023	0023190019	ND
4	04/12/2023	0023190019	ND
Test Method			FID Based Methane Analyser

Notes:

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NITYA LABORATORIES

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BUILDING & ROAD, MATERIAL, SOIL, ENVIRONMENTAL & CALIBRATION TESTING LAB

Issued To: **M/s. Nandanagar Plast Trust**
Water Plast, Chennai, India

Test Report Date: **08/12/2019**

Sample Particulars

Name of the Sample

Purpose of Monitoring

Sampling Location

Method of Sampling

Monitoring Conducted By

Sampling Duration (hrs.)

- ☐ Ambient Air Quality Monitoring
- ☐ To Check the Pollution Load
- ☐ Green House
- ☐ 24 Hr. (Start to)
- ☐ 24 Hr. (End to)
- ☐ 24 Hr.

Analysis Report

Sl. No.	Date of Sampling	LRI No.	Concentration				
			Particulate Matter (PM10) $\mu\text{g}/\text{m}^3$	Particulate Matter (PM2.5) $\mu\text{g}/\text{m}^3$	Sulphur Dioxide (as SO2) $\mu\text{g}/\text{m}^3$	Nitrogen Dioxide (as NO2) $\mu\text{g}/\text{m}^3$	Ozone Monoxide (as CO) $\mu\text{g}/\text{m}^3$
1	07/12/2019	TC00000000000000000000	24.50	18.40	18.40	18.50	ND
2	08/12/2019	TC00000000000000000000	27.40	47.50	17.50	21.50	ND
3	15/12/2019	TC00000000000000000000	17.50	40.50	14.40	26.50	ND
4	18/12/2019	TC00000000000000000000	21.50	42.50	14.50	21.50	ND
NACM Standards			50	40	50	50	5
Test Method			IS:398 Appendix L Part 2- Gravimetric	IS:398 (P-1)	IS:398 (P-2)	IS:398 (P-4)	IS:398 (P-10)

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BUILDING & ROAD, MATERIAL, SOIL, ENVIRONMENTAL & CALIBRATION TESTING LAB

Issued To: **Mr. Manoj Kumar Patel**
 Water PoC, Chemical India

Test Report Date: **06/02/2018**

Sample Particulars

Name of the Sample:

Purpose of Monitoring:

Sampling Location:

Method of Sampling:

Monitoring Conducted By:

Sampling Duration (m/s):

Ambient Air Quality Monitoring

To Check for Pollution Load

Open Road

IS 3102 (Part 14)

Mr. Director

24 hrs

Analysis Report

Sl. No.	Date of Sampling	Report No.	Concentration
			Microg (µg)
1	07/11/2017	102711000111	40
2	16/11/2017	202711000111	40
3	23/11/2017	302711000111	40
4	30/11/2017	402711000111	40
Test Method			PM 10 Gravimetric Analysis

NOTE: Nitya Laboratories India, Gurgaon, Haryana (India) is ISO 9001:2015 certified organization.
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 Management system certificate number is 102711000111 issued by NITYA Quality Management System.



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BUILDING & ROAD, MATERIAL, SOIL, ENVIRONMENTAL & CALIBRATION TESTING LAB

Issued To: Mr. Rameshwar Prasad
Vastha Plast, Okhla, India

Issue Report Date: 28/03/2023

Sample Particulars:

Feature of the Sample:

Purpose of Monitoring:

Sampling Location:

Method of Sampling:

Monitoring Conducted By:

(Sampling Duration: 03hrs.)

Ambient Air Quality Monitoring:

To Check the Pollution Level

From Building

IS:3106 (Part 14)

01: 00:00

24 Hrs.

Analysis Report

Sl. No.	Date of Sampling	Report No.	Concentration
			Microg/m ³
1	07/11/2022	2022/1060110	60
2	10/11/2022	2022/1060110	60
3	17/11/2022	2022/1109110	60
4	28/11/2022	2022/1200110	60
Test Method			PM10 Rapid Method Analyser

Notes:

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BUILDING & ROAD, MATERIAL, SOIL, ENVIRONMENTAL & CALIBRATION TESTING LAB

Issued To: **M/s. Narmada Plast Trust**
 Nitya Plast, Chennai, India

Test Report Date: **08/08/2022**

Sample Particulars

Name of the Sample:

Purpose of Monitoring:

Sampling Location:

Method of Sampling:

Monitoring Conducted On:

Sampling Duration (hrs.):

Ambient Air Quality Monitoring

To Check the Pollution Level

Signal Station

IS 15032 (Part 14)

At: **Chennai**

24 hrs

Ambient Report

Sl. No.	Date of Sampling	Report No.	Concentration
			Method (%)
1	08/08/2022	002211000175	ND
2	08/08/2022	002211000175	ND
3	08/08/2022	002211000175	ND
4	08/08/2022	002211000175	ND
Test Method			FD Based Monitor Analyser

Note:

These results are valid only for the purpose for which they are intended. They do not constitute a warranty, expressed or implied, for any other use. The user of these results shall be responsible for the proper interpretation and use of the results. The user shall also be responsible for the proper interpretation and use of the results.



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Report To: **Mr. Kamaljeet Paul Triast**
 Water Flow Chemical Data

Test Report No: **NYL/00029**

Sample Particulars

- Name of the Service
- Purpose of Monitoring
- Sampling Location
- Method of Sampling
- Monitoring Conducted By
- Sampling Duration (hrs.)

Ambient Air Quality Monitoring

- To Check the Pollution Level
- General Gauge Scale
- IS 5182 (Part 1a)
- Mr. Kamaljeet Paul Triast
- 24 hrs.

Analysis Report

Sr. No.	Date of Sampling	Report No.	Concentration
			Method (µg)
1	07/11/2023	0029/000215	ND
2	07/11/2023	0029/000215	ND
3	07/11/2023	0029/000215	ND
4	07/11/2023	0029/000215	ND
Test Method			PM 10 used Methane Analyser

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BUILDING & ROAD, MATERIAL, SOIL, ENVIRONMENTAL & CALIBRATION TESTING LAB

Request To: **M/s. Karamveer Park Trust**
 Yash Park, Chennai, India

Test Request Date: **16/11/2022**

Sample Particulars
 Nature of the Sample
 Purpose of Monitoring
 Sampling Location
 Method of Sampling
 Monitoring Conducted By
 Sampling Duration (If any)

Ambient Air Quality Monitoring
 To Check the Pollution Load
 Car Parking
 (S. 110) (Part 14)
 00 - Street
 24 hrs

Analysis Report

Sl. No.	Date of Sampling	Point No.	Concentration
			Metane (µg)
1	15/11/2022	0001/00016	ND
2	15/11/2022	0002/00016	ND
3	15/11/2022	0003/00016	ND
4	20/11/2022	0001/00016	ND
Test Method			ISO 15687 Method Analysis

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CORPORATE OFFICE & CENTRAL LABORATORIES -

BUILDING & ROAD, MATERIAL, SOIL, ENVIRONMENTAL & CALIBRATION TESTING LAB

Issued To: **M/s. Kumbharji Part Trust**
Village Part, Chahal, 151001

Test Report No: **04/10/2023**

Sample Particulars
Nature of the Sample
Purpose of Monitoring
Sampling Location
Method of Sampling
Monitoring Conducted by
Sampling Division (If any)

Ambient Air Quality Monitoring
To Check the Pollution Load
The Station
IS 3182 (Part 14)
01 - Ambient
24 hrs.

Analysis Report

Sl. No.	Date of Sampling	Location	Concentration				
			Particulate Matter (PM ₁₀) (µg/m ³)	Particulate Matter (PM _{2.5}) (µg/m ³)	Sulphur Dioxide (as SO ₂) (µg/m ³)	Nitrogen Dioxide (as NO ₂) (µg/m ³)	Ozone (as O ₃) (µg/m ³)
1	04/10/2023	XXXXXXXXXXXXXXX	28.50	15.40	22.50	14.70	40
2	04/10/2023	XXXXXXXXXXXXXXX	28.40	20.00	22.80	16.10	40
3	11/10/2023	XXXXXXXXXXXXXXX	17.50	40.00	14.50	12.00	40
4	20/10/2023	XXXXXXXXXXXXXXX	24.00	44.00	16.00	14.10	40
NAAQM Standard			60	60	60	60	2
Test Method			IS 3182 Appendix 1 Part 10 (PM ₁₀) (IS 3182)	IS 3182 (P-25)	IS 3182 (P-21)	IS 3182 (P-4)	IS 3182 (P-16)

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BUILDING & ROAD, MATERIAL, SOIL, ENVIRONMENTAL & CALIBRATION TESTING LAB

Address To: **M/s Ramlingar Feet Trust**
 VAFS Plot, Chennai, India

Test Report No: **NR/100002**

Sample Particulars

1. Name of the Sample:

2. Purpose of Monitoring:

3. Sampling Location:

4. Method of Sampling:

5. Monitoring Conducted by:

6. Sampling Duration (hrs.):

1. Ambient Air Quality Monitoring

2. To Check the Pollution Level

3. Five Days

4. @ 08:00 (hrs) to 14:00

5. Mr. Sindhu

6. 24 Hrs.

Analysis Report

Sr. No.	Date of Sampling	Expn. No.	Concentration
			Method (%)
1	08/11/2023	080811000110	ND
2	08/11/2023	080811000210	ND
3	08/11/2023	080811000310	ND
4	08/11/2023	080811000410	ND
Test Method			PM 10 Standard Method - Analytical

NOTE: Please refer to Safety Data Sheet (SDS) of the chemicals used in the test.
 The responsibility of the sample collection and analysis is solely on the client. Nitya Laboratories is not responsible for the results of the test if the sample is not collected and analyzed properly.
 Sample Analysis Report Number: NR/100002/2023



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Test Reports of Wastewater (STP)



NOTE: The information provided in this report is based on the test results obtained from the samples submitted to the laboratory. The laboratory is not responsible for the accuracy of the data provided by the client. The results are valid only for the purpose and conditions specified in the report. The laboratory is not responsible for the accuracy of the data provided by the client. The results are valid only for the purpose and conditions specified in the report.

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Kamarajar Port Limited
Vellore Port, Chennai-600 121, Tamil Nadu, India

Report on Environmental Monitoring of Kamarajar Port Limited



Study Period: December 2023

Prepared By:



NITYA LABORATORIES

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BUILDING & ROAD, MATERIAL, SOIL, ENVIRONMENTAL & CALIBRATION TESTING LAB

Introduction

Kamrang Port Trust is the First Corporational Port in India and the 12th Major Port. It Works on the model of "Landlord" system. NPCIL aims to manage the port in a pro-active manner to minimize any impacts from port operations or new developments. Kamrang port handles coal for Export, Heavy Crude Oil, Gas, petroleum and export of automobiles. Data generation on environmental quality constitute the basis for environmental appraisal of the project. Thus, data on environmental quality has to be periodically monitored and also to comply with the TSPCB / MOEF standards.

With this background and need Kamrang Port Limited has appointed M/s. Nitya Laboratories to undertake the same. NPCIL has awarded the work to M/s. Nitya Laboratories vide work order No. NPL/REG/REG/ENV/001/0003 dated 11.02.2020.

Accordingly, environmental quality (air and effluent (Storage) for the month of October 2021 is presented in this report.

2.0 Scope and Methodology

The scope of work, work carried out and methodology adopted for the survey are described below:

2.1 Ambient Air Quality

As a part of study, Ambient Air Quality Parameters were measured during the monitoring days 2000 of PM₁₀, PM_{2.5}, SO₂, NO₂, Methane and CO were monitored.



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AMBIENT AIR QUALITY MONITORING:

Ambient air quality was monitored at different locations inside the port. The study area covers the periphery of Port and different parts of the port. A Total of 8 Ambient Air Quality Monitoring Stations covering both upwind and downwind were monitored during November 2023.

Table: Detail of Ambient Air Quality Monitoring Locations

Sr. No	Station Code	Sampling Location
1	AADM-1	Security Main Gate
2	AADM-2	Inside Port Administrative Building
3	AADM-3	Signal Station
4	AADM-4	Finger Jetty
5	AADM-5	At Car Parking Yard
6	AADM-6	At General Cargo Ramp
7	AADM-7	At Pier Station
8	AADM-8	Crane House

Ambient Air Quality Monitoring was carried out with a frequency of two samples per week i.e. at 8 Locations. A Total of 32 Samples each of PM₁₀ & PM_{2.5}, Sample of SO₂, NO₂, Methane and CO each were monitored by using Respconce dual sampler, Fine Particulate Sampler, Methane & CO Analyser.



Test Reports of Ambient Air Quality Monitoring



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BUILDING & ROAD, MATERIAL, SOIL, ENVIRONMENTAL & CALIBRATION TESTING LAB

Issued To: **M/s Kamangar Plast Trust**
Vedic Plast, Chennai, India

Test Report Date: **18/07/2024**

Sample Particulars

Nature of the Sample:

Purpose of Monitoring:

Sampling Location:

Method of Sampling:

Monitoring Conducted by:

Sampling Duration (Hrs.):

Ambient Air Quality Monitoring

To Check for Pollution Load

Start Date:

18/07/2024

At: **Chennai**

24 Hrs

Analysis Report

Sr. No.	Date of Sampling	Test Report No.	Concentration
			Microg (µg)
1	18/07/2024	2024000018	ND
2	19/07/2024	2024000019	ND
3	19/07/2024	2024000019	ND
4	18/07/2024	2024000018	ND
5	20/07/2024	2024000020	ND
6	20/07/2024	2024000020	ND
7	20/07/2024	2024000020	ND
Test Method			ISO Based Methods Analyst

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BUILDING & ROAD, MATERIAL, SOIL, ENVIRONMENTAL & CALIBRATION TESTING LAB

Report To: **Mr. Kanchanpal Singh**
Village Panch. Office, 1122

Test Report No.: **1122/2024**

Sample Particulars
Name of the Sample
Purpose of Monitoring
Sampling Location
Method of Sampling
Monitoring Conducted by
Sampling Location (Pin)

Ambient Air Quality Monitoring
To Check the Pollution Level
Over Time
At 11:00 AM on 1st
Mr. Kanchanpal
24th May

Analysis Report

Sl. No.	Date of Sampling	Test Report No.	Concentration
			Microg/m ³
1	07/05/2024	1122/0500111	ND
2	14/05/2024	1122/0500111	ND
3	18/05/2024	1122/0500111	ND
4	18/05/2024	1122/0500111	ND
5	20/05/2024	1122/0500111	ND
6	26/05/2024	1122/0500111	ND
7	26/05/2024	1122/0500111	ND
Test Method			FD Direct Method Analyzer

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Issued To: **M/s. Kanchanagar Post Trust**
100A, POC, Chander, India

Test Report Date: 18/05/2024

Sample Particulars

Name of the Sample:
Purpose of Monitoring:
Sampling Location:
Method of Sampling:
Monitoring Commenced By:
Sampling Duration (hrs):

Ambient Air Quality Monitoring

To Check the Pollution Level
Address: Gurgaon
ID: 2024/0001/24
Mr. Shreshth
24 hrs.

Analysis Report

Sl. No.	Date of Sampling	Test Report No.	Concentration
			Microgram (µg)
1	07/05/2024	2024/0001/12	ND
2	14/05/2024	2024/0001/12	ND
3	15/05/2024	2024/0001/12	ND
4	16/05/2024	2024/0001/2012	ND
5	20/05/2024	2024/0001/12	ND
6	20/05/2024	2024/0001/12	ND
7	18/05/2024	2024/0001/12	ND
Test Method			NI 0001 Method adopted

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Issued To: **M/s. Kameshwar Puri Trust**
Vidya Puri, Chennai, India

Test Report Date: 16/11/2024

Sample Particulars

Address of the Sample

Purpose of Monitoring

Sampling Location

Method of Sampling

Monitoring Conducted By

Sampling Duration (hrs)

Ambient Air Quality Monitoring

To Check the Pollution Level

Signal Station

02.000 (Part 14)

05, Street

24 Hrs

Analysis Report

Sr. No.	Date of Sampling	Test Report No.	Concentration
			Method No.
1	07/12/2023	00170000113	ND
2	10/12/2023	00170000213	ND
3	10/12/2023	00170000313	ND
4	10/12/2023	00170000413	ND
5	22/12/2023	00170000513	ND
6	26/12/2023	00170000613	ND
7	28/12/2023	00170000713	ND
Test Method			NIJ Based Method Analyzer

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(NAME: NITYA)

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Issued To: M/s. Maheshwar Park Trust
Vafar Park, Gurgaon, INDIA

Test Report No.: 202100007

Sample Particulars

Name of the Station
Purpose of Monitoring
Sampling Location
Method of Sampling
Monitoring Conducted by
Sampling Operator (Name)

Ambient Air Quality Monitoring
To Check the Pollution Level
Frequency
03 PM (Post 1st)
No. Analyser
24 No.

Analysis Report

Sl. No.	Date of Sampling	Test Report No.	Concentration
			Microg (µg)
1	01/02/2021	20210000714	ND
2	01/02/2021	20210000714	ND
3	01/02/2021	20210000714	ND
4	14/02/2021	20210000714	ND
5	23/02/2021	20210000714	ND
6	20/02/2021	20210000714	ND
7	08/02/2021	20210000714	ND
Test Method			ND Based Monitor Analyser

NOTE: Concentration of each parameter shown in this report is based on 100% efficiency of the instrument used. The actual concentration of a pollutant may be higher than the reported value, if the instrument used is not 100% efficient. The instrument used is calibrated for the use of testing. This report is for information only.



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Issued To: **Mrs. Ramandeep Kaur (Trust)**
Water Test, Chennai, 1999

Test Report Date: 18/01/2024

Sample Particulars

Nature of the Sample

Frequency of Monitoring

Sampling Location

Method of Sampling

Monitoring Conducted by

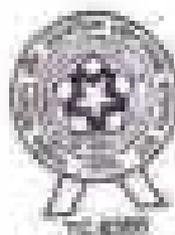
Sampling Duration (Year)

- Ambient Air Quality Monitoring
- To Check for Polluted Load
- Car Emission
- In-Plant Operation
- Air Sampling
- etc. etc.

Analysis Report

Sl. No.	Date of Sampling	O.C.N. No.	Concentration				
			Particulate Matter (PM ₁₀) (µg/m ³)	Particulate Matter (PM _{2.5}) (µg/m ³)	Sulphur Dioxide (as SO ₂) (µg/m ³)	Nitrogen Dioxide (as NO ₂) (µg/m ³)	Ozone Monoxide (as O ₃) (µg/m ³)
1	14/01/2024	Y00000000000000000000	24.00	21.00	18.00	20.00	40
2	14/01/2024	Y00000000000000000000	26.40	20.40	20.00	19.00	40
3	14/01/2024	Y00000000000000000000	19.20	20.40	22.00	21.00	40
4	14/01/2024	Y00000000000000000000	21.40	20.00	18.00	19.40	40
5	14/01/2024	Y00000000000000000000	21.40	24.00	18.40	19.00	40
6	14/01/2024	Y00000000000000000000	20.70	20.00	24.00	20.70	40
7	14/01/2024	Y00000000000000000000	22.40	24.20	20.00	22.70	40
NACM Standard			50	100	50	50	10
Test Method			IS: 5182 Appendix L Part 12 (PCA) Subpart 1	IS: 5182 (P-01)	IS: 5182 (P-0)	IS: 5182 (P-0)	IS: 5182 (P-10)

Report prepared in accordance with the Indian Standards mentioned above. Nitya Laboratories is not responsible for the accuracy of the data reported in this report. The client is responsible for the accuracy of the data reported in this report. The client is responsible for the accuracy of the data reported in this report.



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Report To: **M/s Kamanga Post Trust**
Water Test, Chamba, India

Test Report Date: 05/07/2016

Sample Particulars

Name of the Sample:

Purpose of Monitoring:

Sampling Location:

Method of Sampling:

Monitoring Conducted By:

Sampling Duration (hrs.):

Ambient Air Quality Monitoring

To Check the Pollution Level

Car Parking

10:00 AM to 11:00 AM

At: Chamba

24 hrs.

Analysis Report

Sr. No.	Date of Sampling	Test Report No.	Concentration
			Metres (µg)
1	07/07/2016	0001000116	ND
2	11/07/2016	0001000216	ND
3	14/07/2016	0001000316	ND
4	18/07/2016	0001000416	ND
5	20/07/2016	0001000516	ND
6	24/07/2016	0001000616	ND
7	28/07/2016	0001000716	ND
Test Method			PM Direct Method Analyser

These test results are for the sample submitted to Nitya Laboratories. They are not to be used for any other purpose. The results are valid only if the sample is properly labeled and the test is conducted in accordance with the standard methods. Nitya Laboratories is not responsible for any errors or omissions in the test results. The results are valid only if the sample is properly labeled and the test is conducted in accordance with the standard methods.



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Test Reports of Wastewater (STP)



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KAMARAJAR PORT LIMITED



Compliance Report

On

Ministry's guidelines for

**“EXPANSION PROPOSALS - DEVELOPMENT OF TERMINALS FOR
MARINE LIQUIDS, COAL, IRON AND CONTAINERS IN SECOND
PHASE AND ASSOCIATED DREDGING AT ENNORE PORT”**

Point wise compliance report on Ministry's guidelines for the Ennore Port Expansion Proposals-Development of Terminals for marine liquids, coal, iron and containers in Second phase and associated dredging at Ennore Port Environmental clearance.

Ref: MoEF's Notification No. 10-28/2005-IA-III dated 19th May 2006

Ministry of Environment & Forests had accorded Environmental clearance for the development of satellite port at Ennore near Madras vide letter No. J16011/9/87-IA.III dated 28.9.1992. After commissioning of the satellite port in June 2001, Kamarajar Port Limited, KPL (erstwhile Ennore Port Limited) had proposed for expansion for development of the following projects. Subsequently MoEF & CC had accorded clearance vide letter No. 10-28/2005-IA-III dated 19th May 2006 for the following projects.

- i. Marine Liquid Terminal to handle 3 MTPA.
- ii. Coal Terminal other than TNEB Users to handle 8 MTPA.
- iii. Iron Ore Terminal to handle 12 MTPA.
- iv. Container Terminal for a quay length of 730m to handle 12 MTPA.
- v. Associated Capital Dredging of 15.50 Million cubic metres.

Status of various projects accorded clearance by MoEF

Marine liquid terminal:

The project was developed on BOT basis to handle Marine liquids and chemicals to a capacity of 3 MTPA. The license Agreement was signed during November 2004 with Ennore Tank Terminals Private Limited. The project was commissioned on 18.1.2009.

Coal Terminal

Kamarajar Port (KPL) has awarded license to M/s. Chettinad International Coal terminal Private Limited (CICTPL) to develop a terminal on design, build, operate, market and transfer basis in 2006 as a common user coal terminal. The terminal was completed with equipment and conveyor systems, yard and evacuations systems with capacity to handle **8 Million Metric Tons Per Annum (MMTPA)** and commenced the operation in the year 2011.

In the year 2020, M/s. CICTPL was acquired by M/s. JSW Infrastructure Limited, the infrastructure arm of the JSW group, one of the biggest steel producer in the private sector. Subsequent to acquisition of CICTPL terminal by JSW Infrastructure Limited in the year 2020, the terminal was rechristened as M/s. Ennore Coal Terminal Private Limited (ECTPL).

Iron Ore Terminal

The project was developed on BOT basis and the agreement was signed with M/s. SICAL Iron Ore Terminals Limited at an approved project cost of Rs.480 crores with a capacity of 12 MTPA. Constructions were completed. However, due to the ban on the Iron ore mining from Bellary-Hospet region, the Licensee could not perform the trail run and the terminal was lying idle without any operation since then. It was decided to convert the terminal to handle coal.

KPL submitted application to MoEF&CC for “Modification of existing iron ore terminal to handle coal”. Ministry of Environment & Forests (MoEF) has accorded Environmental Clearance vide letter No. 10-28/2005-IA-III dated 9th May 2018. Presently the project is in stalled condition.

Container Terminal

KPL has subsequently modified this environment clearance for the development of container terminal. MoEF & CC has accorded Environment Clearance vide Letter No. 10-28/2005-IA-III dated 10th September 2007.

Further Environment Clearance was modified to handle container (16.8 MTPA) in quay length of 730m and Multi Cargo berth (2.0 MTPA) in a quay length of 270 m. MoEF&CC has accorded Environment Clearance vide Letter No. 10-28/2005-IA-III dated 24.12.2014.

Dredging

KPL has carried out capital dredging for the development of marine liquids, coal, iron ore and container terminals in second phase. As stipulated in EC, about 6 million cubic meters of dredge material from the basin has been dredged. Out of this about 4 million cubic meters dredge material was used for reclamation of low lying areas within the port limits, 3 million cubic meters has been put up for the beach nourishment and remaining 8.5 million cubic meters of dredged material has been dumped into the sea at designated dumping locations. Presently, port is carrying out maintenance dredging for the above said terminals and the work is in progress. The dredge material is being disposed into sea at designated locations.

Compliance Report

S.No	MoEF Guidelines	Compliance Status
1	All the conditions stipulated in the No Objection Certificate from “Tamil Nadu State Pollution Control Board vide their letter No.T12/TNPCB/Misc/F.3322/TVLR /05 dt. 7/12/06 should be strictly implemented.	Complied with all conditions stipulated in the No Objection Certificate obtained from “Tamil Nadu State Pollution Control Board. The status report is enclosed as Annexure-I
2	Groins and other suitable structures should be constructed to prevent the closing of the mouth of Ennore creek.	Kamarajar Port had requested State Public Works Dept. vide letter dated 09.05.2017 to carry out the groynes construction works on deposit basis. In response, the state Public works

		<p>Department, Araniyar Basin Division vide letter No. F6/AEE/ASE/2017 dated 09.11.2017 communicated their willingness for carrying out the works on deposit basis. Subsequently, the State PWD requested NIOT, Chennai to conduct the study and submit the estimate for the work.</p> <p>Based on the NIOT report, state PWD has submitted their estimate for an amount of Rs.141.05 Crores. KPL had scrutinized the estimate and sanctioned an amount of Rs.115.04 crores and the same will be executed through state PWD on deposit basis.</p> <p>KPL has released an amount of Rs.6.76Crores to PWD for transportation of tetrapods to the site.</p>
3	The DPR and the technical details to be awarded to the BOT operators should be provided to MoEF for post project monitoring within 6 months from the date of receipt of this letter.	<p>Complied with.</p> <p>The DPR for Iron ore and Coal terminals were submitted to Regional Office, MoEF Bangalore vide Ltr .No EPL/MS/49/2008 dated 13/3/2008.</p> <p>The DPR for the Marine Liquid Terminal had submitted vide letter no. EPL/MS/49/2007 dated 03.07.2007.</p>
4	The marine terminal should be set up outside CRZ area	<p>Complied with.</p> <p>The terminal areas are developed outside CRZ area as stipulated.</p>

5	<p>Recommendations of Risk analysis report should be strictly implemented and a comprehensive quantitative Risk Analysis should be carried out before operationalizing the project.</p>	<p>Complied with.</p> <p>M/s. Ennore Tank Terminals Pvt. Ltd (ETTPL), one of the BOT operator operating petroleum products and chemicals had carried out Risk Analysis through M/s. ROOT THINKER PVT. LTD., during 2017. The firm has also carried out third party Safety Audit during 2021. Recommendations of Risk analysis were implemented by M/s. ETTPL. The relevant certification copies of the report are enclosed herewith.</p> <p>With regard to M/s. Ennore Coal Terminal Pvt. Ltd, the terminal has carried out risk analysis during the year 2011 and the recommendations were implemented.</p> <p>With regard to M/s AECTPL, Operational Risk assessment was carried out and recommendations are being implemented. Operational Risk Assessment report submitted vide letter No. AECTPL/KPL/ EC-compliance/Env/02/dtd 13.07.2018.</p>
6	<p>Approval from Chief Controller of Explosives should be obtained for hazardous chemicals storage, transfer and related activities.</p>	<p>Complied with.</p> <p>For the Marine Liquid Terminal, license was obtained for the Storage Terminal from the Chief Controller of Explosives vide Licence No. P/HQ/TN/15/4648 (P191324), dated 18/10/08 and the same was renewed during 2022; validity of the above said licence is till 31.12.2027.</p> <p>With regard to M/s. Ennore Coal Terminal Pvt. Ltd, the terminal has obtained License 'B-Class' petroleum for operational use. License No. P/SC/TN/14/6874 (P285092) and valid upto 31.12.2032.</p> <p>With regard to M/s AECTPL, the terminal is not storing any hazardous chemicals.</p>

7	The reclamation of the port area should be carried out with the dredged materials. Dredged material should not be dumped into the sea. No reclamation should be carried out outside the port limits.	<p>Complied with.</p> <p>The dredged material was used for beach nourishment and filling up of low lying area within the port limits.</p> <p>However, MoEF & CC vide letter dated 6th September, 2006 has directed subsequently that dredged material not suitable for reclamation and beach nourishment should be disposed off in the sea. No reclamation is carried outside the port limits.</p>
8	The coastal protection works should be carried out after detailed hydrodynamic modeling studies and it should be ensured that no erosion or accretion takes place in other areas due to the shore protection works.	<p>KPL has carried out the study through Central Water and Power Research Station, Pune. The study reports were submitted to MoEF vide our letter No. EPL/49/MS/2007 dated 8.12.2009.</p> <p>As per the report, construction of sand trap beach nourishment etc., was carried out.</p>
9	Reclamation of 500 acres should be carried out only for port development. The height of the reclaimed area will be maintained above the maximum flood level.	<p>Complied with.</p> <p>Reclamation carried out for the creation of stock yards for coal and iron ore are upto 4.5 m height, which is about 2 m above the flood level.</p>
10	The wave tranquility study and the ship manoeuvring studies carried out should be taken into account while operating the port.	<p>Complied with.</p> <p>Wave tranquillity study and ship manoeuvring studies were carried out and the port is in operation.</p>
11	The project proponent should ensure that during construction and operation of the port, there will be no impact on the livelihood of the fishermen. The fishermen should be provided free access to carry out the fishing activity.	<p>Complied with.</p> <p>Due to port operations, there is no adverse impact on fishing activities.</p>
12	All necessary precaution while undertaking construction and operation of the port should be taken up keeping in view, the bathymetric changes caused due to tsunami.	<p>There was no bathymetry change due to Tsunami. After Tsunami bathymetry survey was carried out and confirmed.</p>

13	All development in the port should be carried out in accordance with the Coastal Regulation Zone Notification, 1991 and approved Coastal Zone Management Plan of Tamil Nadu.	Complied with. All development activities are carried out in accordance with the CRZ Notification.
14	The project proponent should undertake a comprehensive hydrodynamic modeling study with regard to river diversion and submit the report to the Ministry within 6 months from the date of receipt of this letter. Further, the unit should comply with all the findings/recommendations of the study.	Complied with. Hydrodynamic modelling study with regard to river diversion works was carried out by NIOT, Chennai and submitted to MoEF vide our letter No. EPL/49/MS/2007 dated 5/8/2008. The study was made based on the present site conditions. MoEF vide letter dated 15.12.2008 had communicated to comply with the recommendation of the study. Accordingly, the works was commenced on 24.11.2016 and completed on 23.08.2018. The works of formation of protection bunds along the sides of the river are completed.
15	Construction of labour camps should be located outside Coastal Regulation Zone areas and should be provided with adequate cooking and sanitation facilities.	Complied with. No labour camps were established inside the port. Construction of the terminals is completed and the terminals are in operation.
16	The project-affected people, of any should be properly compensated and rehabilitated.	Complied with. The land has been transferred from TNEB, TIDCO and Salt Department, Government of India. Hence no direct project affected people by Kamarajar Port Limited.
B	General conditions	Compliance Status
1	Development of the proposed channel should be undertaken meticulously conforming to the applicable Central/ local rules and regulations including Coastal Regulation Zone Notification, 1991 and its amendments. All the construction designs/drawings relating to the proposed development activities must have	Complied with. Port being a regulatory authority by itself, All constructions and plans are approved by port itself.

	<p>approvals of the concerned State Government Department/Agencies.</p>	
<p>2</p>	<p>A well equipped laboratory with suitable instruments to monitor the quality of air and water shall be set up as to ensure that the quality of ambient air and water conforms to the prescribed standards. The laboratory will also be equipped with qualified manpower including a marine biologist so that the marine water quality is regularly monitored in order to ensure that the marine life is not adversely affected as a result of implementation of the said project. The quality of ambient air and water shall be monitored periodically in all the seasons and the results should be properly maintained for inspection of the concerned pollution control agencies. The periodic monitoring reports at least once in 6 months must be send to this Ministry (Regional Office at Bangalore) and Pollution Control Committee.</p>	<p>Being complied with.</p> <p>Kamarajar Port is monitoring the environment. Port has engaged M/s. Hubert Enviro Care Systems (P) Ltd, a MoEF and NABL accredited laboratory for sampling and testing of various environmental parameters inside the port.</p> <p>M/s. ETTPL, the BOT operator handling POL projects is monitoring the environment by engaging a laboratory M/s. Green Chem Solution (P) Ltd. once in month and ensuring that it meets as per TNPCB norms. Further, TNPCB also visits the terminal for monitoring of air once in a year. The analysis reports are enclosed herewith.</p> <p>The operator of the coal terminal M/s. Ennore Coal Terminal Pvt Ltd., is monitoring the environment by engaging laboratories for sampling and testing of parameters. The reports are submitted to TNPCB regularly.</p> <p>M/s AECTPL has awarded Environmental Monitoring services to NABL accredited laboratory. Ambient Air Quality, Noise Level, DG Stack emission, Marine & Surface water, sea sediment analysis are carried out on regular basis. The reports are being submitted to TNPCB also as part of the six monthly compliance reports. Monitoring reports are properly maintained and made available for inspection to Pollution Control Agencies, as and when required. Environmental Monitoring report for the compliance period is enclosed herewith.</p>

3	<p>Adequate provisions for infrastructure facilities such as water supply, fuel for cooking, sanitation etc. Must be provided for the laborers during the construction period in order to avoid damage to the environment. Colonies for the laborers should not be located in Coastal Regulation Zone area. It should also be ensured that the construction workers do not cut trees including mangroves for fuel wood purpose.</p>	<p>Complied with.</p> <p>No labour camps were established inside the port. Construction of the terminal is completed and the terminals are in operation.</p>
4	<p>To prevent discharge of sewage and other liquid wastes into the water bodies, adequate system for collection and treatment of the wastes must be provided. No sewage and other liquid wastes without treatment should be allowed to enter into the water bodies.</p>	<p>Complied with.</p> <p>Port handles coal, POL products and exports of automobiles. No effluent or liquid wastes are generated due to the above said operations. Solid waste generated from the ships are collected, segregated and sent to various recyclers for further beneficial use. No wastes are dumped into the water bodies.</p> <p>The operator M/s. ECTPL has installed a Sewage Treatment Plant at the stack-yard and is in operation. The outlet water is reused for gardening purpose. The results of analysis report is enclosed herewith.</p> <p>M/s. ETTPL had taken adequate precautions to ensure that no sewage and other liquid waste are entering into the water bodies. The monitoring reports are enclosed herewith.</p> <p>With regard to M/s AECTPL, the terminal operators had installed and operating 25KLD capacity sewage treatment plant and the entire treated water is being used for horticulture purpose. The monitoring reports are enclosed herewith.</p> <p>The summary of results of STP treated water analysis is as below.</p>

		Parameter	Unit	Min	Max	TNPCB Limit
		pH	-	7.03	7.15	6.5-9.0
		TSS	mg/l	15	22	30
		BOD	mg/l	10	16	20
		COD	mg/l	35.1	50.1	100
		Faecal Coliform	MPN/100ml	90	118	<1000
5	Appropriate facility should be created for the collection of solid and liquid wastes generated by the barges/vessels and their safe treatment and disposal should be ensured to avoid possible contamination of the water bodies.	Complied with. Kamarajar port is having Port “Waste Oil, Sewage and Other Waste Disposal Policy-2019” for the disposal of waste oil through empanelled list of CPCB approved waste oil recyclers. Port has engaged a contractor for the collection, segregation and disposal of solid wastes generated inside the port and from ships. The collected wastes like plastics, metals, wood, paper, cans, etc are segregated and sent to approved recyclers/industries for further beneficial use or for re-cycling. Hazardous wastes are sent to TSDF at Gummidipoondi.				
6	Necessary navigational aids such as channel markers should be provided to prevent accidents. Internationally recognized safety standards shall be applied in case of barge/vessel movements.	Complied with. Navigational aids are available. The channel length has been increased and additional navigational aids were provided.				
7	The project authorities should take appropriate community development and welfare measures for villagers in the vicinity of the project site, including drinking water facilities. A separate fund should be allocated for this purpose.	Complied with. As a part of community development and welfare measures, KPL, through its CSR activities, is undertaking construction of school buildings, community buildings, sanitation, R.C.C streets, and drinking water supply facilities to the nearby villages. Port also engaged Self Help Group women workers belonging to Attipattu and Kattupalli for taking up of plantation and maintenance of green belt. The amount spent on CSR activities				

		<p>during last four years is as below.</p> <p>2018-19 is Rs. 4.69 crores 2020-21 is Rs. 8.28 crores 2021-22 is Rs. 5.57 crores 2022-23 is Rs.9.44 crores</p> <p>With regard to M/s ECTPL, the firm has incurred an amount of Rs.62.6lakhs towards CSR activities during the year 2023-24 (upto Dec'23).</p> <p>The breakup of details is as below.</p> <table border="1" data-bbox="868 588 1448 840"> <thead> <tr> <th>S. No</th> <th>Description</th> <th>Amount in Lakhs.</th> <th>Rs.</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Environment</td> <td>24.8</td> <td></td> </tr> <tr> <td>2</td> <td>Education</td> <td>17.3</td> <td></td> </tr> <tr> <td>4</td> <td>Community Infrastructure Development</td> <td>20.5</td> <td></td> </tr> <tr> <td colspan="2">Total</td> <td>35.5</td> <td></td> </tr> </tbody> </table> <p>With regard to M/s AECTPL, the terminal has implemented CSR activities like Evening Education centre(641 Students benefited), Mobile Health Care Unit (11958 patients benefited), helped organic farming (100 farmers are part of it), veterinary camps (2500 animals are covered in the project area), emergency cyclone relief provided to the nearby villages during Michaung cyclone etc., in the vicinity of the Port area.</p> <p>Expenses incurred for CSR during the compliance period is Rs.215.66 Lakhs and the breakup details are as follows; The breakup of details is as below.</p> <table border="1" data-bbox="868 1449 1448 1780"> <thead> <tr> <th>S. No</th> <th>Description</th> <th>Amount in Lakhs.</th> <th>Rs.</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Education</td> <td>8.77</td> <td></td> </tr> <tr> <td>2</td> <td>Health</td> <td>21.71</td> <td></td> </tr> <tr> <td>3</td> <td>Sustainable Livelihood Development</td> <td>32.98</td> <td></td> </tr> <tr> <td>4</td> <td>Community Infrastructure Development</td> <td>152.2</td> <td></td> </tr> <tr> <td colspan="2">Total</td> <td>215.66</td> <td></td> </tr> </tbody> </table>	S. No	Description	Amount in Lakhs.	Rs.	1	Environment	24.8		2	Education	17.3		4	Community Infrastructure Development	20.5		Total		35.5		S. No	Description	Amount in Lakhs.	Rs.	1	Education	8.77		2	Health	21.71		3	Sustainable Livelihood Development	32.98		4	Community Infrastructure Development	152.2		Total		215.66	
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8	The quarrying material required for the construction purpose shall be obtained only from the approved	<p>Complied with.</p> <p>There was no requirement of quarrying</p>																																												

	quarries/borrow areas. Adequate safeguard measures shall be taken up to ensure that the overburden and rocks at the quarry side do not find their way into water bodies.	the material for the Port. The construction of the terminals was carried out well within the breakwaters, the same was completed and they are in operation.
9	For employing unskilled, semi-skilled and skilled workers for the project, preference shall be given to local people.	<p>M/s AECTPL has engaged the local people also during construction phase & also during the operation phase through contracts.</p> <p>M/s ETTPL has given preference to the local people in employment.</p> <p>M/s ECTPL has engaged local people during construction phase & also in the operation phase.</p>
10	The recommendations made in the Environmental Management Plan and Disaster Management Plan, as contained in the Environmental Impact Assessment and Risk analysis Reports of the project shall be effectively implemented.	Port is having a Crisis Management Plan and Disaster management Plan. However, with the subsequent development of various new projects phase wise, Port has updated the Disaster Management Plan (DMP) in line with National Disaster Management Authority Guidelines 2019. Indian Register of Shipping has vetted the DMP prepared by the Port.
11	A separate Environmental Management Cell with suitable qualified staff to carry out various environments should be set up under the charge of a senior Executive who will report directly to the Chief Executive of the Company.	<p>Port is having Environmental Cell under HSE-Division of Marine Services Department, headed by General Manager (MS). The compliance of Environmental Management Plan of the Port is monitoring by Environmental Cell of HSE division.</p> <p>With regard to M/s ECTPL, a separate Environment team is established at H.O to take care of all environmental activities.</p> <p>With regard to M/s AECTPL, a separate EMC with suitable qualified staff has been put in place by AECTPL for taking care of various day to day environmental monitoring compliance and allied activities. Environmental Department headed by Senior Manager-Environment, who is well supported by Environmental Management Team at H.O.</p>

		M/s ETTPL has appointed the safety officer by taking care of safety and environment. ETTPL has engaged a NABL accredited laboratory M/s. Green Chem Solution (P) Ltd. laboratory for sampling and testing for various Environmental parameters inside the terminal premises.																					
12	The funds earmarked for environment protection measures should be maintained in a separate account and there should be no diversion of these funds for any other purpose. A year-wise expenditure on environmental safeguards should be reported to this Ministry.	<p>The details of expenditure incurred towards Environmental management by KPL during the compliance period is Rs.68,84,925/- (Excl.GST), furnished herewith as below:</p> <ol style="list-style-type: none"> 1. Environmental Monitoring = Rs. 6,92,900/- (Excl. GST). 2. Solid Waste Management = Rs. 21,45,225/- (Excl. GST). 3. Statutory fee payments= Rs. 40,46,800/-. <p>The expenditure by M/s. ETTPL for the Marine Liquid Terminal during the compliance period is Rs. 33.85 Lakhs.</p> <p>The expenditure incurred by M/s. ECTPL for Environment Management during the compliance period is Rs. 63.94 Lakhs.</p> <p>With regard to M/s AECTPL, the Environmental Expenditure carried out during the compliance period is Rs. 15.66 Lakhs. Breakup details are as follows;</p> <table border="1"> <thead> <tr> <th>S. No</th> <th>Description</th> <th>Amount Rs. in Lakhs</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Environmental Monitoring</td> <td>3.76</td> </tr> <tr> <td>2</td> <td>Greenbelt</td> <td>3.02</td> </tr> <tr> <td>3</td> <td>STP-O&M</td> <td>2.86</td> </tr> <tr> <td>4</td> <td>Housekeeping</td> <td>4.22</td> </tr> <tr> <td>5</td> <td>IWMS</td> <td>1.80</td> </tr> <tr> <td colspan="2" style="text-align: right;">Total</td> <td>15.66</td> </tr> </tbody> </table>	S. No	Description	Amount Rs. in Lakhs	1	Environmental Monitoring	3.76	2	Greenbelt	3.02	3	STP-O&M	2.86	4	Housekeeping	4.22	5	IWMS	1.80	Total		15.66
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13	Full support should be extended to the officers of this Ministry's Regional Office at Bangalore and the	<p>Being complied with.</p> <p>All necessary support is being extended</p>																					

	<p>officers of the Central and State Pollution Control Boards by the Project proponent during this inspection for monitoring purposes, by furnishing full details and action plans including the action taken reports in respect if mitigate measures and other environmental protection activities.</p>	<p>during the visit of officials of TNPCB & MoEF.</p> <p>With regard to M/s ECTPL, TNPCB officials inspect the terminal on monthly basis. All the necessary support is being provided during their site visit.</p> <p>With regard to M/s AECTPL, TNPCB officials are visiting the terminal on monthly basis. All the necessary support is being provided during the site visit.</p> <p>With regard to M/s ETTPL, necessary support is being extended by the terminal operators during the visit of officials.</p>
14	<p>In case there is an intention of deviation or alteration in the project including the implementing agency, a fresh reference should be made to this Ministry for modification in the clearance conditions or imposition of new ones for ensuring environmental protection. The project proponent should be responsible for implementing the suggested safeguard measures.</p>	<p>Complied with.</p> <p>(a) The specific condition (vii) was amended as <i>“the dredged material not suitable for reclamation of the low lying areas of the port land and beach nourishment should be disposed off in the sea at the designated disposal site”</i> vide MoEF&CC letter No. 10-28/2005-IA-III, dated 06.09.2006.</p> <p>(b) The quay length of the container terminal was increased from 700m to 1000m vide MoEF&CC letter No. 10-28/2005-IA-III, dated 10.09.2007 and again modified into 730m for container and 270m for multipurpose cargo terminal vide MoEF&CC letter No. 10-28/2005-IA-III, dated 24.12.2014</p>
15	<p>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.</p>	<p>Noted please.</p>
16	<p>This Ministry or any other competent authority may stipulate any additional conditions subsequently, if deemed necessary for environmental protection, which shall be complied with.</p>	<p>Noted for compliance.</p>
17	<p>The Project proponent should</p>	<p>Complied with.</p>

	advertise at least in two local newspapers widely circulated in the region around the project, one of which shall be in the vernacular language of the locality concerned informing that the project has been accorded environmental clearance and the copies of clearance letters are available with the state pollution Control Board and may also be seen at web site of the Ministry of Environment & Forests at http://www.envfor.nic.in . The advertisement should be forwarded to the Regional office of this Ministry at Bangalore.	It was advertised in the vernacular Tamil and English newspapers on 02/06/2006. This was communicated to regional office of MOEF & CC vide EPL letter No. EPL/74/2005 dated 29/5/2006. The copies of the newspaper advertisement in Tamil and English languages are enclosed herewith as Annexure-H & I
18	The project proponents should inform the Regional Office as well as Ministry the date of financial closure and final approval of the project by the concerned authorities and the date of start of development work.	Noted. The details are as given below.

The details of financial closure of the projects are as below.

Project	Date of approval by Competent Authority	Date of Financial Closure	Date of start of development work
Marine Liquid Terminal	16-02-2004	September 2006	Work commenced on 09-06-2006 and the terminal commissioned on 18.1.2009
Coal Terminal	04-07-2006.	27 September 2007	06.02.2007
Iron ore Terminal	20-06-2006.	27 September 2007 (in-principal approval accorded)	06.02.2007
Container Terminal	14.2.2014	15.3.2014	20.10.2014
Capital Dredging (Phase – I)	16-04-2007	---	Dredging commenced on 16/2/2008 and completed on 31.01.09
Capital Dredging (Phase – IIA)	05-12-2009	---	Dredging commenced on 22.02.2011 and completed on 20.04.2014.
Deepening of ECTPL, CB1 & CB2 and its approaches	18.10.2014	---	Work completed.

Annexure- I

S. No	Guidelines issued by Tamil Nadu State Pollution Control Board vide their letter No.T12/TNPCB/Misc/F.3322/TVLR/05 dated 7/12/2006.	Compliance status
1	The unit shall provide adequate sewage Treatment Plant to treat the sewage generated.	<p>Complied with.</p> <p>The sewage generated is of sanitary waste in nature and the buildings in the port are provided with soak pits and septic tanks.</p> <p>With regard to M/s. ETTPL, the sewage generated is of sanitary waste in nature and is cleaned at once in 6 months. Effluent treatment plant of capacity 20KLD is installed.</p> <p>M/s. ECTPL has installed a Sewage treatment Plant and it is in operation. The outlet water is reused for garden purpose. Samples are being drawn by TNPCB every month and the results of the same are enclosed.</p>
2	Adequate dust control measures shall be provided for controlling the dust emanating from large stock piles of bulk cargoes such as coal, iron ore and other dusty cargoes.	<p>Complied with.</p> <p>Adequate dust control measures are provided for controlling the dust emanating from large stock piles of bulk cargoes such as coal. The bulk cargos are transported through elevated closed conveyor system installed with required dust extraction system at all transfer points, junction towers, etc. Water sprinkler systems are in place for minimizing dust at the stack yards.</p> <p>The details of dust control measures provided at the coal handling terminal (M/s. ECTPL) are as below.</p> <p><i>a) Water sprinklers, are installed around the stock yard to suppress the dust emission.</i></p> <p><i>b) Wind shield has been installed in the</i></p>

		<p><i>predominant wind direction of North and South side at 12Mts height to mitigate the dust emission.</i></p> <p><i>c) Varieties of trees are planted around the stock yard to suppress the dust.</i></p> <p><i>d) At all the coal transfer towers, an in build high efficient water sprinkler system are installed to mitigate the dust emission.</i></p> <p><i>e) The conveyor is totally covered with bare galvalume sheet to protect the emission of coal during coal conveying process.</i></p> <p><i>f) In the Stacker / Re-claimer water spraying nozzles are installed to reduce the dust emission with exclusive water tanks and pumps. This is in-built dust suppression system incorporated in the basic design itself.</i></p> <p><i>g) A compound wall of sufficient height is constructed as all sides of the coal stock yard to protect the dust emission</i></p> <p><i>h) Bulldozer grader / pay-loader are being used for coal compression to avoid dust at elevated levels.</i></p> <p><i>i) Coal is dampened by using water to reduce the dust dispersion.</i></p>
3	<p>The unit shall provide the following measures to control dust pollution from coal / iron ore handling activity,</p> <p>a) Totally enclosed continuous loaders / unloaders and conveyor system should be adopted.</p>	<p>The coals from berths (CB1 & CB2) are directly transported to North Chennai Thermal Power Station (NCTPS). Coal is not stored inside the port. The details of dust control measures provided at the M/s. ECTPL coal handling terminal are as below.</p> <p>a) The conveyor is totally covered with bare galvalume sheet to protect the emission of coal during coal</p>

	<p>b) Dust extraction system should be provided at all transfer points.</p> <p>c) To minimize dust from the stack yard, proper water spraying should be done</p> <p>d) Compound wall of adequate height shall be made around the stack yard area</p>	<p>conveying process.</p> <p>b) At all the coal transfer towers an in build high efficient water sprinkler system is installed to mitigate the dust emission.</p> <p>c) Water sprinklers, are installed all around the stock yard to suppress the dust emission.</p> <p>d) A compound wall of sufficient height is constructed on all sides of the coal stock yard to protect the dust emission.</p>
4	<p>Continuous Ambient Air Quality Monitoring Stations with computer printing arrangements shall be installed at strategic locations inside Port and neighbour hood for monitoring dust and shall be displayed online at the Main gate.</p>	<p>M/s. ECTPL has installed Continuous Ambient Air Quality Monitoring stations installed and it is connected to CARE air center – TNPCB.</p> <p>With regard to M/s. ETPL, the operator has engaged M/s Green Chem Solution Pvt. Ltd. The air and water quality monitoring is being carried out by M/s Green Chem Solution Pvt. Ltd once in a month and ensured that it meets as per TNPCB norms. Apart from that Tamilnadu Pollution Control Board also visits the terminal for monitoring the air quality once in a year.</p> <p>Online VOC monitoring system has been installed at critical locations for continuous monitoring of VOC levels.</p>
5	<p>To contain noise levels within the prescribed standards roofed conveyor belts should be deployed. Noise pollution in the port area should be reduced by putting up sound barriers at suitable locations. To protect the workers from high noise levels ear muffs / plugs should be provided.</p>	<p>Complied with.</p> <p>M/s. ETPL has provided ear muffs/ plugs to Workers. Moreover DG power backup are with acoustic arrangements and other DGA set have silencer to reduce noise level.</p> <p>With regard to M/s ECTPL, the conveyor is totally covered to protect the emission of coal and noise.</p>

6	The unit has to furnish the ROA of the split coal collected from seabed during annual maintenance / periodic maintenance dredging analyzed for heavy metals and other toxic metals.	<p>Being complied with.</p> <p>Kamarajar Port is carryout the analysis of seabed for heavy and toxic metals during the periodic maintenance dredging. Heavy metals are also monitored in the seawater and also in the sediments during dredging activities.</p>
7	Water quality monitoring stations at strategic points must be set up in the project area to monitor water quality and marine pollution at regular intervals.	<p>Complied with.</p> <p>Port has engaged M/s. Hubert Enviro Care Systems Pvt. Ltd. Chennai (MoEF & CC/ NABL certified) to carry out regular sampling and testing of various environmental parameters which includes marine water quality and ground water. ROA is submitted to TNPCB on monthly basis.</p> <p>M/s. ECTPL has installed 20 Nos. of piezometric well installed around the stack yard at ECTPL to monitor the ground water quality. ROA is submitted to TNPCB on monthly basis.</p> <p>With regard to M/s. ETTPL, there is no discharge from the unit.</p>
8	The quality of treated effluents solid wastes, emissions and noise level etc must confirm to the standards laid down by the competent authorities including Central/State pollution Control Board and under the Environmental (Protection Act) 1986 whichever are more stringent.	<p>Complied with.</p> <p>Port is regularly monitoring the emission and noise levels inside the port premises and it is found to be within the standards prescribed by Tamil Nadu Pollution Control Board.</p> <p>With regard to M/s. ETTPL, there is no generation of effluent by terminal. Noise level inside the terminal premises are monitored regularly and found to be within the standards prescribed by Pollution Control Board. DG power backup which is with an acoustic arrangement and other DGA sets have silencer to reduce noise level.</p> <p>M/s. ECTPL effluents, emission level and noise are within the limit. The</p>

		results are enclosed.
9	Dredging operations must be undertaken in stages in consultation with some expert institution like CWPRS, in such a way as to ensure that these operations do not deteriorate the surface water quality which must be maintained within the prescribed standards. Water parameters should be measured on regular intervals to monitor water quality. Dredging material should not be used for filling up any water body.	<p>Complied with.</p> <p>Port is monitoring the water quality and sediment quality, pre-dredging, during dredging and post dredging operations.</p>
10	The port shall ensure that no spillage of POL/Chemicals handled is occurred in sea while unloading them either from ship or barge vessels to pipeline/road vessels.	<p>Complied with.</p> <p>Port ensures that no spillage of POL/Chemicals in sea during the operations. The terminal where the POL/Chemicals, are being transferred from the ships to the terminal tank yard through unloading arms/hoses having leak proof systems. Any eventual spill will be tackled with required booms and skimmers. The POL/Chemicals are transferred to the tank farms through dedicated pipelines. KPL is having a dedicated Oil Spill Response team working 24 x 7 basis. Vessels berthed at Kamarajar Port Limited are being garlanded by booms to prevent the spread of oil spills (if any) during operations.</p> <p>To prevent spillage from loading arm connection, collection trays are provided.</p> <p>Dock line integrity is maintained by hydraulics test once in year and pneumatic tests are conducted before each discharge operation from ocean tanker and thickness tests are also carried out for the pipeline regularly.</p> <p>With regard to M/s ECTPL, the terminal is not handling POL/Chemicals.</p>

11	<p>The port shall have adequate contamination boom facility with skimmer to contain and recover the spillage of POL in the sea if any.</p>	<p>Complied with.</p> <p>With regard to the oil spill contingencies, KPL falls under category B. Port is having oil spill contingency plan prepared in line with NOS-DCP. Necessary chemicals, booms, dispersants, etc. are readily available for containment of any accidental spill of Tier-I category. KPL is having a dedicated Oil Spill Response team working 24 x 7 basis. Vessels berthed at Kamarajar Port Limited are being garlanded by booms to prevent the spread of oil spills (if any) during operations.</p> <p>BOT operator M/s. Ennore Tank Terminals Pvt. Ltd has provided facilities like booms, skimmers etc., to contain any eventual oil spill. Port is equipped with facility to contain Tier – I oil spills.</p> <p>With regard to M/s ECTPL, the terminal is maintaining OIL SPILL CONTROL KIT.</p>
12	<p>A proper safety audit should be carried out by specialized agency and their recommendations should be implemented.</p>	<p>Complied with.</p> <p>M/s. Ennore Tank terminals Pvt. Ltd., one of the BOT operator operating petroleum products and chemicals has carried out the safety audit through M/s.BUREAUVERITAS for the year of 2021. Safety audit recommendations are implemented.</p> <p>KPL had carried out safety audit of the terminals through National Safety Council during the year 2021, and requested the terminal operators to comply with the shortcomings; the terminal operators are in the process of compliance to the shortcomings.</p>

13	<p>An environment division must be set up in Ennore port headed by Environment Manager with appropriate strength of Environment Engineers, Forest officers, forest guards and other laboratory staff. An environmental laboratory for Air Water and solid waste monitoring must be set up with adequate equipment and qualified staff.</p>	<p>Port is having Environmental Cell under HSE-Division of Marine Services Department, headed by General Manager (MS). The compliance of Environmental Management Plan of the Port is monitoring by Environmental Cell of HSE division.</p> <p>Port has engaged M/s. Nitya Laboratories (MoEF & CC/NABL accredited) to carry out the regular environmental monitoring. TNPCB is also monitoring the Ambient Air Quality and Noise Levels at various locations inside the port.</p> <p>The operator of the coal terminal M/s. Ennore Coal Terminal Pvt Ltd., is monitoring the environment by engaging laboratories for sampling and testing of parameters. The reports are submitted to TNPCB regularly.</p> <p>With regard to M/s ETTPL, the terminal operator has appointed the safety officer to take care of safety and environment. ETTPL has engaged M/s Green Chem Solutions Pvt Ltd, a laboratory for monitoring various environmental parameters inside the terminal premises.</p>
14	<p>The unit must ensure that all activities carried out in the area falling under coastal Regulation Zone are regulated as per the provision contained in the CRZ Notification 1991 as amended.</p>	<p>Complied with.</p> <p>KPL is following all the provisions contained in the Coastal Regulation Zone Notification.</p>
15	<p>The unit has to implement Environmental Management Plan as envisaged under Environmental Impact assessment study as Per EIA Notification, 1994 as amended by the Ministry of Environment and Forest, Government of India.</p>	<p>Noted and being complied with.</p>
16	<p>The port shall maintain the marine eco system.</p>	<p>Complied with.</p> <p>Port is maintaining the marine eco system by way of regular monitoring.</p>

17	The project authorities must ensure that no cutting of trees takes place in the project area and shall develop green belt.	Complied with. No trees were cut in the project area. In case cutting becomes essential, equivalent plantation will be made.
18	No reclamation of water bodies should be undertaken in CRZ using dredged materials.	Noted. No reclamation of water bodies is undertaken in the CRZ areas using dredged material.
19	The nature of drainage of the terrain should not be affected by filling of low lying areas with dredged material.	Noted and complied with.
20	The possibilities of dumping the dredged spoil north of northern breakwaters in areas prone to sea erosion by creating sand dunes and/or for beach nourishment may also be explored.	Complied with. About 4.0 million m ³ of dredged material are dumped in the north of north break water as beach nourishment.
21	Wherever mangroves are present within the project area, it should not be disturbed.	Noted and complied with. Mangroves present in the project area are not disturbed.
22	The Ennore Port Limited shall develop additional green belt in an area of 150 hectares and install additional air quality monitoring stations with continuous display as assured vide letter dated 7.11.2005.	Complied with. Green belt being developed inside the port in a phased manner. Port has engaged M/s L&T Infrastructure Engineering Ltd., for the preparation of Bio-Diversity Management Plan. Based on the green belt map submitted by the firm, port has planned for the development of green belt of 68.66Acres inside the custom bound area and 621.91 Acres outside the custom bound area.
23	The Port shall adopt the additional dust suppression measures in iron ore and coal handling areas as assured vide letter added 7.11.2005	The details of dust suppression system adopted are mentioned at S.No 2 and 3 of this report.

Point wise compliance report on the conditions issued by Tamil Nadu State Coastal Zone Management vide Letter No. 30060/EC.3/2005-1 dated 06.12.2005

1	No reclamation of water bodies should be undertaken.	<p>Complied with.</p> <p>KPL has not reclaimed any water bodies for the development of above terminals.</p>
2	To ensure that the natural drainage of the terrain is not affected by filling of low lying areas with dredge spoils thus leading to inundation or water logging.	<p>Complied with.</p> <p>The dredge spoil was used for the reclamation of 500 acres of land owned by port for the development of coal and iron ore stackyards.</p> <p>It is informed that, in the application (Form-A) submitted to MoEF, for obtaining Environmental Clearance for Ennore Port Expansion proposals, Port has mentioned in the application that it would make use of the available materials to raise about 500 acres of low lying lands to (+) 2.50 M level for developing it as stack yards for coal and iron ore. Accordingly, the stock yard for the coal, iron ore, were developed in these lands.</p>
3	To explore possibilities of dumping the dredged spoil north of northern breakwaters in areas prone to sea erosion by creating sand dunes and/or for beach nourishment.	<p>Complied with.</p> <p>About 4.0 million m³ of dredged material was dumped in the north of northern breakwater for beach nourishment.</p>
4	The mangroves present near the project area should not be disturbed and action plan to conserve them may be indicated	<p>While executing the project it was ensured that no mangroves were disturbed due to the construction of conveyor belt.</p> <p>KPL has conducted a study “Action plan and Ecological studies for Kamarajar Port” through National Centre for Sustainable Coastal Management, a unit of MoEF&CC, during May 2017. The report has identified the mangroves and also suggested various mitigation measures.</p> <p>Further, KPL has prepared Bio-</p>

		<p>Diversity Management Plan for Kamarajar Port Limited” through M/s L&T Infrastructure Engineers Ltd., and submitted to Tamilnadu Biodiversity Board (TNBB) for validation and approval. TNBB has accorded the approval vide their letter dated 31.12.2021.</p> <p>The Bio-Diversity Management Plan will be implemented as per the timelines indicated.</p>
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GREEN CHEM SOLUTIONS PVT LTD

(ISO 14001:2015 Certified)

Laboratory Division

Plot No.4, Rajiv Gandhi Tower, H.No. 85-100, A.R. Elumthala Road (Oil Mill Road), Iyyappanthangal, Chennai - 600056

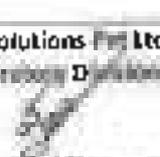
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Website: www.greenchemsolutions.in

greenchemsolutions@gmail.com

Lab No: GCS/001

Report No.	GCS/S/Amb/2023/001/001		Report Date	05.01.2024				
Customer Name & Address	M/s.ENNORE TANK TERMINALS PRIVATE LIMITED Inside Ennore Port, Vallu East, Thiruvallur District, Chennai - 600 120.							
Customer Reference	IMC/TER/GCSPL/WO/001/2023/012							
Survey Description	Ambient Air Quality Monitoring			Sample Received on	30.12.2023			
Survey Conducted by	GCSPL			Test Commenced on	02.01.2024			
Survey Conducted on	30.12.2023			Test Completed on	04.01.2024			
S. No.	Locations	Pollutants						
		PM ₁₀	PM _{2.5}	SO ₂	NO _x	Pb	CO	O ₃
1	Near Main Gate	54	20	6.7	16.5	BDL(D.L.0.5)	BDL(D.L.1.0)	20.9
2	Weigh Bridge	55	21	7.0	16.3	BDL(D.L.0.5)	BDL(D.L.1.0)	20.9
3	Near Power House	57	23	7.3	17.0	BDL(D.L.0.5)	BDL(D.L.1.0)	20.9
4	Near Fire Engine Plant	52	19	6.9	15.9	BDL(D.L.0.5)	BDL(D.L.1.0)	20.9
Unit		µg/m ³	µg/m ³	µg/m ³	µg/m ³	µg/m ³	mg/m ³	%
AAQ Standards (Industrial, Residential & Rural Area)		100	60	80	80	1.0	4	—
Reference Method - IS : 5187		Part 20	Part 21	Part 2	Part 6	Part 22	Part 10	IS 13270
PM ₁₀	Particulate Matter (Size less than 10µm)				NO _x	Oxides of Nitrogen		
PM _{2.5}	Particulate Matter (Size less than 2.5µm)				CO	Carbon Monoxide		
SO ₂	Sulphur Dioxide				Pb	Lead		
O ₃	Oxygen				BDL: Below Detection Limit, D.L: Detection Limit			
For Green Chem Solutions Pvt Ltd								 Authorized Signatory
(Laboratory Division)								

*** End of Report ***

Note: The results relate only to the samples tested. The results of report shall not be reproduced without approval of the laboratory.
The samples shall be retained for a duration of one month from the date of issue of test report.



GREEN CHEM SOLUTIONS PVT LTD

(ISO 14001:2015 Certified)

Laboratory Division

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Test Report

Report No.	GCS/5/AAQ/3245 R /2023-2024			Report Date	05.01.2024
Customer Name & Address	M/s. ENMORE TANK TERMINALS PRIVATE LIMITED, Inside Enmore Port, Vakkal Post, Thiruvallur District, Chennai - 600 120.				
Customer Reference	IRAC/TER/GCSPI/WD/003/12-13/2022				
Survey Description	AAQ Monitoring TUF	Sample Received on	30.12.2023		
Survey Conducted by	GCSPL	Test Commenced on	02.01.2024		
Survey Conducted on	30.12.2023	Test Completed on	04.01.2024		
S.No	PARAMETER	UNITS	RESULTS	REFERENCE METHOD	MAAQ Standards (Industrial, Residential & Rural Area)
1	PM ₁₀	µg/m ³	51	IS 5182 - Part 23	100
2	PM _{2.5}	µg/m ³	13	IS 5182 - Part 24	50
3	Oxides of Sulphur as SO ₂	µg/m ³	7.3	IS 5182 - Part 2	80
4	Oxides of Nitrogen as NO _x	µg/m ³	16.2	IS 5182 - Part 6	50
5	Lead as Pb	µg/m ³	ND(DL:0.5)	IS 5182 - Part 22	1
6	Carbon monoxide as CO	mg/m ³	ND(DL:1.0)	IS 5182 - Part 10	4
7	Ozone as O ₃	µg/m ³	ND(DL:2.0)	IS 5182 - Part 9	180
8	Ammonia as NH ₃	µg/m ³	ND(DL:2.0)	IS 5182 - Part 25	400
9	Benzene as C ₆ H ₆	µg/m ³	ND(DL:1.0)	IS 5182 - Part 11	5
10	Benzene (a) pyrene	ng/m ³	ND(DL:0.1)	IS 5182 - Part 12	1
11	Arsenic as As	ng/m ³	ND(DL:1.0)	GCS/Lab/SDP/089	6
12	Nickel as Ni	ng/m ³	ND(DL:5.0)	IS 5182 - Part 26	20
NDL: Below Detection Limit, D.L.: Detection Limit.					
					For Green Chem Solutions Pvt. Ltd. (Laboratory Division)

*** End of Report ***

Note: The results relate only to the samples received for analysis. It must be reproduced without approval of the laboratory. The samples will not be tested for validity more than 6 months from the date of issue of test report.



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TEST REPORT

Report No.	GCS/S/MIA/1270/2021-2021		Report Date	05.01.2024	
Customer Name & Address	M/s. ENHORE TRANS REFINERIES PRIVATE LIMITED Inside Ennore Port, Madhav Post, Thiruvallur District, Chennai - 600 120.				
Customer Reference	HAC/TTR/GCSPL/WOP/02/12-13/2021				
Description	Noise Level Monitoring	Monitoring Date	30.12.2023		
Monitored by	GCSPL	Data Received On	30.12.2023		
S.No.	Locations	Day Time		Night Time	
		Maximum	Minimum	Maximum	Minimum
1	Near Security Gate	71.4	63.9	61.9	55.8
2	Weigh Bridge	71.8	67.1	65.3	59.0
3	TLF IV	63.1	58.4	57.5	49.7
4	TLF I	64.3	61.2	58.2	52.6
5	Pump House - II	71.2	65.6	62.6	54.9
6	Near DG set	77.7	66.8	64.4	60.5
Unit		dB(A)		dB(A)	
TNPCB Standards (Industrial Area)		75.0		70.0	
Reference Method	Instruments Manual				
For Green Chem Solutions Pvt Ltd (Laboratory Division)  Authorized Signatory					

Page 1 of 1 Page No. 19

Note: The results relate only to the samples submitted. The samples will not be retained. The results should not be reproduced without approval of the laboratory. The date of issue of test report.



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Report No.	GCS/5/SM/ 3272 A/2023-2024		Report Date	05.01.2024	
Customer Name & Address	M/s. ENNORE TANK TERMINALS PRIVATE LIMITED, Inside Ennore Port, Vallur Post, Thiruvallur District, Chennai - 600 020.				
Customer Reference	IMC/TER/GCSP/NO/002/1403/2017				
Survey Description	Stack Monitoring	Sample Received on	30.12.2023		
Survey Conducted by	GCSP.	Test Commenced on	02.01.2024		
Survey Conducted on	30.12.2023	Test Completed on	04.01.2024		
S.No.	Description	Unit	DG 250 KVA	DG 500 KVA	Reference Method
1	APC Measures Attached	-	Silencer	Silencer	---
2	Total Stack Height - from 'G' Level	m	7.0	10.0	---
3	Stack Diameter	m	0.10	0.20	---
4	Ambient Temperature	°C	29	29	---
5	Stack Temperature	°C	142	175	---
6	Flue gas velocity	m/sec	15.24	18.78	IS:11255 - P3
7	Gaseous Emission	Nm ³ /hr	309	1410	IS:11755 - P3
8	Particulate Matter (PM)	mg/Nm ³	17.1	24.2	IS:11255 - P1
9	Sulphur Di-Oxide (SO ₂)	mg/Nm ³	5.7	7.9	IS:11255 - P2
10	Oxides of Nitrogen (NO _x)	mg/Nm ³	59	146	IS:11255 - P7
11	Carbon Monoxide (CO)	%	< 0.2	< 0.2	IS:13270
12	Chlorine as Cl ₂	mg/Nm ³	< 1	< 1	Isometric Method
EMPCB Standards - PM		mg/Nm ³	150.0		
For Green Chem Solutions Pvt. Ltd. (Laboratory Division)  Authorized Signatory					

Red Report

Note: The results related to this report are valid only for the samples received and tested. It can be reproduced without approval of the laboratory. The sample report is valid only for the date of issue of test report.



GREEN CHEM SOLUTIONS PVT LTD

(ISO 15189:2013 Certified)

Laboratory Division

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greenchemsolutions@gmail.com

Report No:		GCS/5/SM/3271 B /2023-2024		Report Date		05.01.2024	
Customer Name & Address:		M/s.EMPO-01 TAMIL TECHNICALS PRIVATE LIMITED, Inside Ennore Port, Vallur Puzh, Thiruvallur Dist. 601, Chennai - 600 120					
Customer Reference:		MC/TER/GCS/AVO/009/11 13 /2012					
Survey Description		Stack Vent being		Sample Received on		30.12.2023	
Survey Conducted by:		GCSPL		Test Commenced on		02.01.2024	
Survey Conducted on		30.12.2023		Test Completed on		04.01.2024	
S.No.	Descriptions	Unit	0G 180 KVA	0G 500 KVA	Reference Method		
1	APC Measures Attached		Silencer	Silencer			
2	Total Stack Height From 'G'Level	m	7.0	10.0			
3	Stack Diameter	m	0.10	0.20			
4	Ambient Temperature	°C	29	29			
5	Stack Temperature	°C	134	241			
6	Flue gas velocity	m/sec	13.20	21.40	IS:11255 - P3		
7	Gaseous Emission	mg/m ³	275	1401	IS:11255 - P3		
8	Particulate Matter (PM)	mg/m ³	15.1	26.2	IS:11255 - P1		
9	Sulphur Dioxide (SO ₂)	mg/m ³	5.3	8.8	IS:11255 - P2		
10	Oxides of Nitrogen (NO _x)	mg/m ³	5.7	130	IS:11255 - P7		
11	Carbon monoxide (CO)	%	< 0.2	< 0.2	IS 13270		
12	Chlorine as Cl ₂	mg/Nm ³	< 1	< 1	Isometric Method		
TAPCB Standards - FM		mg/Nm ³	150.0				
For Green Chem Solutions Pvt. Ltd. Laboratory Division							
 Authorized Signatory							

For Legal Use

Note: The results related to this testing are for the sole use of the client and should not be reproduced without approval of the laboratory.
The sample should be preserved at the laboratory for a period of 30 days from the date of issue of test report.



GREEN CHEM SOLUTIONS PVT LTD

(ISO 14001:2015 Certified)

Water Quality Division

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greenchemsolutions@gmail.com

Test Report

Report No	GCS/WQ/2024/003-2024		Report Date	05.01.2024	
Customer Name & Address	M/s. PANQUEE TRADING PRIVATE LIMITED Inside Ennave Peru, Vallur Post, Pilluvattur District, Chennai - 600 120.				
Survey Description	ETP Outlet		Sample Received On	30.12.2023	
Sample Drawn By	GCSPL		Test Commenced On	02.01.2024	
Sample Collected Date	30.12.2023		Test Completed On	05.01.2024	
S No	PARAMETERS	UNITS	RESULTS	TEST METHOD	TNPCB Norms for Treated Effluent
1.	pH @ 25°C		7.49	IS:3025/P11/2022	5.5 - 9.0
2.	Total Dissolved Solids	mg/l	251	IS:3025/P16/1984Reaff 2017	2100
3.	Total Suspended Solids	mg/l	12	IS:3025/P17/2022	100
4.	Chemical Oxygen Demand	mg/l	35	IS:3025/P58/2006Reaff 2017	250
5.	BOD (for 3 days at 20°C)	mg/l	17	IS:3025/P44/1993Reaff 2013	30
6.	Oil & Grease	mg/l	BDL (L10)	IS:3025/P39/2021	20
BDL: Below Detection Limit (D.L. Detection Limit)					
For GREEN CHEM SOLUTIONS PVT LTD  Authorized Signatory					

End of Report ***

Note: The results relating to this report are valid only for the purpose for which it is reproduced without approval of the laboratory. The same is valid for a period of 30 days from the date of issue of test report.



GREEN CHEM SOLUTIONS PVT LTD

(ISO 14001:2015 Certified)

Environmental Division

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greenchemsolutions@gmail.com

GREEN CHEM SOLUTIONS PVT LTD

Report of Analysis

MICROMETEOROLOGY SURVEY

Report No: GCS/S/AM/3272/2023-2024

Date: 05.01.2024

Name and Address of the industry: M/S. ENKORF TANK TERMINALS PVT LTD,
11/26 Enkor Road, Vallur Post,
Thiruvallur District,
Chennai - 600120.

Date of Survey: 30.12.2023

Duration of Survey: 24 hours

Pollution Category: Rec

Industry Classification: Large

Weather Condition: Clear Sky

Ambient Temperature: Max: 33°C Min: 24°C

Relative Humidity: Max: 89% Min: 70%

Predominant Wind Direction: North East

Wind Speed (km/hr): 1-5

Rainfall (mm): Nil

End of Report

Note: The results herein are for the specific conditions and shall not be reproduced without approval of the Laboratory.
The sample validity period for this survey shall be from the date of issue of test report.



GREEN CHEM SOLUTIONS PVT LTD

(ISO 14001:2015 Certified)

Laboratory Division

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greensolutionspvt@gmail.com

Test Report

Report No.	GCS/5/AAQ/3493 A /2023-2024		Report Date	20.11.2023				
Customer Name & Address	M/s.ENNORE TANK TERMINALS PRIVATE LIMITED Inside Ennore Port, Vallur Post, Thiruvallur District, Chennai - 600 120.							
Customer Reference	IMC/TER/GCSP/WO/CC2/12-13 /2012							
Survey Description	Ambient Air Quality Monitoring		Sample Received on.	15.11.2023				
Survey Conducted by	GCSPI		Test Commenced on	16.11.2023				
Survey Conducted on	14.11.2023		Test Completed on	18.11.2023				
S. No.	Locations	Pollutants						
		PM ₁₀	PM _{2.5}	SO ₂	NO _x	Pb	CO	O ₂
1	Near Main Gate	52	21	6.4	16.1	BDL(D.L:0.5)	BDL(D.L:1.0)	20.9
2	Weigh Bridge	58	23	7.1	16.9	BDL(D.L:0.5)	BDL(D.L:1.0)	20.9
3	Near Power House	53	18	7.9	17.3	BDL(D.L:0.5)	BDL(D.L:1.0)	20.9
4	Near Fire Engine Plant	57	20	6.8	15.8	BDL(D.L:0.5)	BDL(D.L:1.0)	20.9
Unit		µg/m ³	µg/m ³	µg/m ³	µg/m ³	µg/m ³	mg/m ³	%
NAAQ Standards (Industrial, Residential & Rural Area)		100	60	80	80	1.0	4	-
Reference Method - IS : 5182		Part 23	Part 24	Part 2	Part 6	Part 22	Part 10	IS 13270
PM ₁₀	Particulate Matter (Size less than 10µm)				NO _x	Oxides of Nitrogen		
PM _{2.5}	Particulate Matter (Size less than 2.5µm)				CO	Carbon Monoxide		
SO ₂	Sulphur Dioxide				Pb	Lead		
O ₂	Oxygen	BDL: ■ Low Detection Limit ■ ■ ■ Detection Limit						
For Green Chem Solutions Pvt Ltd (Laboratory Division)								
 Authorized Signatory								

*** End of Report ***

Note: The results relate only to the samples tested. This test report shall not be reproduced without approval of the laboratory. The samples will not be retained for more than one month from the date of issue of test report.



GREEN CHEM SOLUTIONS PVT LTD

(ISO 14001:2015 Certified)

Laboratory Division

Plot No 4, Rajiv Gandhi Street, Balaji Avenue, A.N.Elurajal Road (Oil Mill Road), Iyyappanthangal, Chennai - 600058.

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Test Report

Report No.	GCS/S/AAQ/ 3193 B /2023-2024			Report Date	20.11.2023
Customer Name & Address	M/s.ENNORE TANK TERMINALS PRIVATE LIMITED, Inside Ennore Port, Vallur Post, Thiruvallur District, Chennai - 600 120.				
Customer Reference	IVC/TFR/GCSPL/WO/002/12-13 /2012				
Survey Description	AAQ Monitoring - IUP I	Sample Received on	15.11.2023		
Survey Conducted by	GCSPL	Test Commenced on	16.11.2023		
Survey Conducted on	14.11.2023	Test Completed on	18.11.2023		
S.No	PARAMETER	UNITS	RESULTS	REFERENCE METHOD	NAAQ Standards (Industrial, Residential & Rural Area)
1	PM ₁₀	µg/m ³	55	IS 5182 - Part 23	100
2	PM _{2.5}	µg/m ³	21	IS 5182 - Part 24	60
3	Oxides of Sulphur as SO ₂	µg/m ³	7.8	IS 5182 - Part 2	80
4	Oxides of Nitrogen as NO ₂	µg/m ³	16.9	IS 5182 - Part 6	80
5	Lead as Pb	µg/m ³	BDL(DL:0.5)	IS 5182 - Part 22	1
6	Carbon monoxide as CO	mg/m ³	BDL(DL:1.0)	IS 5182 - Part 10	4
7	Ozone as O ₃	µg/m ³	BDL(DL:2.0)	IS 5182 - Part 9	180
8	Ammonia as NH ₃	µg/m ³	BDL(DL:1.0)	IS 5182 - Part 25	400
9	Benzene as C ₆ H ₆	µg/m ³	BDL(DL:1.0)	IS 5182 - Part 11	5
10	Benzene (u) pyrene	µg/m ³	BDL(DL:0.1)	IS 5182 - Part 17	1
11	Arsenic as As	µg/m ³	BDL(DL:1.0)	GCS/Lab/SOP/089	6
12	Nickel as Ni	ng/m ³	BDL(DL:5.0)	IS 5182 - Part 26	20
BDL: Below Detection Limit D.L: Detection Limit					
					For Green Chem Solutions Pvt. Ltd. (Laboratory Division)
					Authorized Signatory

*** End of Report ***

Note: The results relate only to the samples tested. The test is peculiar and not to be reproduced without approval of the laboratory. The samples will not be returned for a minimum of one month from the date of issue of test report.



GREEN CHEM SOLUTIONS PVT LTD

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Laboratory Division

Plot No.4, Raju Gandhi Street, Kalajeri, A.N.Chandrababu Naidu Road, Iyyappanthangal, Chennai - 600056.

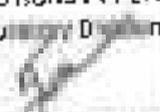
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Website: www.greensolutions.com

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Test Report

Report No	GCS/W/ 3212 /2023-2024	Report Date	20.11.2023		
Customer Name & Address	M/s. ENMORE TANK TERMINALS PRIVATE LIMITED Inside Ennore Port, Vallur Post, Thiruvallur District, Chennai - 600 120.				
Survey Description	ETP Outlet	Sample Received On	14.11.2023		
Sample Drawn By	GCSPL	Test Commenced On	14.11.2023		
Sample Collected Date	14.11.2023	Test Completed On	20.11.2023		
S.No	PARAMETERS	UNITS	RESULTS	TEST METHOD	TNPCR Norms for Treated Effluent
1.	pH @ 25°C	-	7.18	IS:3025/P11/2022	5.5 - 9.0
2.	Total Dissolved Solids	mg/l	778	IS:3025/F16/1534Reaff 2017	2100
3.	Total Suspended Solids	mg/l	90	IS:3025/P11/2022	100
4.	Chemical Oxygen Demand	mg/l	71	IS:3025/P58/2006Reaff 2017	250
5.	BOD (for 3 days at 27°C)	mg/l	12	IS:3025/P44/1993Reaff 2019	30
6.	Oil & Grease	mg/l	BDL(D.L.)	IS:3025/P35/2021	10
BDL: Below Detection Limit, D.L.: Detection Limit					
				For GREEN CHEM SOLUTIONS PVT LTD (Laboratory Division)	
				 Authorized Signatory	

End of Report

Note: The results relate only to the samples tested. This test report shall not be reproduced without approval of the laboratory. The samples will not be retained for more than one Month from the date of issue of test report.



GREEN CHEM SOLUTIONS PVT LTD

(ISO 14001:2015 Certified)

Laboratory Division

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TEST REPORT

Report No.	GCS/S/SM/ 3195 A /2023-2024		Report Date	20.11.2023	
Customer Name & Address	M/s. ENMORE TANK TERMINALS PRIVATE LIMITED, Inside Ennore Port, Vallur Post, Tiruvallur District, Chennai - 600 120.				
Customer Reference	IMC/TER/GCSPL/WO/UJ2/12 13 /2022				
Survey Description	Stack Monitoring	Sample Received on	15.11.2023		
Survey Conducted by	GCSPL	Test Commenced on	16.11.2023		
Survey Conducted on	14.11.2023	Test Completed on	18.11.2023		
S.No.	Descriptions	Unit	DG 250 kVA	DG 500 kVA	Reference Method
1	APC Measures Attached	—	Silencer	Silencer	—
2	Total Stack Height From 'G' Level	m	7.0	10.0	—
3	Stack Diameter	m	0.20	0.20	—
4	Ambiant Temperature	°C	26	26	—
5	Stack Temperature	°C	135	186	—
6	Flue gas velocity	m/sec.	14.93	18.64	IS:11255 - P3
7	Gaseous Emission	Nm ³ /hr	308	1366	IS:11255 - P3
8	Particulate Matter (PM)	mg/ Nm ³	17.6	23.7	IS:11255 - P1
9	Sulphur Di-Oxide (SO ₂)	mg/ Nm ³	5.8	7.5	IS:11255 - P2
10	Oxides of Nitrogen (NO _x)	mg/ Nm ³	62	143	IS:11255 - P7
11	Carbon monoxide (CO)	%	< 0.2	< 0.2	IS:13270
12	Chlorine as Cl ₂	mg/ Nm ³	< 1	< 1	Wedmetric Method
TNPCB Standards - PM		mg/ Nm ³	150.0		
For Green Chem Solutions Pvt. Ltd. (Laboratory Division)					
 Authorized Signatory					

*** End of Report ***

Note: The results relate only to the samples tested. This test report shall not be reproduced without approval of the laboratory.
The samples will not be retained for more than 30 Months from the date of issue of test report.



GREEN CHEM SOLUTIONS PVT LTD

(ISO 14001:2015 Certified)

Laboratory Division

Plot No 4, Rajiv Gandhi Street, Udaya Nagar, A.N.E. Road, Oil Mill Road, Iyyappanthangal, Chennai - 600056.

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Test Report

Report No.	GC/VT/14/3195 B /2023-2024		Report Date	20.11.2023	
Customer Name & Address	M/s.ENNORE TANK TERMINALS PRIVATE LIMITED, Inside Ennore Port, Vallur Post, Thiruvallur District, Chennai - 600 120.				
Customer Reference	IMC/TER/GCSPL/WO/IXX/12-13 /2012				
Survey Description	Stack Monitoring	Sample Received on	15.11.2023		
Survey Conducted by	GCSPL	Test Commenced on	16.11.2023		
Survey Conducted on	14.11.2023	Test Completed on	18.11.2023		
S.No.	Descriptions	Unit	DG 180 KVA	DG 500 KVA	Reference Method
1	APC Measures Attached	-	Silencer	Silencer	---
2	Total Stack Height From 'G'Level	m	7.0	10.0	---
3	Stack Diameter	m	0.10	0.20	---
4	Ambient Temperature	°C	27	27	---
5	Stack Temperature	°C	125	247	---
6	Flue gas velocity	m/sec	23.16	21.22	IS:11255 - P3
7	Gaseous Emission	Nm ³ /hr	277	1373	IS:11255 - P3
8	Particulate Matter (PM)	mg/ Nm ³	15.3	25.8	IS:11255 - P1
9	Sulphur Di-Oxide (SO ₂)	mg/ Nm ³	5.2	8.6	IS:11255 - P2
10	Oxides of Nitrogen (NO _x)	mg/ Nm ³	55	129	IS:11255 - P7
11	Carbon monoxide (CO)	%	< 0.2	< 0.2	IS:13270
12	Chlorine as Cl ₂	mg/Nm ³	< 1	< 1	iodometric Method
TNPCE Standards - PM		mg/ Nm ³	150.0		
For Green Chem Solutions Pvt. Ltd.					
 Authorized Signatory					

*** End of Report ***

Note: The results relate only to the samples tested. This test report shall not be reproduced without approval of the laboratory. The samples will not be retained for more than one month from the date of issue of test report.



GREEN CHEM SOLUTIONS PVT LTD

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Laboratory Division

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Test Report

Report No.	GCS/5/MLM/3194 /2023-2024		Report Date	20.11.2023	
Customer Name & Address	M/s. ENNORE TANK TERMINALS PRIVATE LIMITED Inside Ennore Port, Vallur Post, Thirupalur District, Chennai - 600 120.				
Customer Reference	IMC/TER/GCSPL/WO/002/12-13 / 2022				
Description	Noise Level Monitoring	Monitoring Date	14.11.2023		
Monitored by	GCSPL	Date Received On	14.11.2023		
S.No.	Locations	Day Time		Night Time	
		Maximum	Minimum	Maximum	Minimum
1	Near Security Gate	70.3	63.1	62.7	56.6
2	Weigh Bridge	72.5	67.5	65.9	59.2
3	TLF IV	69.8	57.7	57.4	49.1
4	TLF I	64.9	60.3	58.6	51.5
5	Pump House - II	70.6	65.2	62.3	55.8
6	Near DG set	72.1	66.4	64.9	60.4
Unit		dB(A)		dB (A)	
TNPCB Standards (Industrial Area)		75.0		70.0	
Reference Method	Instruments Manual				
	For Green Chem Solutions Pvt Ltd (Laboratory Division)				

*** End of Report ***

Note: The results relate only to the samples tested. This test report shall not be reproduced without approval of the laboratory. The samples will not be retained for more than one month from the date of issue of test report.



GREEN CHEM SOLUTIONS PVT LTD

(ISO 14001:2015 Certified)

Laboratory Division

PLOT No.4, Rajiv Gandhi Street, Balaji Avenue, A.K Ethimal Road (Oil Mill Road), Iyyanpanghal, Chennai - 600096.

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Test Report

GREEN CHEM SOLUTIONS PVT LTD

Report of Analysis

MICROMETEOROLOGY SURVEY

Report No:	GCS/S/MM/ 3195 /2023-2024	Date:	20.11.2023
Name and Address of the industry :	M/s.ENNORE TANK TERMINALS PVT LTD , Inside Ennore Port, Vallur Post, Thiruvallur District, Chennai - 600 120.		
Date of Survey	14.11.2023		
Duration of Survey	24 hours		
Pollution Category	Red		
Industry Classification	Large		
Weather Condition	Clear Sky		
Ambient Temperature	Max: 27°C	Min:	24°C
Relative Humidity	Max: 94%	Min:	89%
Predominant Wind Direction	N		
Wind Speed (km/hr)	9.1		
Rainfall (mm)	Nil		

*** End of Report ***

Note: The results relate only to the samples tested. This test report shall not be reproduced without approval of the laboratory.
The samples will not be retained for more than 600 Month from the date of issue of test report.



GREEN CHEM SOLUTIONS PVT LTD

(ISO 14001:2015 Certified)

Laboratory Division

Plot No.4, Rajiv Gandhi Street, Balaji Avenue, A.N. Elumathala Road (Oil Mill. Road), Iyyappanthangal, Chennai - 600058.

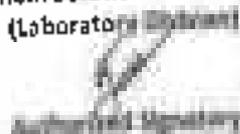
Tel: 044 42612103

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Email: info@greenchemsolutions.in

greenchemsolutions@gmail.com

Test Report

Report No.	GCS/S/AAQ/ J115 A /2023-2024		Report Date	27.10.2023				
Customer Name & Address	M/s.ENNORE TANK TERMINALS PRIVATE LIMITED Inside Ennore Port, Vallur East, Thiruvallur District, Chennai - 600 120.							
Customer Reference	IMC/TER/GCSPL/WO/002/12-17 /2012							
Survey Description	Ambient Air Quality Monitoring			Sample Received on	22.10.2023			
Survey Conducted by	GCSPL			Test Commenced on	23.10.2023			
Survey Conducted on	21.10.2023			Test Completed on	25.10.2023			
		Pollutants						
S. No.	Locations	PM ₁₀	PM _{2.5}	SO ₂	NO _x	Pb	CO	O ₂
1	Near Main Gate	68	25	7.6	18.2	NDL(D.L.0.5)	BDL(D.L.1.0)	20.9
2	Weigh Bridge	71	26	7.2	17.5	BUL(D.L.0.5)	BDL(D.L.1.0)	20.9
3	Near Power House	58	22	8.1	18.9	BUL(D.L.0.5)	BDL(D.L.1.0)	20.9
4	Near Fire Engine Plant	63	24	7.4	16.5	BDL(D.L.0.5)	BDL(D.L.1.0)	20.9
Unit		µg/m ³	µg/m ³	µg/m ³	µg/m ³	µg/m ³	mg/m ³	%
NAAQ Standards (Industrial, Residential & Rural Area)		100	60	80	80	1.0	4	-
Reference Method IS 5182		Part 23	Part 24	Part 2	Part 6	Part 22	Part 10	IS 13770
PM ₁₀	Particulate Matter (Size less than 10µm)				NO _x	Oxides of Nitrogen		
PM _{2.5}	Particulate Matter (Size less than 2.5µm)				CO	Carbon Monoxide		
SO ₂	Sulphur Di-Oxide				Pb	Lead		
O ₂	Oxygen				BDL: Below Detection Limit D.L: Detection Limit			
For Green Chem Solutions Pvt Ltd (Laboratory Division)								 Authorized Signature

*** End of Report ***

Note: 1) The results relate only to the samples tested. This test report shall not be reproduced without approval of the laboratory.
2) The samples will not be retained for more than one month from the date of issue of test report.



GREEN CHEM SOLUTIONS PVT LTD

(ISO 14001:2015 Certified)

Laboratory Division

Plot No.4, Rajiv Gandhi Street, Balaji Nagar, A.N. Shastri Road (Old Mill Road), Iyyappanthangal, Chennai - 600096.

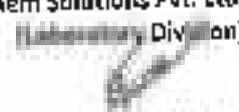
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greenchemsolutions@gmail.com

Test Report

Report No.	GCS/S/AMB/1116 6 /2023-2024			Report Date	27.10.2023
Customer Name & Address	M/s.ENNORE TANK TERMINALS PRIVATE LIMITED, Inside Ennore Port, Vallur Post, Thiruvallur District, Chennai - 600 120.				
Customer Reference	IMC/TER/GCSPL/WO/002/12-13/2012				
Survey Description	AAQ Monitoring - TUF 1	Sample Received on	27.10.2023		
Survey Conducted by	GCSPL	Test Commenced on	23.10.2023		
Survey Conducted on	21.10.2023	Test Completed on	25.10.2023		
S.No	PARAMETER	UNITS	RESULTS	REFERENCE METHOD	AAQ Standards (Industrial, Residential & Rural Area)
1	PM ₁₀	µg/m ³	69	IS 5182 - Part 2A	100
2	PM _{2.5}	µg/m ³	27	IS 5182 - Part 2A	60
3	Oxides of Sulphur as SO ₂	µg/m ³	9.4	IS 5182 - Part 7	80
4	Oxides of Nitrogen as NO ₂	µg/m ³	15.9	IS 5182 - Part 6	80
5	Lead as Pb	µg/m ³	BDL(DL:0.5)	IS 5182 - Part 22	1
6	Carbon monoxide as CO	mg/m ³	BDL(DL:1.0)	IS 5182 - Part 10	4
7	Ozone as O ₃	µg/m ³	BDL(DL:2.0)	IS 5182 - Part 9	180
8	Ammonia as NH ₃	µg/m ³	BDL(DL:2.0)	IS 5182 - Part 25	400
9	Benzene as C ₆ H ₆	µg/m ³	BDL(DL:1.0)	IS 5182 : Part 11	5
10	Benzene (α) pyrene	ng/m ³	BDL(DL:0.1)	IS 5182 : Part 17	1
11	Arsenic as As	ng/m ³	BDL(DL:1.0)	GCS/Lab/SOP/089	6
12	Nickel as Ni	ng/m ³	BDL(DL:5.0)	IS 5182 - Part 2b	20
BDL: Below Detection Limit DL: Detection Limit					
					For Green Chem Solutions Pvt. Ltd. (Laboratory Division)
					 Authorized Signatory

*** End of Report ***

Note: The results relate only to the analyses tested. This is a result sheet and to be reproduced without approval of the laboratory. If a sample is not retained for future reference, please forward this to the date of issuance of test report.



GREEN CHEM SOLUTIONS PVT LTD

(ISO 14001:2015 Certified)

Laboratory Division

Plot No.4, Raju Gandhi Street, [Address], A.H.Elumthala Road (Old Mill Road), Ayappantheega, Chennai - 600056.

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Test Report

Report No.	GCS/S/NLM/ 3117 /2023-2024		Report Date	27.10.2023	
Customer Name & Address	M/s.ENNORE TANK TERMINALS PRIVATE LIMITED Inside Ennore Port, Vallur Post, Thiruvallur District, Chennai - 600 120.				
Customer Reference	IMC/TER/GCSPL/WO/002/12-13 / 2012				
Description	Noise Level Monitoring	Monitoring Date	21.10.2023		
Monitored by	GCSPL	Data Received On	22.10.2023		
S.No	Locations	Day Time		Night Time	
		Maximum	Minimum	Maximum	Minimum
1	Near Security Gate	71.4	66.9	64.0	56.8
2	Weigh Bridge	73.7	67.2	67.7	60.5
3	TLF IV	66.0	53.0	60.9	52.6
4	TLF I	63.8	60.2	59.6	53.2
5	Pump House - II	71.2	64.9	65.3	54.9
6	Near DG set	72.5	67.6	66.8	62.7
Unit		dB(A)		dB (A)	
TNPSB Standards (Industrial Area)		75.0		70.0	
Reference Method	Instruments Manual For Green Chem Solutions Pvt Ltd				
				 Authorized Signatory	

*** End of Report ***

Note : The results relate only to the samples tested. This test report shall not be reproduced without approval of the laboratory. The samples will not be retained for more than one month from the date of issue of test report.



GREEN CHEM SOLUTIONS PVT LTD

(ISO 14001:2015 Certified)

Laboratory Division

Plot No.4, Rajiv Gandhi Street, Balajinagar, A N Ethimalai Road (Old Mill Road), Iyyappanthangal, Chennai - 600055.

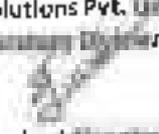
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Test Report

Report No.	GCS/TER/3118 A/2023-2024		Report Date	27.10.2023	
Customer Name & Address	M/s.ENMORE TANK TERMINALS PRIVATE LIMITED, Inside Ennore Port, Vallur Post, Thiruvallur District, Chennai - 600 120.				
Customer Reference	IMC/TER/GCSPL/WO/202/22 LS /2012				
Survey Description	Stack Monitoring	Sample Received on	21.10.2023		
Survey Conducted by	GCSPL	Test Commenced on	23.10.2023		
Survey Conducted on	21.10.2023	Test Completed on	25.10.2023		
S.No	Descriptions	Unit	DG 150 KVA	DG 500 KVA	Reference Method
1	APC Measures Attached	-	Silencer	Silencer	---
2	Total Stack Height Form 'C' Level	m	7.0	10.0	---
3	Stack Diameter	m	0.10	0.20	---
4	Ambient Temperature	°C	29	29	---
5	Stack Temperature	°C	139	208	---
6	Flue gas velocity	m/sec	14.87	18.94	IS:11255 - P3
7	Gaseous Emission	km ³ /hr	304	1324	IS:11255 - P3
8	Particulate Matter (PM)	mg/ Nm ³	18.6	22.1	IS:11255 - P1
9	Sulphur Di-Oxide (SO ₂)	mg/ Nm ³	6.1	6.8	IS:11255 - P2
10	Oxides of Nitrogen (NO _x)	mg/ Nm ³	59	123	IS:11255 - P7
11	Carbon monoxide (CO)	%	< 0.2	< 0.2	IS:13270
12	Chlorine as Cl ₂	mg/Km ³	< 1	< 1	Iodometric Method
TNPCB Standards - PM		mg/ Nm ³	150.0		
For Green Chem Solutions Pvt. Ltd. (Laboratory Division)					
 Authorized Signatory					

*** End of Report ***

Note: The results relate only to the samples tested. This test report shall not be reproduced without approval of the laboratory. The samples will not be returned for more than one to with 15 days from the date of issue of test report.



GREEN CHEM SOLUTIONS PVT LTD

(ISO 14001:2015 Certified)

Laboratory Division

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Test Report

Report No	GCS/S/SM/3118 B	2023-2024	Report Date	27.10.2023	
Customer Name & Address	M/s.ENNORE TANX TERMINALS PRIVATE LIMITED, Inside Ennore Port, Vallur Post, Thiruvallur District, Chennai - 600 120.				
Customer Reference	IMC/IER/GCSPL/WO/CO2/12-13/2023				
Survey Description	Stack Monitoring	Sample Received on	21.10.2023		
Survey Conducted by	GCSPL	Test Commenced on	23.10.2023		
Survey Conducted on	21.10.2023	Test Completed on	25.10.2023		
S.No.	Descriptions	Unit	DG 180 KVA	DG 500 KVA	Reference Method
1	APC Measures Attached		Silencer	Silencer	---
2	Total Stack Height From 'G'Level	m	7.0	10.0	---
3	Stack Diameter	m	0.10	0.20	---
4	Ambient Temperature	°C	31	31	---
5	Stack Temperature	°C	136	272	---
6	Flue gas velocity	m/sec	13.85	20.04	IS:11255 - P3
7	Gaseous Emission	Nm ³ /hr	285	1237	IS:11255 - P3
8	Particulate Matter (PM)	mg/ Nm ³	16.2	26.3	IS:11255 - P1
9	Sulphur Di-Oxide (SO ₂)	mg/ Nm ³	5.4	9.0	IS:11255 - P2
10	Oxides of Nitrogen (NO _x)	mg/ Nm ³	61	112	IS:11255 - P7
11	Carbon monoxide (CO)	%	< 0.2	< 0.2	IS:1327C
12	Chlorine as Cl ₂	mg/ Nm ³	< 1	< 1	Iodometric Method
TNPCB standards - PM		mg/ Nm ³	150.0		
For Green Chem Solutions Pvt. Ltd. [Laboratory Division]  Authorized Signatory					

*** End of Report ***

Note: The results relate only to the samples tested. This test is not valid if a clear reproduction of either an approval of the laboratory or the samples will not be retained by the laboratory. Contact the laboratory for the date of issue of test report.



GREEN CHEM SOLUTIONS PVT LTD

(ISO 14001:2015 Certified)

Laboratory Division

Plot No.4, Rajiv Gandhi Street, Balaji Nagar, S.S. Elumthala Road (Off Mill Road), Iyyappanthangal, Chennai - 600056.

Tel: 044 42612403

Website: www.greenchemsolutions.in

Email: info@greenchemsolutions.in

greenchemsolutions@gmail.com

Test No: 2023

Report No	GCS/W/ 3146 /2023-2024	Report Date	27.10.2023		
Customer Name & Address	M/s.ENNORE TANK TERMINUS PRIVATE LIMITED Inside Ennore Port, Vallur Post, Thiruvallur District, Chennai - 600 120.				
Survey Description	ETP Outlet	Sample Received On	21.10.2023		
Sample Drawn By	GCSP.	Test Commenced On	21.10.2023		
Sample Collected Date	21.10.2023	Test Completed On	25.10.2023		
S.No	PARAMETERS	UNITS	RESULTS	TEST METHOD	TNPSB Norms for Treated Effluent
1.	pH @ 25°C	-	7.64	IS:3025/11/2022	5.5 - 9.0
2.	Total Dissolved Solids	mg/l	798	IS:3025/116/1983Reaff 2017	2100
3.	Total Suspended Solids	mg/l	27	IS:3025/117/2017	100
4.	Chemical Oxygen Demand	mg/l	85	IS:3025/158/1000Reaff 2017	250
5.	BOD (for 3 days at 27°C)	mg/l	14	IS:3025/144/1983Reaff 2019	30
6.	Oil & Grease	mg/l	BDL(D.L.1.C)	IS:3025/133/2021	10
BDL Below Detection Limit D.L - Detection Limit					
For GREEN CHEM SOLUTIONS PVT LTD (Laboratory Division)					
 Authorized Signatory					

** End of Report **

Note: The results relate only to the sample tested. This report is not to be reproduced without approval of the laboratory. The samples will not be returned but will be destroyed with the date of issuance of this report.



GREEN CHEM SOLUTIONS PVT LTD

(ISO 14001:2015 Certified)

Laboratory Division

Plot No.4, Rajiv Gandhi Street, Balaji Nagar, A.N. Elumalai Road, (Old Bus Stand), Myyappanthangal, Chennai - 600058.

Tel: 044 42612103

Website: www.greenchemsolutions.in

Email: info@greenchemsolutions.in

greenchemsolutions@gmail.com

Test Report

GREEN CHEM SOLUTIONS PVT LTD

Report of Analysis

MICROMETEOROLOGY SURVEY

Report No: GCS/S/WM/ 3119 /2023-2024

Date : 27.10.2023

Name and Address of the Industry : M/s. ENVIRO TANK TERMINALS PVT LTD,
inside Ennore Port, Vallur Post,
Thiruvallur District,
Chennai - 600120.

Date of Survey : 21.10.2023

Duration of Survey : 24 hours

Pollution Category : Red

Industry Classification : Large

Weather Condition : Clear Sky

Ambient Temperature : Max: 31°C Min : 25°C

Relative Humidity : Max : 85% Min : 58%

Predominant Wind Direction : North

Wind Speed (km/hr) : 0.4

Rainfall (mm) : Nil

*** End of Report ***

Note : The results relate only to the samples tested. This test report should not be reproduced without approval of the laboratory.
The samples will not be retained for more than 7 (seven) days from the date of issue of test report.



GREEN CHEM SOLUTIONS PVT LTD

(ISO 14001:2015 Certified)

சென்னை கிளையின் முகவரி

Plot No.4, Raju Gandhi Street, Balaji Avenue, A N Chinnai Road (Old Mill Road), Iyappanthangal, Chennai - 600056.

Tel: 044 42612103

Email: info@greenchemsolutions.in

Website: www.greenchemsolutions.com

greenchemsolutions@gmail.com

Test Reports

Report No.	GCS/S/AAQ/ 1040 A /2023 2023		Report Date	20.09.2023				
Customer Name & Address	M/s.ENNORE TANK TERMINALS PRIVATE LIMITED Inside Ennore Port, Vallur Pally, Thiruvallur District, Chennai - 600 120.							
Customer Reference	MC/TER/GCSPL/WQ/002/12-13/2012							
Survey Description	Ambient Air Quality Monitoring		Sample Received on	16.09.2023				
Survey Conducted by	GCSPL		Test Commenced on	16.09.2023				
Survey Conducted on	15.09.2023		Test Completed on	16.09.2023				
S. No.	Locations	Pollutants						
		PM ₁₀	PM _{2.5}	SO ₂	NO _x	Pb	CO	O ₂
1	Near Main Gate	63	24	7.9	18.6	BDL(B.L.0.5)	BDL(B.L.1.0)	20.9
2	Weigh Bridge	66	21	7.6	17.3	BDL(B.L.0.5)	BDL(B.L.1.0)	20.9
3	Near Power House	54	25	8.3	19.0	BDL(B.L.0.5)	BDL(B.L.1.0)	20.9
4	Near Fire Engine Plant	58	22	7.1	16.2	BDL(B.L.0.5)	BDL(B.L.1.0)	20.9
Unit		µg/m ³	µg/m ³	µg/m ³	µg/m ³	µg/m ³	mg/m ³	%
MAAQ Standards (Industrial, Residential & Rural Area)		100	60	80	80	1.0	4	-
Reference Method - IS : 5182		Part 23	Part 24	Part 2	Part 6	Part 22	Part 10	IS 13270
PM ₁₀	Particulate Matter (Size less than 10µm)				NO _x	Oxides of Nitrogen		
PM _{2.5}	Particulate Matter (Size less than 2.5µm)				CO	Carbon Monoxide		
SO ₂	Sulphur Di-Oxide				Pb	Lead		
O ₂	Oxygen				BDL: Below Detection Limit, D.L: Detection Limit.			
								For Green Chem Solutions Pvt Ltd (Laboratory Director)
								Authorized Signatory

*** End of Report ***

Note: The results relate only to the samples tested. The report is not valid if it is reproduced without a formal approval of the Laboratory. The samples will not be retained for more than one (1) month from the date of issue of test report.



GREEN CHEM SOLUTIONS PVT LTD

(ISO 14001:2015 Certified)

Laboratory Division

Plot No.4, Rajiv Gandhi Street, Balaji Enclave, A.N. Chettiar Road (Old Hill Road), Teyyanankuppam, Chennai - 600056.

Tel: 044 42612103

Website: www.greenchemsolutions.com

Email: info@greenchemsolutions.in

greenchemsolutions@gmail.com

Test Report

Report No	GCS/S/AAQ/3040 B /2023-2024			Report Date	20.09.2023
Customer Name & Address	M/s.ENNORE TANK TERMINALS PRIVATE LIMITED, Inside Ennore Port, Vallur Post, Thiruvallur District, Chennai - 600 120.				
Customer Reference	MC/TFR/GCSPL/WO/002/22-23/2012				
Survey Description	AAQ Monitoring - TLF 1	Sample Received on	16.09.2023		
Survey Conducted by	GCSPL	Test Commenced on	16.09.2023		
Survey Conducted on	15.09.2023	Test Completed on	18.09.2023		
S.No	PARAMETER	UNITS	RESULTS	REFERENCE METHOD	CAAQ Standards (Industrial, Residential & Rural Area)
1	PM ₁₀	µg/m ³	67	IS 5182 - Part 23	100
2	PM _{2.5}	µg/m ³	28	IS 5182 - Part 24	60
3	Oxides of Sulphur as SO ₂	µg/m ³	41	IS 5182 - Part 2	80
4	Oxides of Nitrogen as NO ₂	µg/m ³	18.5	IS 5182 - Part 6	80
5	Lead as Pb	µg/m ³	BDL(DL:0.5)	IS 5182 - Part 22	1
6	Carbon monoxide as CO	mg/m ³	BDL(DL:1.0)	IS 5182 - Part 10	4
7	Ozone as O ₃	µg/m ³	NDL(DL:2.0)	IS 5182 - Part 9	180
8	Ammonia as NH ₃	µg/m ³	BDL(DL:2.0)	IS 5182 - Part 25	400
9	Benzene as C ₆ H ₆	µg/m ³	BDL(DL:1.0)	IS 5182 - Part 11	5
10	Benzene (o) pyrene	ng/m ³	BDL(DL:0.1)	IS 5182 - Part 12	1
11	Arsenic as As	ng/m ³	BDL(DL:1.0)	GCS/Lab/SOP/089	6
12	Nickel as Ni	ng/m ³	BDL(DL:5.0)	IS 5182 - Part 2b	20
BDL: Below Detection Limit. D.L: Detection Limit					
					For Green Chem Solutions Pvt. Ltd. (Authorized Signatory) Authorized Signatory

*** End of Report ***

Note: The results relate only to the samples provided. It is the responsibility of the client to ensure the correct use and handling of the laboratory. The samples will not be retained for more than 15 days from the date of test report.



GREEN CHEM SOLUTIONS PVT LTD

(ISO 14001:2015 Certified)

Environmental Monitoring Division

Plot No.4, Rajiv Gandhi Steel, Balaji Avenue, A.N.Bhambala Road (Or Mill Road), Iyappanthangal, Chennai - 600050.

Tel: 044 42612103

Website: www.greenchemsolutions.com

Email: info@greenchemsolutions.in

greenchemsolutions@gmail.com

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Report No	GCS/S/ELM/ 3041 /2023-2024		Report Date	20.09.2023	
Customer Name & Address	M/s.ENNORE TANK TERMINALS PRIVATE LIMITED Inside Ennore Port, Vallur Post, Thiruvallur District, Chennai - 600 120.				
Customer Reference	IMC/TER/GCSPL/WO/007/12-15 / 2012				
Description	Noise Level Monitoring	Monitoring Date	15.09.2023		
Monitored by	GCSPL	Date Received On	15.09.2023		
S.No.	Locations	Day Time		Night Time	
		Maximum	Minimum	Maximum	Minimum
1	Near Security Gate	70.2	67.1	65.3	57.5
2	Weight Bridge	72.8	66.9	66.0	58.8
3	TUF IV	66.4	58.6	62.4	54.6
4	ILF :	64.1	59.3	60.2	50.9
5	Pump House - II	71.7	65.2	64.5	53.7
6	Near DG set	73.6	68.0	68.1	64.3
Unit		dB(A)		dB (A)	
TNPCB Standards (Industrial Area)		75.0		70.0	
Reference Method	Instruments Manual For Green Chem Solutions Pvt Ltd (Laboratory Division)				
 Authorized Signatory					

*** End of Report ***

Note: The results relate only to the samples tested. The test is not valid for comparison without approval of the laboratory.
The samples submitted are returned for the client. The monitoring is dated on the date of test report.



GREEN CHEM SOLUTIONS PVT LTD

(ISO 14001:2015 Certified)

Lab No: GCS/5/SM/3042 A/2023-2024

Plot No.4, Ray Gandhi Street, Balaji Nagar, A.N.Chennai Road (Old Mill Road), Iyappanthangal, Chennai - 600056.

Tel: 044 42612103

Website: www.greenchemsolutions.in

Email: info@greenchemsolutions.in

greenchemsolutions@gmail.com

Test Report

Report No.	GCS/5/SM/3042 A/2023-2024		Report Date	20.09.2023	
Customer Name & Address	M/s.ENNORE TANK TERMINALS PRIVATE LIMITED, Inside Ennore Port, Vallur Post, Thiruvallur District, Chennai - 600120.				
Customer Reference	IMC/100/GCSPL/960/00/12-11/2012				
Survey Description	Stack Monitoring	Sample Received on	16.09.2023		
Survey Conducted by	GCSPL	Test Commenced on	15.09.2023		
Survey Conducted on	15.09.2023	Test Completed on	18.09.2023		
S.No.	Descriptions	Unit	DG 250 EVA	DG 500 EVA	Reference Method
1	APC Measures Attached	—	Silencer	Silencer	—
2	Total Stack Height From 'G'Level	m	7.0	10.0	—
3	Stack Diameter	m	0.70	0.70	—
4	Ambient Temperature	°C	30	30	—
5	Stack Temperature	°C	144	215	—
6	Flue gas velocity	m/sec	15.24	19.33	IS:11255 - P3
7	Gaseous Emission	Nm ³ /hr	307	1332	IS:11255 - P3
8	Particulate Matter (PM)	mg/Nm ³	19.2	22.9	IS:11255 - P1
9	Sulphur Di-Oxide (SO ₂)	mg/Nm ³	6.3	7.0	IS:11255 - P2
10	Oxides of Nitrogen (NO _x)	mg/Nm ³	75	137	IS:11255 - P7
11	Carbon monoxide (CO)	%	< 0.2	< 0.2	IS:13270
12	Chlorine as Cl ₂	mg/Nm ³	< 1	< 1	iodometric Method
TNPCB Standards - PM		mg/Nm ³	150.0		
For Green Chem Solutions Pvt. Ltd. (Laboratory Director)					
Authorized Signatory					

*** End of Report ***

Note: The results relate only to the samples tested. The test is performed in accordance with the protocol of the laboratory. The samples will not be re-analyzed unless specifically stated in the date of issue of test report.



GREEN CHEM SOLUTIONS PVT LTD

(ISO 14001:2015 Certified)

|| Laboratory Accreditation ||

Plot No 4, Rajiv Gandhi Street, Bala Avenue, A.P. Ekmalai Road (Old M H Road), Iyappanthangal, Chennai - 600056.

Tel: 044 42612103

Website: www.greenchemsolutions.in

Email: info@greenchemsolutions.in

greenchemsolutions@gmail.com

TEST REPORT

Report No.	GCS/S/SM/ 3042 B /2023-2024		Report Date	20.09.2023	
Customer Name & Address	M/s. ENMORE TANK YERWINALS PRIVATE LIMITED, Inside Ennore Port, Vallur Post, Thiruvallur District, Chennai - 600 120.				
Customer Reference	IMC/IEB/GCPI/MC/002/12-13 /2012				
Survey Description	Stack Monitoring	Sample Received on	16.09.2023		
Survey Conducted by	GCSP1	Test Commenced on	16.09.2023		
Survey Conducted on	15.09.2023	Test Completed on	18.09.2023		
S.No.	Descriptions	Unit	DG 180 KVA	DG 500 KVA	Reference Method
1	APC Measures Attached		Slencer	Slencer	---
2	Total Stack Height From 'G' Level	m	7.0	13.0	---
3	Stack Diameter	m	0.10	0.20	---
4	Ambient Temperature	°C	32	37	---
5	Stack Temperature	°C	131	260	---
6	Flue gas velocity	m/sec	13.42	20.16	IS:11255 - P3
7	Gasous emission	dm ³ /hr	270	1772	IS:11255 - P3
8	Particulate Matter (PM)	ng/ Nm ³	15.6	25.7	IS:11255 - P1
9	Sulphur D.-Oxide (SO ₂)	ng/ Nm ³	5.1	8.6	IS:11255 - P2
10	Oxides of Nitrogen (NO _x)	ng/ Nm ³	56	135	IS:11255 - P7
11	Carbon monoxide (CO)	%	< 0.2	< 0.2	IS:13270
12	Chlorine as Cl ₂	ng/ Nm ³	< 1	< 1	Iodometric Method
TNPCB Standards - FM		ng/ Nm ³	150.0		
For Green Chem Solutions Pvt. Ltd. (Laboratory Division)					
 Authorized Signatory					

*** End of Report ***

Note: The results relate only to the samples tested. The samples are of low to medium production with a coverage of the laboratory. The samples will not be returned for more than one month from the date of issue of a report.



GREEN CHEM SOLUTIONS PVT LTD

(ISO 14001:2015 Certified)

Laboratory Division

Plot No.4, Rajiv Gandhi Street, Balaji Avenue, A & B, Elumalai Road (Oil Mill Road), Iyyappanthesai, Chennai - 600056.

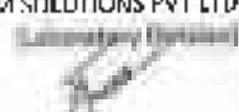
Tel: 044 42612103

Website: www.greenchemsolutions.com

Email: info@greenchemsolutions.in

greenchemsolutions@gmail.com

Test Report

Report No	GCS/W/ 3101/2023-2024	Report Date	20.09.2023		
Customer Name & Address	M/s. ENnore TANK TERMINALS PRIVATE LIMITED Inside Ennore Port, Vallur Post, Thiruvallur District, Chennai - 600 120.				
Survey Description	ETP Outlet	Sample Received On	15.09.2023		
Sample Drawn By	GCSPL	Test Commenced On	15.09.2023		
Sample Collected Date	15.09.2023	Test Completed On	20.09.2023		
S.No	PARAMETERS	UNITS	RESULTS	TEST METHOD	TNPCB Norms For Treated Effluent
1.	pH @ 25°C	—	7.56	IS 3025/P11/2002	5.5 - 9.0
2.	Total Dissolved Solids	mg/l	273	IS 3025/P16/1934Recall 2017	2100
3.	Total Suspended Solids	mg/l	10	IS 3025/P17/2022	100
4.	Chemical Oxygen Demand	mg/l	76	IS 3025/P58/2006Recall 2017	250
5.	BOD (for 3 days at 27°C)	mg/l	13	IS 3025/P44/1995Recall 2019	30
6.	Oil & Grease	mg/l	BDL(0.1 L 0)	IS 3025/199/2021	10
BDL: Below Detection Limit (L); Detection limit					
For GREEN CHEM SOLUTIONS PVT LTD Laboratory Division  Authorized Signatory					

*** End of Report ***

Note: The results are only for the samples tested. This test report shall not be reproduced without approval of the laboratory. The samples will not be retained for more than one (1) month from the date of issue of test report.



GREEN CHEM SOLUTIONS PVT LTD

(ISO 14001:2015 Certified)

Laboratory Division

Plot No.4, Rajiv Gandhi Street, Balaji Industrial Estate, A.N.E.I. (Old) (Old Mill Road), Eyyappanthangal, Chennai - 600058.

Tel: 044 42612103

Website: www.greenchemsolutions.com

Email: info@greenchemsolutions.in

greenchemsolutions@gmail.com

Test Report

GREEN CHEM SOLUTIONS PVT LTD

Report of Analysis

MICROMETEOROLOGY SURVEY

Report No: GCS/S/MM/3043/2023-2024

Date: 20.09.2023

Name and Address of the industry : M/s. ERNORE TANK TERMINALS PVT LTD,
Inside Ennore Port, Vallur Post,
Tiruvallur District,
Chennai - 600 120.

Date of Survey : 15.09.2023

Duration of Survey : 24 hours

Pollution Category : Red

Industry Classification : Large

Weather Condition : Clear Sky

Ambient Temperature : Max: 35°C Min : 27°C

Relative Humidity : Max : 84% Min : 56%

Predominant Wind Direction : SW

Wind Speed (km/hr) : 19.2

Rainfall (mm) : Nil

*** End of Report ***

Note: The results relate only to the samples tested. This test result shall not be reproduced without approval of the laboratory.
The samples will not be retained for more than one month from the date of issue of test report.



GREEN CHEM SOLUTIONS PVT LTD

(ISO 14001:2015 Certified)

Laboratory Division

Plot No 4, Rajiv Gandhi Street, Balaji Avenue, A N. Elumalai Road (Old Mill Road), Iyyappanallangal, Chennai - 600056.

Tel: 044 42612103

Website: www.greensolutions.com

Email: info@greenchemsolutions.in

greenchemsolutions@gmail.com

Test Report

Report No.	GCS/S/AAQ/ 2934 A /2023-2024		Report Date	20.08.2023				
Customer Name & Address	M/s.EMMORE TANK TERMINALS PRIVATE LIMITED Inside Emmore Port, Vallur Post, Thiruvallur District, Chennai - 600 120.							
Customer Reference	IMC/TER/GCSPL/WO/002/12 13 /2012							
Survey Description	Ambient Air Quality Monitoring		Sample Received on	24.08.2023				
Survey Conducted by	GCSPL		Test Commenced on	25.08.2023				
Survey Conducted on	23.08.2023		Test Completed on	26.08.2023				
S. No.	Locations	Pollutants						
		PM ₁₀	PM _{2.5}	SO ₂	NO _x	Pb	CO	O ₂
1	Near Main Gate	68	26	8.7	19.5	BDL(D.L: 0.5)	BDL(D.L: 10)	20.9
2	Weigh Bridge	72	27	8.3	18.5	BDL(D.L: 0.5)	BDL(D.L: 10)	20.9
3	Near Power House	58	20	7.6	17.6	BDL(D.L: 0.5)	BDL(D.L: 10)	20.9
4	Near Fire Engine Plant	55	19	7.0	15.7	BDL(D.L: 0.5)	BDL(D.L: 10)	20.9
Unit		µg/m ³	µg/m ³	µg/m ³	µg/m ³	µg/m ³	mg/m ³	%
NAAQ Standards (Industrial, Residential & Rural Area)		100	60	80	60	1.0	4	-
Reference Method - IS : 5182		Part 23	Part 24	Part 2	Part 6	Part 22	Part 10	IS 13270
PM ₁₀	Particulate Matter (less than 10µm)	NO _x		Oxides of Nitrogen				
PM _{2.5}	Particulate Matter (less than 2.5µm)	CO		Carbon Monoxide				
SO ₂	Sulphur Di-Oxide	Pb		Lead				
O ₂	Oxygen	BDL: Below Detection Limit. D.L: Detection Limit						
For Green Chem Solutions Pvt Ltd (Laboratory Division)								 Authorized Signatory

*** End of Report ***

Note: The report is valid only for the samples tested. This report shall not be reproduced without approval of the laboratory. The samples will be retained for more than one month from the date of issue of test report.



GREEN CHEM SOLUTIONS PVT LTD

(ISO 14001:2015 Certified)

Laboratory Division

Plot No.4, Rajiv Gandhi Street, Balaji Nagar, A.N.T. Junction, Old Madhavaram Road, Teyyanpattinam, Chennai - 600058.

Tel: 044 42612103

Website: www.greenchemsolutions.com

Email: info@greenchemsolutions.in

greenchemsolutions@gmail.com

Test Report

Report No.	GCS/S/AAQ/ 2934 0 /2023-7024			Report Date	29.08.2023
Customer Name & Address	M/s.ENNORE TANK TERMINALS PRIVATE LIMITED, Inside Ennore Port, Vallur Post, Thiruvallur District, Chennai - 600 120.				
Customer Reference	IMC/TER/GCSPL/NO/002/12-13 /2012				
Survey Description	AAQ Monitoring - TLF I	Sample Received on	24.08.2023		
Survey Conducted by	GCSFL	Test Commenced on	25.08.2023		
Survey Conducted on	24.08.2023	Test Completed on	26.08.2023		
S.No	PARAMETER	UNITS	RESULTS	REFERENCE METHOD	AAQ Standards (Industrial, Residential & Rural Area)
1	PM ₁₀	µg/m ³	66	IS 5182 - Part 23	200
2	PM _{2.5}	µg/m ³	26	IS 5182 - Part 24	60
3	Oxides of Sulphur as SO ₂	µg/m ³	4.5	IS 5182 - Part 2	80
4	Oxides of Nitrogen as NO ₂	µg/m ³	17.3	IS 5182 - Part 6	80
5	Lead as Pb	µg/m ³	BDL (DL:0.5)	IS 5182 - Part 22	1
6	Carbon monoxide as CO	mg/m ³	BDL (DL: 1.0)	IS 5182 - Part 10	4
7	Ozone as O ₃	µg/m ³	BDL (DL: 2.0)	IS 5182 - Part 9	180
8	Ammonia as NH ₃	µg/m ³	BDL (DL: 2.0)	IS 5182 - Part 25	400
9	Benzene as C ₆ H ₆	µg/m ³	BDL (DL: 1.0)	IS 5182 - Part 11	5
10	Benzene (α) pyrene	ng/m ³	BDL (DL: 0.1)	IS 5182 - Part 12	1
11	Arsenic as As	ng/m ³	BDL (DL: 1.0)	GCS/Tab/SOP/099	6
12	Nickel as Ni	ng/m ³	6/3 (DL: 5.0)	IS 5182 - Part 26	20
For Green Chem Solutions Pvt. Ltd.					
					
Authorized Signatory					

*** End of Report ***

Note: This test is valid only for the samples tested. This data is not to be reproduced without approval of the laboratory. The samples will only be retained for more than 2 months from the date of issue of test report.



GREEN CHEM SOLUTIONS PVT LTD

(ISO 14001:2015 Certified)

Laboratory Division

Plot No.4, Rajiv Gandhi Street, Balaji Avenue, K. K. E. (K. K. E. Road), Iyyappanthangal, Chennai - 600056.

Tel. 044 47812103

Website: www.greenchemsolutions.com

Email: info@greenchemsolutions.in

greenchemsolutions@gmail.com

Test Report

Report No.	GCS/S/NLM/ 2945 /2023-2024		Report Date	29.08.2023	
Customer Name & Address	M/s. ENNORE TANK TERMINALS PRIVATE LIMITED Inside Ennore Port, Vallur Post, Thiruvaiyur District, Chennai - 600 120.				
Customer Reference	IMC/TER/GCSPL/WC/007/12-13 / 2012				
Description	Noise Level Monitoring	Monitoring Date	23.08.2023		
Monitored by	GCSP.	Data Received On	24.08.2023		
S.No.	Locations	Day Time		Night Time	
		Maximum	Minimum	Maximum	Minimum
1	Near Security Gate	72.4	68.1	66.7	58.5
2	Weigh Bridge	71.9	67.5	66.8	59.3
3	TLF IV	65.6	57.8	60.6	52.9
4	TLF I	62.7	59.2	58.7	52.7
5	Pump House - II	73.1	63.6	66.4	55.1
6	Near DG set	72.5	62.4	69.3	65.6
Unit		dB(A)		dB (A)	
INPCB Standards (Industrial Area)		75.0		70.0	
Reference Method	Instrument's Manual				
	For Green Chem Solutions Pvt Ltd (Laboratory Division)  Authorized Signatory				

*** End of Report ***

Note: The results relate only to the samples tested. This test report shall not be reproduced without approval of the laboratory. The samples will not be returned for more than four months from the date of issue of test report.



GREEN CHEM SOLUTIONS PVT LTD

(ISO 14001:2015 Certified)

Laboratory Division

Plet No.4, Rajiv Gandhi Street, Balaji Avenue, A.I.I. Elambakkam Road (Oil Mill Road), Iyyappanthangal, Chennai - 600056

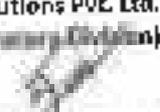
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Website: www.greenchemsolutions.com

Email: info@greenchemsolutions.in

greenchemsolutions@gmail.com

Test Report

Report No.	GCS/S/SM/2936 A /2023-2024			Report Date	29.08.2023
Customer Name & Address	M/s.ENNORE TANK TERMINALS PRIVATE LIMITED, Inside Ennore Port, Vallur Post, Tiruvallur District, Chennai - 600 120.				
Customer Reference	IMC/TCR/GCSPL/WO/002/12-13 /2012				
Survey Description	Stack Monitoring	Sample Received on	23.08.2023		
Survey Conducted by	GCSPL	Test Commenced on	23.08.2023		
Survey Conducted on	23.08.2023	Test Completed on	26.08.2023		
S.No	Descriptions	Unit	DG 250 KVA	DG 500 KVA	Reference Method
1	APC Measures Attached		Silencer	Silencer	
2	Total Stack Height from 'G'Level	m	7.0	10.0	
3	Stack Diameter	m	0.10	0.20	
4	Ambient Temperature	°C	30	30	
5	Stack Temperature	°C	149	732	
6	Flue gas velocity	m/sec	14.61	21.26	IS:11255 - P3
7	Gaseous Emission	Nm ³ /hr	291	1417	IS:11255 - P3
8	Particulate Matter (PM ₁₀)	mg/ Nm ³	18.2	26.4	IS:11255 - P1
9	Sulphur Di-Oxide (SO ₂)	mg/ Nm ³	5.6	7.5	IS:11255 - P2
10	Oxides of Nitrogen (NO _x)	mg/ Nm ³	79	143	IS:11255 - P7
11	Carbon monoxide (CO)	%	< 0.2	< 0.2	IS:13270
12	Chlorine as Cl ₂	mg/Nm ³	< 1	< 1	Iodometer Method
TNPCC Standards - PM		mg/ Nm ³	150.0		
For Green Chem Solutions Pvt. Ltd. (Laboratory Division)					
 Authorized Signatory					

*** End of Report***

Note: The results are only valid for samples tested. This report is valid for the period of 3 months without approval of the laboratory. The samples should be returned to the laboratory within 3 months from the date of issue of test report.



GREEN CHEM SOLUTIONS PVT LTD

(ISO 14001:2015 Certified)

Laboratory Division

Plot No.4, Rajiv Gandhi Street, Baalambadi, K.K. Elumbarathi Road (Oil Mill Road), Iyappanthangal, Chennai - 600056.

Tel: 044 42612103

Website: www.greensolutions.com

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Test Report

Report No.	GCS/S/M/ 2930 B /2023-2024		Report Date	29.08.2023	
Customer Name & Address	M/s.ENMORE TANK TERMINALS PRIVATE LIMITED, Inside Ennore Port, Vallur Post, Thiruvallur District, Chennai - 600 120.				
Customer Reference	.MC/TEH/GCSPL/WC/002/12-13 /2012				
Survey Description	Stack Monitoring	Sample Received on	23.08.2023		
Survey Conducted by	GCSPL	Test Commenced on	23.08.2023		
Survey Conducted on	23.08.2023	Test Completed on	26.08.2023		
S.No	Descriptions	Unit	DG 180 KVA	DG 500 KVA	Reference Method
1	APC Measures Attached		Silencer	Silencer	
2	Total Stack Height from 'G' level	m	7.0	10.0	
3	Stack Diameter	m	0.10	0.20	
4	Ambient temperature	°C	31	31	
5	Stack temperature	°C	124	278	
6	Flue gas velocity	m/sec	12.15	21.46	IS:11255 - P3
7	Gaseous Emission	km ³ /hr	257	1310	IS:11255 - P3
8	Particulate Matter (PM ₁₀)	mg/ Nm ³	15.2	26.3	IS:11255 - P1
9	Sulphur Di-Oxide (SO ₂)	mg/ Nm ³	4.8	8.9	IS:11255 - P2
10	Oxides of Nitrogen (NO _x)	mg/ Nm ³	46	142	IS:11255 - P7
11	Carbon monoxide(CO)	%	< 0.2	< 0.2	IS:13270
12	Chlorine as Cl ₂	mg/ Nm ³	< 1	< 1	Iodometric Method
TNPCB Standards - PM		mg/ Nm ³	150.0		
For Green Chem Solutions Pvt Ltd. (Laboratory Division)					

*** End of Report ***

Note: The results relate only to the sample tested. This test report shall not be reproduced without approval of the laboratory. The samples will not be retained for more than one fortnight from the date of issue of test report.



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Laboratory Division

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greenchemsolutions@gmail.com

Test Report

Report No	GC5/W/ 3037 /2023-2024	Report Date	29.08.2023		
Customer Name & Address	M/s.ENNORE TANK TERMINALS PRIVATE LIMITED Inside Ennore Port, Vallur Post, Thiruvallur District, Chennai - 600 120.				
Survey Description	ETP Outlet	Sample Received On	23.08.2023		
Sample Drawn By	GC/SPL	Test Commenced On	23.08.2023		
Sample Collected Date	23.08.2023	Test Completed On	29.08.2023		
S.No	PARAMETERS	UNITS	RESULTS	TEST METHOD	INPCB Norms for Treated Effluent
1.	pH @ 25°C		7.58	IS:3025/7:1/2022	5.5 - 9.0
2.	Total Dissolved Solids	mg/l	534	IS:3025/P16/1984Reaff 2017	2100
3.	Total Suspended Solids	mg/l	17	IS:3025/P17/2022	100
4.	Chemical Oxygen Demand	mg/l	32	IS:3025/P58/2006Reaff 2017	250
5.	BOD (for 3 days at 17°C)	mg/l	15	IS:3025/P44/1953Reaff 2019	30
6.	Oil & Grease	mg/l	BDL(DL :U)	IS:3025/P39/2021	10
BDL Below Detection Limit (D.L: Detection Limit)					
				For GREEN CHEM SOLUTIONS PVT LTD (Laboratory Division)	
					
				Authorized Signatory	

*** End of Report ***

Note: The results apply only to the samples sent. The test report shall not be reproduced without the approval of the laboratory. The samples will be retained for more than one month from the date of issue of test report.



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Laboratory Division

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greenchemsolutions@gmail.com

Test Report

GREEN CHEM SOLUTIONS PVT LTD

Report of Analysis

MICROMETEOROLOGY SURVEY

Report No: *GCS/S/MV/ 29.17 /2023-2024*

Date : 29.08.2023

Name and Address of the industry : **M/s.ENNORE TANK TERMINALS PVT LTD ,**
Inside Ennore Port, Vallur Post,
Thiruvallur District,
Chennai - 600 120.

Date of Survey	23.08.2024	
Duration of Survey	24 hours	
Pollution Category	Red	
Industry Classification	Large	
Weather Condition	Clear Sky	
Ambient Temperature	Max: 34 °C	Min : 25C
Relative Humidity	Max : 86 %	Min : 68 %
Predominant Wind Direction	WSW	
Wind Speed (km/hr)	11.4	
Rainfall (mm)	Nil	

*** End of Report***

Note: The results are only for the samples tested. This test report should not be re-evaluated without approval of the laboratory.
The samples will not be retained for an indefinite time from the date of issue of test report.



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Laboratory Division

Plot No.4, Rajiv Gandhi Street, Balaji Avenue, A.N.Elnatala Road (Old Mill Road), Pyappanthangal, Chennai - 600056.

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greenchemsolutions@gmail.com

Test Report

Report No	GCS/S/AAQ/ 2737 A /2023-2024		Report Date	31.07.2023				
Customer Name & Address	M/s.ENNHORE TANK TERMINALS PRIVATE LIMITED Inside Ennore Port, Vallur Post, Thiruvallur District, Chennai - 600 120.							
Customer Reference	IMC/IER/GCSP/LWO/002/12 13 /2017							
Survey Description	Ambient Air Quality Monitoring	Sample received on	27.07.2023					
Survey Conducted by	GCSPI	Test Commenced on	28.07.2023					
Survey Conducted on	26.07.2023	Test Completed on	29.07.2023					
S No	Locations	Pollutants						
		PM ₁₀	PM _{2.5}	SO ₂	NO _x	Pb	CO	O ₂
1	Near Main Gate	65	25	8.5	19.7	BDL(D.L.0.5)	BDL(D.L.1.0)	20.9
2	Weigh Bridge	74	28	8.6	18.9	BDL(D.L.0.5)	BDL(D.L.1.0)	20.9
3	Near Power House	55	13	7.4	17.2	BDL(D.L.0.5)	BDL(D.L.1.0)	20.9
4	Near Fire Engine Plant	54	18	6.9	15.4	BDL(D.L.0.5)	BDL(D.L.1.0)	20.9
Unit		µg/m ³	µg/m ³	µg/m ³	µg/m ³	µg/m ³	mg/m ³	%
NAAQ Standards (Industrial, Residential & Rural Area)		100	60	80	80	10	4	
Reference Method - IS - 5182		Part 23	Part 24	Part 2	Part 6	Part 22	Part 10	IS 13270
PM ₁₀	Particulate Matter (less than 10µm)	NO _x		Oxides of Nitrogen				
PM _{2.5}	Particulate Matter (less than 2.5µm)	CO		Carbon Monoxide				
SO ₂	Sulphur Di-Oxide	Pb		Lead				
O ₂	Oxygen	BDL. Below Detection Limit D.L. Detection Limit						
							For Green Chem Solutions Pvt Ltd Laboratory Division  Authorized Signatory	

*** End of Report ***

Note: The results relate only to the samples tested. This test report shall not be reproduced without approval of the laboratory. The samples will not be retained for more than one month from the date of issue of test report.



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Laboratory Division

Plot No.4, Rajiv Gandhi Street, Balaji Avenue, A.N. Elumalai Road (Oil Mill Road) Iyyapanthangal, Chennai - 600058.

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greenchemsolutions@gmail.com

Test Report

Report No.	GCS/S/AAC/ 2737 B /2023-2024			Report Date	31.07.2023
Customer Name & Address	M/s. ENMORE TANK TERMINALS PRIVATE LIMITED, Inside Ennore Port, Vallur Post, Thiruvallur District, Chennai - 600120.				
Customer Reference	IMC/TER/GCSF/WD/008/12-13/2012				
Survey Description	PAH Monitoring - TLF		Sample Received on	27.07.2023	
Survey Conducted by	GCSF.		Test Commenced on	28.07.2023	
Survey Conducted on	26.07.2023		Test Completed on	29.07.2023	
S.No	PARAMETER	UNITS	RESULTS	REFERENCE METHOD	MAAQ Standards (Industrial, Residential & Rural Area)
1	PM ₁₀	µg/m ³	61	IS 5182 - Part 24	100
2	PM _{2.5}	µg/m ³	25	IS 5182 - Part 24	50
3	Oxides of Sulphur as SO ₂	µg/m ³	8.6	IS 5182 - Part 2	80
4	Oxides of Nitrogen as NO ₂	µg/m ³	17.0	IS 5182 - Part 6	80
5	Lead as Pb	µg/m ³	BDL (DL: 0.5)	IS 5182 - Part 22	1
6	Carbon monoxide as CO	mg/m ³	BDL (DL: 0.0)	IS 5182 - Part 10	4
7	Ozone as O ₃	µg/m ³	BDL (DL: 2.0)	IS 5182 - Part 9	180
8	Ammonia as NH ₃	µg/m ³	BDL (DL: 7.0)	IS 5182 - Part 25	400
9	Benzene as C ₆ H ₆	µg/m ³	BDL (DL: 1.0)	IS 5182 - Part 11	5
10	Benzene [α] pyrene	ng/m ³	BDL (DL: 0.1)	IS 5182 - Part 12	1
11	Arsenic as As	ng/m ³	BDL (DL: 1.0)	GCS/Lab/SOP/089	6
12	Nickel as Ni	ng/m ³	BDL (DL: 5.0)	IS 5182 - Part 26	20
For Green Chem Solutions Pvt. Ltd. (Laboratory Division)					 Signatory

*** End of Report ***

Note : The results relate only to the samples tested. This test report shall not be reproduced without approval of the laboratory. The samples will not be retained for more than one Month from the date of issue of test report.



GREEN CHEM SOLUTIONS PVT LTD

(ISO 14001:2015 Certified)

Laboratory Division

Plot No 4, Rajiv Gandhi Street, Balaji Avenue, A.K. Pinnalai Road (Oil Mill Road), Iyyappanthangal, Chennai - 600056.

Tel: 044-42612103

Web: www.greenchemsol.com

Email: info@greenchemsolutions.in

greenchemsolutions@gmail.com

Test Report

Report No.	GCS/NTM/ 2738 /2023-2024		Report Date	31.07.2023	
Customer Name & Address	M/s. ENNORE TANK TERMINALS PRIVATE LIMITED Inside Ennore Port, Vallur Post, Thiruvallur District, Chennai - 600 120.				
Customer Reference	IMC/TER/GCSPL/WO/002/72-13 / 2012				
Description	Noise Level Monitoring	Monitoring Date	26.07.2023		
Monitored by	GCSPL	Date Received Dr	27.07.2023		
S.No.	Locations	Day Time		Night Time	
		Maximum	Minimum	Maximum	Minimum
1	Near Security Gate	71.5	67.2	65.2	59.1
2	Weigh Bridge	73.1	66.7	67.6	59.8
3	TLF IV	64.7	58.1	61.5	53.7
4	TLF I	60.8	58.4	57.4	53.5
5	Pump House - I	72.5	62.8	65.2	55.9
6	Near DG set	73.6	69.6	68.9	64.2
Unit		dB(A)		dB (A)	
TNPSB Standards (Industrial Area)		75.0		70.0	
Reference Method	Instruments Manual For Green Chem Solutions Pvt Ltd (Laboratory Division)				

*** End of Report ***

Note: The results relate only to the samples tested. This test report shall not be reproduced without approval of the laboratory. The samples will not be returned for more than one month from the date of issue of test report.



GREEN CHEM SOLUTIONS PVT LTD

(ISO 14001:2015 Certified)

Laboratory Division

Plot No.4, Rajiv Gandhi Street, Balaji Avenue, A.N. Ethimatal Road (Oil Mill Road), Iyyappanthangal, Chennai - 600056.

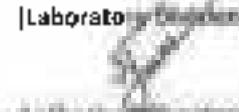
Tel: 044-42612103

Website: www.greenchemsolutions.in

Email: info@greenchemsolutions.in

greenchemsolutions@gmail.com

Test Report

Report No.	GCS/S/SM/ 2739 A /2023-2024			Report Date	31.07.2023
Customer Name & Address	M/s.ENNORE TANK TERMINALS PRIVATE LIMITED, Inside Ennore Port, Vallur Post, Thiruvallur District, Chennai - 600 120.				
Customer Reference	IMC/ IER/GCSPL/WO/002/17-13 /2017				
Survey Description	Stack Monitoring	Sample Received on	26.07.2023		
Survey Conducted by	GCSPL	Test Commenced on	26.07.2023		
Survey Conducted on	26.07.2023	Test Completed on	29.07.2023		
S.No.	Descriptions	Unit	DG 750 KVA	DG 500 KVA	Reference Method
1	APC Measures Attached	-	Silencer	Silencer	---
2	Total Stack Height From 'G' Level	m	7.0	10.0	---
3	Stack Diameter	m	0.10	0.20	---
4	Ambient Temperature	°C	29	29	---
5	Stack Temperature	°C	134	238	---
6	Flue gas velocity	m/sec	13.78	21.04	IS:11255 - P3
7	Gaseous Emission	Nm ³ /hr	295	1385	IS:11255 - P3
8	Particulate Matter (PM)	mg/ Nm ³	17.9	75.6	IS:11255 - P1
9	Sulphur Di-Oxide (SO ₂)	mg/ Nm ³	5.4	7.3	IS:11255 - P2
10	Oxides of Nitrogen (NO _x)	mg/ Nm ³	75	139	IS:11255 - P7
11	Carbon monoxide (CO)	%	< 0.2	< 0.2	IS:13270
12	Chlorine as Cl ₂	mg/ Nm ³	< 1	< 1	Iodometric Method
TNP&CB Standards - PM		mg/ Nm ³	150.0		
For Green Chem Solutions Pvt. Ltd. [Laboratory Division]					
 Author: [Signature]					

*** End of Report ***

Note : The results relate only to the samples tested. This test report shall not be reproduced without approval of the laboratory.
The samples will not be retained for more than one month from the date of issue of test report.



GREEN CHEM SOLUTIONS PVT LTD

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Laboratory Division

Plot No.4, Rajiv Gandhi Street, Dalaji Avenue, A.N. Elumalai Road (Oil Mill Road), Iyyappanthangal, Chennai - 600056.

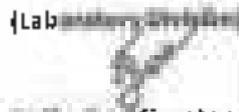
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Email: info@greenchemsolutions.in

greenchemsolutions@gmail.com

Test Report

Report No.	GCS/S/SM/ 2739 B /2023-2024	Report Date	31.07.2023		
Customer Name & Address	M/s.ENNORE TANK TERMINALS PRIVATE LIMITED, Inside Ennore Port, Vallur Post, Thiruvallur District, Chennai - 600 120.				
Customer Reference	IMC/TER/GCSPL/WO/002/17-14/2012				
Survey Description	Stack Monitoring	Sample Received on	26.07.2023		
Survey Conducted by	GCSPL	Test Commenced on	26.07.2023		
Survey Conducted on	25.07.2023	Test Completed on	29.07.2023		
S.No.	Descriptions	Unit	DG 18C kVA	DG 500 kVA	Reference Method
1	APC Measures Attached	-	Silencer	Silencer	---
2	Total Stack Height From 'G'Level	m	7.0	10.0	---
3	Stack Diameter	m	0.10	0.20	---
4	Ambient Temperature	°C	30	30	---
5	Stack Temperature	°C	117	267	---
6	Flue gas velocity	m/sec	11.82	20.95	IS:11255 - P3
7	Gaseous Emission	Nm ³ /hr	256	1305	IS:11255 - P3
8	Particulate Matter (PM)	mg/ Nm ³	14.9	25.6	IS:11255 - P1
9	Sulphur Di-Oxide (SO ₂)	mg/ Nm ³	4.5	0.7	IS:11255 - P2
10	Oxides of Nitrogen (NO _x)	mg/ Nm ³	42	134	IS:11255 - P7
11	Carbon monoxide (CO)	%	< 0.2	< 0.2	IS:13270
12	Chlorine as Cl ₂	mg/Nm ³	< 1	< 1	Iodometric Method
TNPCB Standards - PM		mg/ Nm ³	150.0		
For Green Chem Solutions Pvt. Ltd. (Laboratory Division)  Authorized Signatory					

*** End of Report ***

Note: The results relate only to the samples tested. This test report shall not be reproduced without approval of the laboratory.
The samples will not be re-tested for more than one month from the date of issue of test report.



GREEN CHEM SOLUTIONS PVT LTD

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Laboratory Division

Plot No.4, Rajiv Gandhi Street, Balaj Avenue, A.N.Elumalai Road (Old Mill Road), Iyyappanthangal, Chennai - 600056.

Tel: 044 4261 2103

Website: www.greensolutions.in

Email: info@greensolutions.in

green:chemsolutions@gmail.com

Test Report

Report No	GCS/W/ 2964 /2023-2024	Report Date	31.07.2023		
Customer Name & Address	M/s.ENNORE TANK TERMINALS PRIVATE LIMITED Inside Ennore Port, Vallur Post, Thiruvallur District, Chennai - 600 120.				
Survey Description	ETP Outlet	Sample Received On	26.07.2023		
Sample Drawn By	GCSPL	Test Commenced On	26.07.2023		
Sample Collected Date	26.07.2023	Test Completed On	31.07.2023		
S.No	PARAMETERS	UNITS	RESULTS	TEST METHOD	INPCB Norms for Treated Effluent
1.	pH @ 25°C		7.45	IS:3025/P11/2022	5.5 - 9.0
2.	Total Dissolved Solids	mg/l	586	IS:3025/P16/1984Reaff JUL7	2100
3.	Total Suspended Solids	mg/l	14	IS:3025/P17/2022	100
4.	Chemical Oxygen Demand	mg/l	78	IS:3025/P58/2006Reaff 2017	250
5.	BOD (for 5 days at 27°C)	mg/l	14	IS:3025/P44/1993Reaff 2019	30
6.	Oil & Grease	mg/l	BDL(O.L:1.0)	IS:3025/P23/2021	10
BDL: Below Detection Limit () L: Detection Limit					
For GREEN CHEM SOLUTIONS PVT LTD (Laboratory Division)  Authorized Signatory					

*** End of Report ***

Note: The results relate only to the samples tested. This test report shall not be reproduced without approval of the laboratory. The samples will not be retained for more than one Month from the date of issue of test report.



GREEN CHEM SOLUTIONS PVT LTD

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Laboratory Division

Plot No.4, Rajiv Gandhi Street, Balaji Avenue, A.N.Elumalai Road (OR Mill Road), Iyyappanthangal, Chennai - 600098.

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greenchemsolutions@gmail.com

Test Report

GREEN CHEM SOLUTIONS PVT LTD

Report of Analysis

MICROMETEOROLOGY SURVEY

Report No: GCS/S/MM/ 2710 /2023-2024

Date : 31.07.2023

Name and Address of the industry : M/S.ENMORE TANK TERMINALS PVT LTD ,
Inside Ennore Park, Vallur Post,
Thiruvallur District,
Chennai – 600 120.

Date of Survey	26.07.2023
Duration of Survey	24 hours
Pollution Category	Red
Industry Classification	Large
Weather Condition	Clear Sky
Ambient Temperature	Max: 33 °C Min : 27C
Relative Humidity	Max : 87 % Min : 64 %
Predominant Wind Direction	NE
Wind Speed (km/hr)	12.8
Rainfall (mm)	Nil

*** End of Report***

Note : The results relate only to the samples tested. This test report shall not be reproduced without approval of the laboratory.
The samples will not be retained for more than one month from the date of issue of test report.

**REPORT ON
COMPREHENSIVE ENVIRONMENTAL MONITORING
FOR**

**ADANI ENNORE CONTAINER TERMINAL CONTAINER PRIVATE LIMITED
(AECTPL)
(WITHIN KAMARAJAR PORT LIMITED)
VALLUR POST, PONNERI TALUK, CHENNAI - 600 056.**

JULY 2023 - DECEMBER 2023



PREPARED BY:

**M/S. SV ENVIRO LABS & CONSULTANTS,
(MoEF & CC Recognized, NABL & NABET Accredited,
ISO 9001 & 45001 Certified Laboratory),
B1, Block-B, IDA, Autonagar,
Visakhapatnam - 530012.**

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1.0 INTRODUCTION

M/s. Adani Ennore Container Terminal Pvt Ltd (AECTPL) located inside Kamarajar Port, Ennore is operating container berth and handling containerized Import/Export cargoes.

AECTPL have engaged M/s. SV ENVIRO LABS AND CONSULTANTS, an Accredited Consultant by NABL to carry out the Comprehensive Environmental monitoring studies in AECTPL continuously as per the Statuary Requirement. This report covers the monitored environmental data for the Period of July 2023 to December 2023.

1.1 LOCATION OF THE PROJECT

The Project site is located at Port area inside the Kamarajar Port Limited.

The location map is shown in Fig - 1

Fig – 1 – Location Map



2.0 SCOPE OF WORK

The scope of Comprehensive Environmental monitoring includes the following environmental components;

1. Meteorological data
2. Ambient Air Quality
3. Ambient Noise Level
4. Marine Sampling
5. Treated STP / ETP Water.
6. Potable water
7. DG Set Emission

The parameters covered under the scope for each of the above attributes are given below:

SCOPE OF WORK

S.No	Attribute	Scope	Frequency
1.	Meteorological Data	Collection of micrometeorological data on hourly basis by installing an auto weather monitoring station at plant site covering the following parameters: <ul style="list-style-type: none"> • Wind speed • Wind direction • Rainfall • Relative Humidity • Temperature • Barometric pressure • Solar Radiation 	Daily
2.	Ambient Air Quality	Sampling of ambient air at 03 stations for analysing the following parameters: <ul style="list-style-type: none"> • PM10 • PM2.5 • SO₂ • NO₂ • CO • Lead • Ozone • Ammonia • Benzene • Benzo Pyrene • Arsenic • Nickel 	Weekly Twice
3.	Ambient Noise	Collection of Noise levels on hourly basis at 3 locations <ul style="list-style-type: none"> • L_{eq} – Day (Max and Min) • L_{eq} – Night (Max and Min) 	Monthly Once

4.			
4a.	Surface and Bottom Water	<p>Collection of Surface and Bottom Water analysed for -1location</p> <ul style="list-style-type: none"> • Temperature • pH @ 25°C • Total Suspended Solids • BOD at 27 °C for 3 days • Dissolved oxygen • Salinity at 25 °C • Oil & Grease • Nitrate as NO₃ • Nitrite as NO₂ • Ammoniacal Nitrogen as N • Total phosphates as PO₄ • Total Nitrogen, • COD • Turbidity • Total Iron as Fe • Colour • Odour • Mercury as Hg • Cadmium as Cd • Total Chromium as Cr • Copper as Cu • Lead as Pb • Nickel as Ni • Iron • Zinc • Particulate Organic Carbon • Petroleum Hydrocarbons 	Monthly Once
4b.	Marine Sediment	<p>Collection of Marine sediment analyzedfor-1 location</p> <ul style="list-style-type: none"> • pH • Organic Matter • Moisture Content • Conductivity • Iron • Sodium • Copper • Nickel • Zinc • Manganese • Lead • Boron • Phosphate • Chloride • Sulphate • Sulphide • Pesticide • Potassium • Total Chromium • Petroleum Hydrocarbon • Aluminium • Total Nitrogen • Organic Nitrogen • Phosphorus 	Monthly Once

		<ul style="list-style-type: none"> • Texture 	
4c.	Phytoplankton Monitoring	<ul style="list-style-type: none"> • Total Count • No. of species • Major Species 	Monthly Once
4d.	Zooplankton Monitoring	<ul style="list-style-type: none"> • Total Count • No. of species • Major 	Monthly Once
4e.	Microbiological Monitoring	<ul style="list-style-type: none"> • Pseudomonas aeruginosa • Streptococcus Faecalis • Total Coliform • Faecal Coliform • E.Coli • Total viable count • Salmonella • Shigella • Vibrio Cholera • Vibrio Parahaemolyticus 	Monthly Once
4f.	Biological Monitoring	<ul style="list-style-type: none"> • primary productivity • Chlorophyll-a • Phaeopigment • Total Biomass 	Monthly Once
4g.	Phytobenthos Monitoring data	<ul style="list-style-type: none"> • Fungus • Total Count • No. of species • Diversity Index • Major species 	Monthly Once
4h.	Total Fauna Monitoring	<ul style="list-style-type: none"> • Name of phylum • Class • Number of Individuals encountered • Total no. of species encountered • Total fauna 	Monthly Once
5.	STP Treated Water	<p>Collection of STP Inlet and Treated water analysed for – 11location</p> <ul style="list-style-type: none"> • pH • TSS • BOD • Faecal Coliforms • COD • TDS • Oil & Grease • Cl • SO₄ 	Monthly Once
6.	Potable Water analysis	<p>Collection of Drinking water sample at 01 location. Analysing As per IS 10500: 2012 – 36 Parameters</p>	Monthly Once
7.	DG Set Emissions	<p>Sampling of Emission at 02 stations for analysing the following parameters:</p> <ul style="list-style-type: none"> • PM • Carbon Monoxide • NO_x – NO₂ • SO₂ 	Monthly Once

3. METHODOLOGY

Methodologies adopted for sampling and analysis for each of the above parameters are detailed below

1	Meteorological parameters	
	Online Met station	
2	Ambient Air Quality	
	Parameters	Method
	Respirable Suspended Particulate Matter (PM10)	IS5182Part23:2006(Reaff.2017)
	Particulate Matter PM2.5	IS5182Part24:2019
	Sulphur dioxide as SO ₂	IS5182 Part02:2001(Reaff.2017)
	Oxides of Nitrogen as NO ₂	IS5182 Part06:2006(Reaff.2017)
	Lead as Pb	IS5182 Part22:2004(Reaff.2019)
	Arsenic as As	CPCB Guidelines
	Nickel as Ni	IS5182Part26:2020
	Carbon monoxide as CO	IS5182Part10:1999(Reaff.2019)
	Ozone as O ₃	IS5182Part09:1974(Reaff.2017)
	Ammonia as NH ₃	IS5182Part25:2018
	Benzene (α) pyrene	IS5182 Part12: 2004 (Reaff.2017)
	Benzene as C ₆ H ₆	IS5182Part11:2006(Reaff.2019)
3	Ambient Noise Monitoring	
	L _{eq} Day& Night	Instrument Manual, SV/LAB/SOP/Noise/001
4	Marine Sampling	
	Surface and Bottom Water	APHA Methods 23 rd Edition, 2017 Standard Methods for examination of Water and Wastewater and IS 3025 & USEPA Test Methods
	Sea Sediment	
	Phytoplankton Monitoring	
	Zooplankton Monitoring	
	Microbiological Monitoring	
	Primary Productivity Monitoring	
	Phytobenthos Monitoring data	
Total Fauna Monitoring		
5	STP Water Analysis	
	pH, TSS, BOD, Faecal Coliforms	APHA Methods 23 rd Edition, 2017 Standard Methods for examination of Water and Wastewater and IS 3025
6	Emission Monitoring	
	PM, Carbon Monoxide, NO _x – NO ₂ , SO ₂	IS 11255 Methods of measurement of emissions from Stationary source
7	New Water Analysis	
	As per IS 10500 : 2012–36 Parameters	APHA Methods 23 rd Edition, 2017 Standard Methods for examination of Water and Waste water and IS 3025

4. ENVIRONMENTAL STUDIES – JULY 2023 – DECEMBER 2023.

S.No	ATTRIBUTE	STUDIES CARRIED OUT
1.	Meteorological parameters	Collection of micrometeorological data at project site on daily basis with hourly frequency
2.	Ambient Air Quality	Collection of ambient air at 4 locations.
3.	STP water	Collection of STP outlet water at two locations
4.	Ambient Noise	Collection of Ambient noise levels for day and night at 4 locations
5.	Drinking Water	Collection of Drinking water at Canteen Building
6.	Marine Water and Marine Sediments	Collection of Marine water and Marine Sediments at Three locations
7.	DG Set Emissions	Collection of DG Set Emissions.

1. METEOROLOGICAL DATA

Meteorological data was collected on hourly basis by installing an auto weather monitoring station at Plant site. The report depicted here under presents the data for July 2023 – December 2023.

The following parameters were recorded

- Wind speed
- Wind direction
- Temperature
- Pressure
- Relative humidity
- Rainfall



ANNEXURE - 1 MICROMETEOROLOGY DATA

JULY - 2023

Marine Infrastructure Developer Private Ltd

Report Type: Average Report

From: 01-07-2023 0:00:00 Hrs To: 31-07-2023 23:59:59 Hrs

Created by Adani. Created at 01-08-2023 9:22:46 AM

Date	AQMS-Wind_Speed (km/h)	AQMS-Wind_Direction(Degree)	AQMS-RH (%)	AQMS Total Rain Fall (mm)	AQMS-Atm. Pressure (mBar)	AQMS-Atm. Temperature (Degree)	AQMS-Solar_Radiation (w/m2)
Avg	5.5	237	89	0.0	1003.1	31.9	197.8
Min	3.8	206	76.7	-	996.1	28.6	98.1
Max	8.2	262	99.8	-	1008.4	33.8	282.5
01-07-2023	4.8	221.3	88.6	0.0	999.0	33.3	255.9
02-07-2023	4.4	232.9	94.5	0.0	998.6	31.5	98.3
03-07-2023	4.8	234.4	96.1	0.0	997.3	31.0	117.2
04-07-2023	5.0	231.3	93.9	0.0	995.8	31.3	202.3
05-07-2023	5.7	250.0	91.2	0.0	994.4	31.4	169.8
06-07-2023	6.9	241.8	82.0	0.0	996.8	32.9	186.0
07-07-2023	6.5	234.8	83.8	0.0	999.2	33.1	274.8
08-07-2023	6.2	243.3	84.0	0.0	1000.0	33.1	211.2
09-07-2023	5.1	206.0	89.6	0.0	999.3	32.0	266.8
10-07-2023	5.0	226.3	97.5	0.0	999.1	30.6	139.1
11-07-2023	6.3	228.5	96.8	0.0	998.2	31.0	178.2
12-07-2023	3.8	244.1	94.5	0.0	998.2	31.3	143.7
13-07-2023	5.2	230.7	96.3	0.0	998.8	30.6	208.2
14-07-2023	3.8	241.2	93.3	0.0	999.2	31.8	240.6
15-07-2023	4.8	219.6	90.2	0.0	998.4	32.9	280.6
16-07-2023	4.0	235.7	92.0	0.0	998.2	32.3	162.8
17-07-2023	5.6	231.0	85.4	0.0	997.2	33.1	253.3
18-07-2023	5.6	240.9	83.2	0.0	996.1	33.5	258.8
19-07-2023	7.2	253.0	83.9	0.0	995.1	32.5	246.9
20-07-2023	7.6	228.6	81.9	0.0	994.6	33.1	207.0
21-07-2023	6.6	251.5	76.7	0.0	995.5	33.5	192.0
22-07-2023	7.3	246.7	85.1	0.0	997.6	31.6	117.2
23-07-2023	4.3	238.0	98.7	0.0	998.6	29.7	103.8
24-07-2023	5.5	240.0	97.9	0.0	997.8	29.4	110.5
25-07-2023	4.9	243.9	99.8	0.0	997.9	28.6	98.1
26-07-2023	6.4	245.0	95.9	0.0	998.1	29.7	133.9
27-07-2023	8.2	240.0	84.3	0.0	998.4	32.2	268.2
28-07-2023	4.5	229.1	87.2	0.0	998.0	32.2	240.4
29-07-2023	5.2	254.4	80.5	0.0	997.7	33.4	237.1
30-07-2023	5.8	262.4	79.9	0.0	997.2	33.8	282.5
31-07-2023	4.1	218.8	86.2	0.0	996.9	33.1	247.3

Remarks: -

AUG - 2023

Marine Infrastructure Developer Private Ltd

Report Type: Average Report

From: 01-08-2023 0:00:00 Hrs To: 31-08-2023 23:59:59 Hrs

Created by Adani. Created at 01-09-2023 9:36:35 AM

Date	AQMS-Wind Speed (km/h)	AQMS-Wind_Direction (Degree)	AQMS-RH (%)	AQMS Total Rain Fall (mm)	AQMS-Atm. Pressure (mBar)	AQMS-Atm. Temperature (Degree)	AQMS-Solar_Radiation (w/m2)
Avg	4.3	218	93	62.0	1003.1	31.8	249.5
Min	2.4	182	75.9	-	996.1	30.0	176.0
Max	6.7	243	99.2	-	1008.4	33.8	299.1
01-08-2023	4.6	214.1	84.21	0.0	996.9	33.2	176.0
02-08-2023	6.7	242.6	75.87	0.0	997.6	33.8	248.0
03-08-2023	6.0	223.8	81.75	0.0	997.5	33.1	276.4
04-08-2023	4.5	221.6	88.01	0.0	999.5	32.7	270.2
05-08-2023	4.8	216.8	89.07	0.0	1000.7	32.7	291.7
06-08-2023	4.4	219.5	90.3	0.0	999.8	33.0	299.1
07-08-2023	4.6	199.1	92.61	0.0	998.3	32.5	266.6
08-08-2023	4.2	191.4	91.31	0.0	998.9	32.5	208.6
09-08-2023	4.5	202.7	92.16	0.0	1000.3	32.4	275.7
10-08-2023	6.7	234.4	89.07	0.0	1000.5	32.0	239.3
11-08-2023	4.5	201.5	93.19	0.0	1000.1	31.1	222.6
12-08-2023	5.4	209.6	94.81	0.0	999.4	31.1	193.1
13-08-2023	5.4	198.9	93	0.0	998.8	31.5	206.7
14-08-2023	4.1	228.1	96.75	6.0	999.6	30.3	194.1
15-08-2023	2.9	224.2	97.95	0.0	999.7	30.9	275.8
16-08-2023	3.5	217.6	96.53	16.0	999.7	30.8	258.8
17-08-2023	4.2	237.5	93.43	11.5	998.6	31.5	269.8
18-08-2023	3.8	225.5	92.1	0.0	997.3	31.7	237.5
19-08-2023	4.9	230.6	90.04	0.0	996.8	31.7	246.8
20-08-2023	3.4	210.6	91.42	0.0	997.3	31.6	260.5
21-08-2023	4.1	182.0	95.72	0.0	997.3	31.9	298.4
22-08-2023	2.6	227.8	95.29	0.0	997.3	31.9	232.0
23-08-2023	4.4	222.9	95.34	0.5	997.6	31.3	271.0
24-08-2023	4.1	229.3	97.44	6.5	997.5	30.7	265.2
25-08-2023	2.5	217.4	96.95	0.0	997.5	31.8	265.0
26-08-2023	3.0	217.3	97.8	9.0	998.7	31.2	239.7
27-08-2023	2.4	228.6	99.2	12.5	999.5	30.0	200.8
28-08-2023	4.9	219.7	94.43	0.0	998.0	32.1	288.5
29-08-2023	4.1	227.6	95.75	0.0	997.7	31.3	210.3
30-08-2023	3.8	202.3	92.48	0.0	997.8	32.0	277.4
31-08-2023	5.0	218.9	94.88	0.0	997.8	31.3	268.7

Remarks: -

SEPTEMBER - 2023

Marine Infrastructure Developer Private Ltd							
Report Type: Average Report							
From: 01-09-2023		0:00:00 Hrs		To: 30-09-2023		23:59:59 Hrs	
Created by Adani.			Created at 01-10-2023 9:40:35 AM				
Date	AQMS-Wind_Speed (km/h)	AQMS-Wind_Direction (Degree)	AQMS-RH (%)	AQMS Total Rain Fall (mm)	AQMS-Atm. Pressure (mBar)	AQMS-Atm. Temperature (Degree)	AQMS-Solar_Radiation (w/m2)
<i>Avg</i>	5.0	231	94	90.0	1003.1	31.2	240.4
<i>Min</i>	2.8	210	85.9	-	996.1	29.6	92.9
<i>Max</i>	7.6	251	97.8	-	1008.4	33.1	308.1
01-09-2023	4.3	210.4	94.9	14.2	998.0	31.7	307.7
02-09-2023	4.5	232.4	95.5	0.2	997.2	31.7	308.1
03-09-2023	3.8	227.8	96.7	0.0	996.2	30.3	254.3
04-09-2023	4.1	250.8	96.1	0.0	994.2	30.3	132.4
05-09-2023	5.6	249.7	95.5	0.0	994.4	29.6	92.9
06-09-2023	5.8	232.9	92.0	0.0	994.8	31.5	206.2
07-09-2023	7.6	234.2	92.3	5.5	995.8	31.3	269.0
08-09-2023	4.9	231.4	93.6	0.0	996.9	31.1	263.3
09-09-2023	5.6	227.7	92.2	0.0	996.0	32.0	289.4
10-09-2023	5.0	241.1	92.0	0.0	995.5	31.7	166.5
11-09-2023	4.2	223.1	91.7	0.0	995.6	32.0	207.3
12-09-2023	4.8	234.4	85.9	0.0	995.9	32.7	245.9
13-09-2023	6.3	219.4	91.3	0.0	996.0	31.8	243.8
14-09-2023	5.1	229.6	91.7	0.0	996.0	31.6	231.7
15-09-2023	6.4	211.0	92.9	38.0	996.6	31.3	240.2
16-09-2023	3.2	222.5	96.6	0.0	997.3	29.8	231.5
17-09-2023	6.7	231.2	97.8	16.0	996.5	30.2	235.9
18-09-2023	6.2	238.4	93.7	3.0	996.1	31.0	262.2
19-09-2023	4.6	234.6	95.5	0.0	997.4	30.8	260.1
20-09-2023	4.5	227.4	95.2	0.0	997.6	31.9	256.2
21-09-2023	4.6	241.1	96.4	0.0	998.4	31.0	176.3
22-09-2023	3.9	226.1	97.0	0.0	998.3	31.8	240.5
23-09-2023	2.8	241.7	96.9	0.0	998.3	31.4	257.8
24-09-2023	5.0	232.1	94.9	0.0	997.5	30.9	266.1
25-09-2023	5.4	224.7	96.0	13.1	996.6	31.0	260.8
26-09-2023	5.8	237.2	96.4	0.0	996.5	30.9	271.5
27-09-2023	4.5	222.8	96.4	0.0	996.4	30.8	263.9
28-09-2023	5.5	238.6	93.7	0.0	995.9	31.6	253.7
29-09-2023	6.5	236.8	91.6	0.0	996.2	31.0	256.2
30-09-2023	3.9	235.8	95.2	0.0	996.9	31.1	253.3
Remarks:	-						

OCTOBER - 2023

MARINE INFRASTRUCTURE DEVELOPER PVT LTD							
AVERAGE REPORT							
PERIOD: 01.10.2023 to 31.10.2023							
Date	Atms. Temp. (°C)	Relative Humidity (%)	Rainfall (mm)	Wind Speed (km/hr)	Wind Direction (Degrees)	Atms. Pressure (mmHg)	Solar Radiation (kwh/m ²)
Aug	28.8	74.7	4.3	25.8	147.8	1010.7	245.6
Min	28.3	69.6	0.1	14.8	18.4	1009.1	60.1
Max	29.7	84.8	16.9	43.8	211.8	1012.0	291.1
2023-10-01	28.8	75.5	0.3	58	211.8	1009.1	167.5
2023-10-02	29.0	75.3	0.323	43.1	204.4	1009.3	187.3
2023-10-03	28.8	77.8	0.3	48.8	201	1009.7	208.7
2023-10-04	29.0	76.9	0.1	68	202.9	1009.7	201.3
2023-10-05	29.2	76.4	0.3	37.1	203.4	1008.9	207.0
2023-10-06	28.8	74.3	1.3	28.1	197.6	1008.2	179
2023-10-07	29.7	78.2	0.6	27.4	190.8	1008.1	178.1
2023-10-08	29.2	78.5	0.3	31	193.5	1009.8	281
2023-10-09	29.3	76.4	1	28.4	198.7	1011.3	271.7
2023-10-10	29.3	74.8	0.1	25.8	197.1	1010.9	288.3
2023-10-11	29.3	74	0.085	30.2	202.3	1010.4	274.9
2023-10-12	29.8	75.5	0.7	28.4	204	1011.1	257
2023-10-13	29.0	75.1	?	30.5	185.2	1011.0	268
2023-10-14	29.5	75.8	2.212	22.3	198	1011.3	165.7
2023-10-15	29.8	74.5	0.7	25.6	192.8	1010.6	241.6
2023-10-16	29.0	78	26.888	20.5	221.3	1011.4	282.2
2023-10-17	29.1	75.8	0.4	32.4	41.2	1011.1	217.4
2023-10-18	29.5	74.4	1.192	24.5	57.9	1011.7	265.7
2023-10-19	29.7	73.8	0.338	25.3	41.6	1011.6	258.4
2023-10-20	29.8	71.1	0.8	18	113.2	1011.8	253.8
2023-10-21	29.0	73.4	0.358	33.1	126.2	1011.7	285.0
2023-10-22	29.0	74.4	0.351	17.3	113.2	1011.8	240.3
2023-10-23	29.5	73.3	3.1	22.8	134.3	1011.9	262.4
2023-10-24	29.0	72.5	2.7	33.4	125.3	1011.8	251.1
2023-10-25	29.0	73.1	2.484	34.8	120.2	1012	286.7
2023-10-26	29.1	69.2	0.7	22.8	107.8	1011.3	243.3
2023-10-27	29.3	69.4	1.6	24	61.3	1011.8	258.6
2023-10-28	29.0	71.7	0.6	38.2	88.6	1011.8	260.2
2023-10-29	29.6	73.4	5.856	18	62	1010.6	226.4
2023-10-30	29.1	81.8	12.636	22	10.4	1010.8	62.1
2023-10-31	29.7	80.0	4.173	20.5	24.5	1011	247.6

NOVEMBER - 2023

MARINE INFRASTRUCTURE DEVELOPER LTD							
AVERAGE REPORT							
FROM 01.11.2023 TO 30.11.2023							
Date	Abs. Temp (°C)	Relative Humidity (%)	Rainfall (mm)	Wind Speed (km/hr)	Wind Direction (degrees)	Abs. Pressure (mb)	Solar Radiation (w/m ²)
Avg	27.3	80.4	14.4	21.0	94.7	1010.8	204.3
Min	25.8	74	0	11.9	4.2	1009	95.2
Max	28.7	88.8	71.2	76	203.2	1012.4	254.3
2023-11-01	28.7	78.4	22.5	21.4	37.9	1010.9	242.8
2023-11-02	28.1	79.5	0	20.9	49	1010.1	199.7
2023-11-03	27.6	81.8	18.2	18.7	83.6	1009	142.4
2023-11-04	26.9	82.9	36.1	16.6	203.2	1009.3	95.2
2023-11-05	27.9	78.7	0	21.8	199.9	1010.5	219.1
2023-11-06	28.7	74.9	0	15.1	84.2	1011.8	204.2
2023-11-07	28.1	77.7	7.8	23	34.6	1011.6	192.0
2023-11-08	27.8	79.9	2.2	15.5	98.1	1011	181.0
2023-11-09	27.5	79.6	23.9	16.9	51.6	1011.4	147.2
2023-11-10	27.6	81	0	20.9	40	1012.3	217.9
2023-11-11	27.4	82.7	0	27.4	21.8	1012.4	242.2
2023-11-12	27.0	74	0	26.0	10.8	1012.4	199.4
2023-11-13	27.1	76.9	0	27	18.2	1011.7	210.1
2023-11-14	26.4	81.1	49.5	36	4.9	1011	136.6
2023 11 15	26.2	77.6	58.5	27.4	4.2	1010.2	224.6
2023 11 15	27.5	78.6	0	21.6	23.5	1011.3	238.9
2023 11 17	28.3	78.8	0	22.3	33	1011.3	243.3
2023 11 18	27.5	83.2	0	22.3	24.5	1010.8	185.1
2023-11-19	28.1	88.8	0	22.7	96.4	1011.1	110.8
2023-11-20	27.4	80.3	8.8	21.2	22.1	1011	207.5
2023-11-21	28.1	80.7	71.2	19.8	75.8	1010	223.3
2023-11-22	27.5	82.0	25.7	11.9	144.2	1009.9	111.4
2023-11-23	27.1	80.0	4.4	22.7	144.9	1009.9	224.7
2023-11-24	27.9	79.4	7.1	19.8	82.0	1009.9	290.7
2023-11-25	27.4	81.9	3.9	22.7	39.7	1010.9	210.7
2023-11-26	27.5	79.9	1.5	25.2	96.3	1011.5	238.4
2023 11 27	27.4	82.6	12.2	25.2	37.4	1010.3	242.3
2023 11 28	27.7	80.4	9.2	23.4	98.7	1009.6	237.7
2023 11 29	27.2	81.3	65.3	22.3	33.4	1009.7	133.3
2023 11 30	28.6	85.0	3.5	20.5	70.6	1010.7	254.3

DECEMBER - 2023

MARINE INFRASTRUCTURE DEVELOPER LTD							
AVERAGE REPORT							
FROM 01.12.2023 TO 31.12.2023							
Date	Air Temp (°C)	Relative Humidity (%)	Rainfall (mm)	Wind Speed (km/hr)	Wind Direction (degrees)	Air Pressure (mbars)	Solar Radiation (w/m ²)
Avg	26.9	79.6	8.2	27.5	77.8	1011.2	200.0
Min	25.1	73.8	0	13.9	14.8	1006.9	25.1
Max	28.9	88.9	40.700	34.9	107.5	1018.2	300
01-12-2023	26.1	81	1.9	27	34.8	1009.8	81
02-12-2023	27.1	77.9	0.139	16.6	107.1	1008	118
03-12-2023	28.1	74.7	0.288	13.1	125.4	1007.6	101.8
04-12-2023	28.9	77.5	1.9	18.7	109.2	1006.9	134.8
05-12-2023	28.9	78.8	2.4	22	208.8	1007	259
06-12-2023	28.8	79.2	2.4	21.8	107.5	1008.8	227.1
07-12-2023	28.6	76.6	0	19.1	188	1009.7	296.3
08-12-2023	28.7	75.9	0.379	15.5	121.1	1010.4	286.7
09-12-2023	28.4	78.5	18.372	22	45.4	1011.2	248
10-12-2023	27.7	80.3	31.588	28.8	38.2	1010.6	291.8
11-12-2023	27.9	79.6	41.881	18.8	88.6	1011.1	301.1
12-12-2023	27.1	76.7	0	28.7	32.2	1010.6	153.2
13-12-2023	26.4	76.9	0	41.1	44.1	1011.1	47.9
14-12-2023	26.6	77.1	2.896	32.2	32.2	1012	217.1
15-12-2023	26.9	80.2	5.6	21.6	11.4	1012	278.2
16-12-2023	27.9	86.5	11.021	11.2	12.9	1011.1	171
17-12-2023	28.7	87.5	46.725	22.1	25	1009.5	15
18-12-2023	28.1	88.6	27.722	14.2	4.7	1011.6	25.2
19-12-2023	28.6	84	10.07	22	21.7	1012.7	131.5
20-12-2023	27.4	82.4	0	42.4	14.6	1012.8	212.8
21-12-2023	26	83.4	17.122	32.6	32.6	1012.7	213.8
22-12-2023	26.4	80.1	0	25.6	25.7	1012.7	224
23-12-2023	26.7	79.4	0	24.6	7.4	1012.6	240.8
24-12-2023	26.9	79.5	2.896	25.4	25.5	1012.2	225.7
25-12-2023	26.1	80.3	0	11.2	14.6	1012.6	212
26-12-2023	26.1	77.1	0	22.7	22.2	1012.7	221.4
27-12-2023	26.8	82.8	0	44.6	22.6	1012.1	221
28-12-2023	26.9	80.2	12.153	24.6	32.2	1012.6	236.7
29-12-2023	26.8	77.9	0	42.8	44.6	1012.8	237.4
30-12-2023	26.6	77	0	22.7	22.7	1012.6	231
31-12-2023	26.4	77.4	0	22.5	25	1012.5	248.5

i. AMBIENT AIR QUALITY

Ambient air quality monitoring is required to determine the existing quality of air, evaluation of the effectiveness of control system and to identify areas in need of restoration and their prioritization. In order to generate background data, air quality monitoring is conducted to assess existing level of contamination and to assess possible effects of air contamination occurring in future.

Frequency of Monitoring

The frequency of monitoring that has been followed for sampling of ambient air quality is that one sample per weekly twice at three locations.

DETAILS OF AMBIENT AIR QUALITY MONITORING LOCATIONS

Station code	Location	Geographical location	Environmental setting
AAQ1	Port operating building	13.270444° N 80.334657° E	Industrial
AAQ2	RMU Building	13.273412° N 80.337600° E	Industrial
AAQ3	In Terminal Gate	13.273715° N 80.333810° E	Village

Fig - 2. AMBIENT AIR SAMPLING STATIONS LOCATION MAP



Fig.3.AMBIENT AIR SAMPLINGS STATIONS WITH RESPECT TO WIND



TECHNIQUES USED FOR AMBIENT AIR QUALITY MONITORING

S.No	Parameter	Technique	Unit	Minimum Detectable Limit
1	PM ₁₀	Respirable Dust Sampler (Gravimetric method)	µg/m ³	1.0
2	PM _{2.5}	Fine particle Sampler (Gravimetric method)	µg/m ³	5.0
3	Sulphur Dioxide	Modified West and Gaeke method	µg/m ³	4.0
4	Nitrogen Oxide	Jacob & Hochheiser method	µg/m ³	6.0
5	Lead	Atomic Absorption Spectrometry	µg/m ³	0.5
6	Carbon Monoxide	Draggers Tube	mg/m ³	0.1
7	Ozone	UV Photometric	µg/m ³	2.0
8	Ammonia	Indophenol blue method	µg/m ³	2.0
9	Benzene	Gas Chromatography	µg/m ³	1.0
10	Benzene (α) pyrene	Gas Chromatography	ng/m ³	0.1
11	Arsenic	Atomic Absorption Spectrometry	ng/m ³	1.0
12	Nickel	Atomic Absorption Spectrometry	ng/m ³	5.0

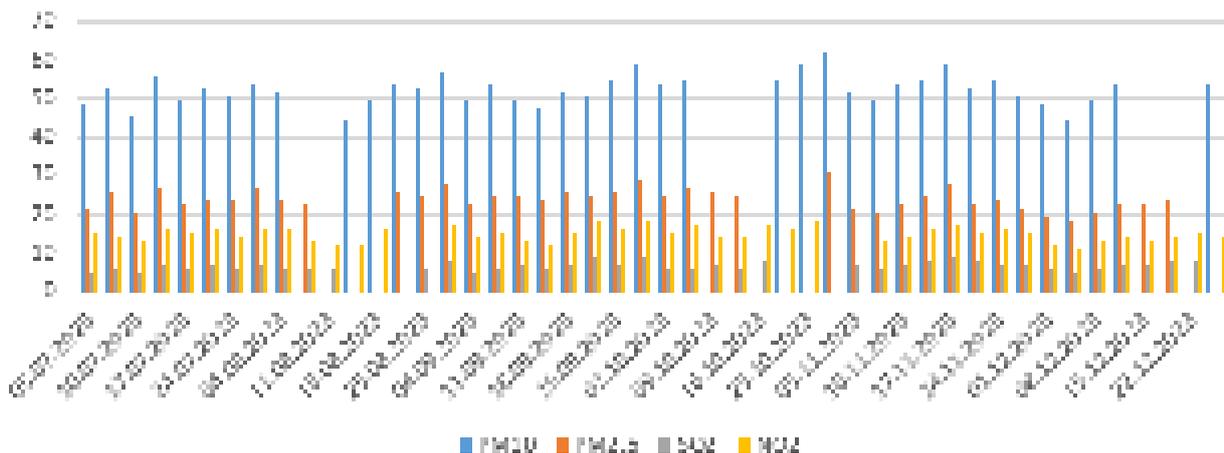
Results and Discussion

The results of the ambient air quality for the study period are submitted. The minimum, maximum 98th percentile and average values have been computed from the observed raw data for all the AAQ monitoring stations. The summary of these results for all the locations is presented in the Table and the detailed analytical results are shown in Annexure - 2. These are compared with the standards prescribed by Central Pollution Control Board (CPCB) for "Industrial, Rural, Residential and other areas"

ANNEXURE - 2 RESULTS OF AMBIENT AIR QUALITY MONITORING DATA

PORT OPERATING BUILDING - (AAQ1)													
Parameters		Particular matter PM10	Particular matter PM2.5	Sulphur dioxide as SO2	Nitrogen dioxide as NO2	Lead as Pb	Carbon monoxide as CO	Ozone as O3	Ammonia as NH3	Arsenic as As	Nickel as Ni	Benzene as C6H6	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												
1	03.07.2023	48.5	22.1	5.5	15.6	<0.1	<1	<10	<2	<2	<2	<1	<0.1
2	07.07.2023	52.6	25.3	6.2	14.9	<0.1	<1	<10	<2	<2	<2	<1	<0.1
3	10.07.2023	45.1	20.8	5	13	<0.1	<1	<10	<2	<2	<2	<1	<0.1
4	14.07.2023	55.7	27	7.3	16.1	<0.1	<1	<10	<2	<2	<2	<1	<0.1
5	17.07.2023	49.4	22.8	6	15.7	<0.1	<1	<10	<2	<2	<2	<1	<0.1
6	21.07.2023	52.6	24	7.1	16.7	<0.1	<1	<10	<2	<2	<2	<1	<0.1
7	24.07.2023	50.3	23.4	5.8	14.6	<0.1	<1	<10	<2	<2	<2	<1	<0.1
8	28.07.2023	54.2	26.8	7.1	16.3	<0.1	<1	<10	<2	<2	<2	<1	<0.1
9	04.08.2023	51.4	24.1	6.2	16.3	<0.1	<1	<10	<2	<2	<2	<1	<0.1
10	07.08.2023	49.8	23	5.6	13.8	<0.1	<1	<10	<2	<2	<2	<1	<0.1
11	11.08.2023	47.3	22.4	5.9	12.7	<0.1	<1	<10	<2	<2	<2	<1	<0.1
12	14.08.2023	44.8	21.6	5.3	11.9	<0.1	<1	<10	<2	<2	<2	<1	<0.1
13	18.08.2023	50.2	23.7	6.7	16.3	<0.1	<1	<10	<2	<2	<2	<1	<0.1
14	21.08.2023	54.3	25.9	8	17.1	<0.1	<1	<10	<2	<2	<2	<1	<0.1
15	25.08.2023	52.8	24.3	6.4	15.9	<0.1	<1	<10	<2	<2	<2	<1	<0.1
16	28.08.2023	56.9	27.9	8.2	17.6	<0.1	<1	<10	<2	<2	<2	<1	<0.1
17	04.09.2023	49.5	22.6	5.5	14.8	<0.1	<1	<10	<2	<2	<2	<1	<0.1
18	08.09.2023	53.6	25.1	6.3	15.2	<0.1	<1	<10	<2	<2	<2	<1	<0.1
19	11.09.2023	50.1	24.3	6.7	13.4	<0.1	<1	<10	<2	<2	<2	<1	<0.1
20	15.09.2023	47.6	23.9	5.8	12.7	<0.1	<1	<10	<2	<2	<2	<1	<0.1
21	18.09.2023	52.1	25.6	7.4	15.5	<0.1	<1	<10	<2	<2	<2	<1	<0.1
22	22.09.2023	50.8	24.9	8.7	18.2	<0.1	<1	<10	<2	<2	<2	<1	<0.1
23	25.09.2023	55.3	26.1	7.3	16.7	<0.1	<1	<10	<2	<2	<2	<1	<0.1
24	29.09.2023	58.6	28.7	9	18.5	<0.1	<1	<10	<2	<2	<2	<1	<0.1
25	02.10.2023	53.8	24.3	6.1	15.6	<0.1	<1	<10	<2	<2	<2	<1	<0.1
26	06.10.2023	55.4	27.2	6.3	17.1	<0.1	<1	<10	<2	<2	<2	<1	<0.1
27	09.10.2023	52.8	25.4	7.5	14.8	<0.1	<1	<10	<2	<2	<2	<1	<0.1
28	13.10.2023	50.4	24.7	6.4	13.9	<0.1	<1	<10	<2	<2	<2	<1	<0.1
29	16.10.2023	56.8	27.5	8.5	17.6	<0.1	<1	<10	<2	<2	<2	<1	<0.1
30	20.10.2023	54.9	26.3	9.6	16.4	<0.1	<1	<10	<2	<2	<2	<1	<0.1
31	23.10.2023	58.6	27.8	8.1	18.2	<0.1	<1	<10	<2	<2	<2	<1	<0.1
32	27.10.2023	62.1	30.6	10.2	19.3	<0.1	<1	<10	<2	<2	<2	<1	<0.1
33	03.11.2023	51.3	21.2	6.7	14.5	<0.1	<1	<10	<2	<2	<2	<1	<0.1
34	06.11.2023	49.6	20.4	5.6	13.6	<0.1	<1	<10	<2	<2	<2	<1	<0.1
35	10.11.2023	53.9	22.9	7.1	14.9	<0.1	<1	<10	<2	<2	<2	<1	<0.1
36	13.11.2023	55.2	24.6	7.8	16.1	<0.1	<1	<10	<2	<2	<2	<1	<0.1
37	17.11.2023	58.6	28.4	9.1	17.2	<0.1	<1	<10	<2	<2	<2	<1	<0.1
38	20.11.2023	52.4	22.5	8.6	15.3	<0.1	<1	<10	<2	<2	<2	<1	<0.1
39	24.11.2023	54.7	24.1	7.5	16.4	<0.1	<1	<10	<2	<2	<2	<1	<0.1
40	27.11.2023	50.4	21.6	7.3	15.8	<0.1	<1	<10	<2	<2	<2	<1	<0.1
41	01.12.2023	48.3	19.6	5.9	12.4	<0.1	<1	<10	<2	<2	<2	<1	<0.1
42	04.12.2023	44.8	18.1	5.2	11.3	<0.1	<1	<10	<2	<2	<2	<1	<0.1
43	08.12.2023	49.5	20.4	6.5	13.1	<0.1	<1	<10	<2	<2	<2	<1	<0.1
44	11.12.2023	53.8	23.1	7.4	14.5	<0.1	<1	<10	<2	<2	<2	<1	<0.1
45	15.12.2023	51.5	22.3	6.9	13.7	<0.1	<1	<10	<2	<2	<2	<1	<0.1
46	18.12.2023	54.2	24.1	7.8	14.6	<0.1	<1	<10	<2	<2	<2	<1	<0.1
47	22.12.2023	56.1	25.7	8.1	15.6	<0.1	<1	<10	<2	<2	<2	<1	<0.1
48	25.12.2023	53.4	23.2	7.7	14.3	<0.1	<1	<10	<2	<2	<2	<1	<0.1

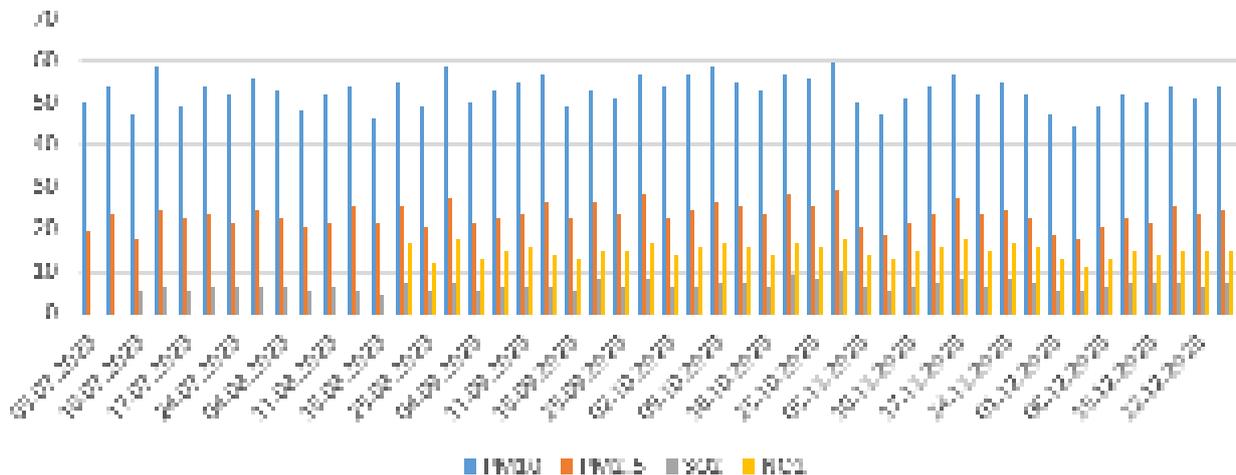
PORT OPERATING BUILDING (AAQ 1)



RMU BUILDING - (AAQ2)

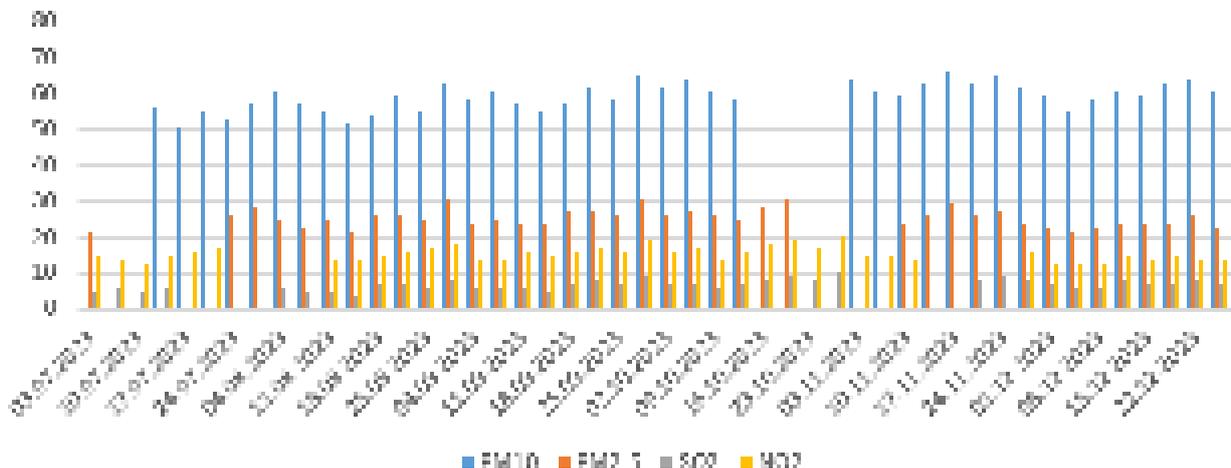
Parameters		Particular matter PM10	Particular matter PM2.5	Sulphur dioxide as SO2	Nitrogen dioxide as NO2	Lead as Pb	Carbon monoxide as CO	Ozone as O3	Ammonia as NH3	Arsenic as As	Nickel as Ni	Benzene as C6H6	Benzo (a) pyrene as BaP
Unit		µg/m3	µg/m3	µg/m3	µg/m3	µg/m3	mg/m3	µg/m3	µg/m3	ng/m3	ng/m3	µg/m3	ng/m3
National AAQM Standard		100	60	80	80	1	4	180	400	6	20	5	1
S.No.	Sampling Date												
1	03.07.2023	50.2	20.1	5.7	13.4	<0.1	<1	<10	<2	<2	<2	<1	<0.1
2	07.07.2023	53.9	23.4	6.5	14.3	<0.1	<1	<10	<2	<2	<2	<1	<0.1
3	10.07.2023	47.5	18.2	5.4	13	<0.1	<1	<10	<2	<2	<2	<1	<0.1
4	14.07.2023	58.3	24.6	6.9	14.8	<0.1	<1	<10	<2	<2	<2	<1	<0.1
5	17.07.2023	49.2	22.9	5.4	14.8	<0.1	<1	<10	<2	<2	<2	<1	<0.1
6	21.07.2023	54.3	23.8	6.5	15.9	<0.1	<1	<10	<2	<2	<2	<1	<0.1
7	24.07.2023	51.7	21.4	6.2	13.7	<0.1	<1	<10	<2	<2	<2	<1	<0.1
8	28.07.2023	56.1	24.5	6.7	16.4	<0.1	<1	<10	<2	<2	<2	<1	<0.1
9	04.08.2023	52.6	22.9	6.4	14.2	<0.1	<1	<10	<2	<2	<2	<1	<0.1
10	07.08.2023	48.6	20.3	5.9	13.1	<0.1	<1	<10	<2	<2	<2	<1	<0.1
11	11.08.2023	51.6	21.5	6.1	13.9	<0.1	<1	<10	<2	<2	<2	<1	<0.1
12	14.08.2023	54.3	25.2	5.8	15.1	<0.1	<1	<10	<2	<2	<2	<1	<0.1
13	18.08.2023	46.5	21.4	5	13.6	<0.1	<1	<10	<2	<2	<2	<1	<0.1
14	21.08.2023	55.2	25.6	7.3	16.7	<0.1	<1	<10	<2	<2	<2	<1	<0.1
15	25.08.2023	49.3	20.6	5.8	12.5	<0.1	<1	<10	<2	<2	<2	<1	<0.1
16	28.08.2023	59.1	27.8	7.7	17.8	<0.1	<1	<10	<2	<2	<2	<1	<0.1
17	04.09.2023	50.3	21.5	5.8	13	<0.1	<1	<10	<2	<2	<2	<1	<0.1
18	08.09.2023	52.7	22.4	6.5	14.6	<0.1	<1	<10	<2	<2	<2	<1	<0.1
19	11.09.2023	55.2	23.5	6.8	15.7	<0.1	<1	<10	<2	<2	<2	<1	<0.1
20	15.09.2023	56.7	26.4	6.4	14.3	<0.1	<1	<10	<2	<2	<2	<1	<0.1
21	18.09.2023	49.3	22.7	5.9	12.8	<0.1	<1	<10	<2	<2	<2	<1	<0.1
22	22.09.2023	53.1	26.8	8.2	15.4	<0.1	<1	<10	<2	<2	<2	<1	<0.1
23	25.09.2023	51.4	23.5	6.7	14.8	<0.1	<1	<10	<2	<2	<2	<1	<0.1
24	29.09.2023	56.3	28.1	8.5	16.9	<0.1	<1	<10	<2	<2	<2	<1	<0.1
25	02.10.2023	54.2	22.8	6.4	14.3	<0.1	<1	<10	<2	<2	<2	<1	<0.1
26	06.10.2023	56.3	24.5	6.9	15.8	<0.1	<1	<10	<2	<2	<2	<1	<0.1
27	09.10.2023	58.4	26.1	7.6	17.2	<0.1	<1	<10	<2	<2	<2	<1	<0.1
28	13.10.2023	54.9	25.3	7.1	15.7	<0.1	<1	<10	<2	<2	<2	<1	<0.1
29	16.10.2023	52.9	23.8	6.5	14.3	<0.1	<1	<10	<2	<2	<2	<1	<0.1
30	20.10.2023	56.6	27.9	9.1	16.8	<0.1	<1	<10	<2	<2	<2	<1	<0.1
31	23.10.2023	55.8	25.7	8.2	15.9	<0.1	<1	<10	<2	<2	<2	<1	<0.1
32	27.10.2023	59.7	29.6	9.9	18.2	<0.1	<1	<10	<2	<2	<2	<1	<0.1
33	03.11.2023	50.4	20.6	6.1	13.9	<0.1	<1	<10	<2	<2	<2	<1	<0.1
34	06.11.2023	47.6	19.2	5.4	13.3	<0.1	<1	<10	<2	<2	<2	<1	<0.1
35	10.11.2023	51.3	21.5	6.7	14.8	<0.1	<1	<10	<2	<2	<2	<1	<0.1
36	13.11.2023	53.9	23.2	7.5	16.1	<0.1	<1	<10	<2	<2	<2	<1	<0.1
37	17.11.2023	56.7	26.9	8.5	17.6	<0.1	<1	<10	<2	<2	<2	<1	<0.1
38	20.11.2023	52.1	23.4	6.7	15.3	<0.1	<1	<10	<2	<2	<2	<1	<0.1
39	24.11.2023	54.6	24.3	8.1	16.9	<0.1	<1	<10	<2	<2	<2	<1	<0.1
40	27.11.2023	51.8	22.9	7.3	16.2	<0.1	<1	<10	<2	<2	<2	<1	<0.1
41	01.12.2023	47.3	19.1	5.6	12.7	<0.1	<1	<10	<2	<2	<2	<1	<0.1
42	04.12.2023	44.7	17.6	5.1	11.5	<0.1	<1	<10	<2	<2	<2	<1	<0.1
43	08.12.2023	48.9	20.8	6.2	13.4	<0.1	<1	<10	<2	<2	<2	<1	<0.1
44	11.12.2023	52.4	22.9	7.9	15.3	<0.1	<1	<10	<2	<2	<2	<1	<0.1
45	15.12.2023	50.2	21.7	7.6	14.2	<0.1	<1	<10	<2	<2	<2	<1	<0.1
46	18.12.2023	53.6	25.1	7.9	14.7	<0.1	<1	<10	<2	<2	<2	<1	<0.1
47	22.12.2023	51.5	23.1	6.8	15.4	<0.1	<1	<10	<2	<2	<2	<1	<0.1
48	25.12.2023	54.2	24.6	7.3	14.7	<0.1	<1	<10	<2	<2	<2	<1	<0.1

RMU BUILDING (AAQ 2)



IN TERMINAL GATE - (AAQ3)													
Parameters		Particular matter PM10	Particular matter PM2.5	Sulphur dioxide as SO2	Nitrogen dioxide as NO2	Lead as Pb	Carbon monoxide as CO	Ozone as O3	Ammonia as NH3	Arsenic as As	Nickel as Ni	Benzene as C6H6	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												
1	03.07.2023	57.8	21.6	5	14.9	<0.1	<1	<10	<2	<2	<2	<1	<0.1
2	07.07.2023	59.4	23.7	5.6	13.5	<0.1	<1	<10	<2	<2	<2	<1	<0.1
3	10.07.2023	47.2	20.4	4.5	12.9	<0.1	<1	<10	<2	<2	<2	<1	<0.1
4	14.07.2023	56.9	28.7	6.1	15	<0.1	<1	<10	<2	<2	<2	<1	<0.1
5	17.07.2023	50.7	24.9	5.8	16.1	<0.1	<1	<10	<2	<2	<2	<1	<0.1
6	21.07.2023	55.4	27	6.9	17.6	<0.1	<1	<10	<2	<2	<2	<1	<0.1
7	24.07.2023	52.8	26.1	5.4	15.7	<0.1	<1	<10	<2	<2	<2	<1	<0.1
8	28.07.2023	57.2	28.6	6.7	17.9	<0.1	<1	<10	<2	<2	<2	<1	<0.1
9	04.08.2023	61.2	24.8	6.3	15.8	<0.1	<1	<10	<2	<2	<2	<1	<0.1
10	07.08.2023	57.6	22.3	5.2	12.4	<0.1	<1	<10	<2	<2	<2	<1	<0.1
11	11.08.2023	55.3	25.1	5.2	14	<0.1	<1	<10	<2	<2	<2	<1	<0.1
12	14.08.2023	51.6	21.4	4	13.6	<0.1	<1	<10	<2	<2	<2	<1	<0.1
13	18.08.2023	53.7	25.8	6.6	15.3	<0.1	<1	<10	<2	<2	<2	<1	<0.1
14	21.08.2023	59.4	26	7.2	16.1	<0.1	<1	<10	<2	<2	<2	<1	<0.1
15	25.08.2023	55.6	24.7	6.3	17.2	<0.1	<1	<10	<2	<2	<2	<1	<0.1
16	28.08.2023	63.4	30.1	8.3	18.4	<0.1	<1	<10	<2	<2	<2	<1	<0.1
17	04.09.2023	58.6	23.4	5.8	14.3	<0.1	<1	<10	<2	<2	<2	<1	<0.1
18	08.09.2023	60.4	25.2	6.4	13.5	<0.1	<1	<10	<2	<2	<2	<1	<0.1
19	11.09.2023	57.2	24	6.1	15.8	<0.1	<1	<10	<2	<2	<2	<1	<0.1
20	15.09.2023	55.1	23.8	5.4	14.9	<0.1	<1	<10	<2	<2	<2	<1	<0.1
21	18.09.2023	57.6	26.9	7.2	16.4	<0.1	<1	<10	<2	<2	<2	<1	<0.1
22	22.09.2023	62.4	27.5	8.4	17.5	<0.1	<1	<10	<2	<2	<2	<1	<0.1
23	25.09.2023	58.3	26.4	6.9	15.8	<0.1	<1	<10	<2	<2	<2	<1	<0.1
24	29.09.2023	65.7	31.2	9.1	19.2	<0.1	<1	<10	<2	<2	<2	<1	<0.1
25	02.10.2023	62.4	26.3	7.1	15.6	<0.1	<1	<10	<2	<2	<2	<1	<0.1
26	06.10.2023	64.1	27.5	7.6	16.8	<0.1	<1	<10	<2	<2	<2	<1	<0.1
27	09.10.2023	60.8	25.8	5.9	14.3	<0.1	<1	<10	<2	<2	<2	<1	<0.1
28	13.10.2023	58.9	24.6	6.7	15.6	<0.1	<1	<10	<2	<2	<2	<1	<0.1
29	16.10.2023	61.4	28.4	8.1	17.8	<0.1	<1	<10	<2	<2	<2	<1	<0.1
30	20.10.2023	65.8	30.1	9.4	18.9	<0.1	<1	<10	<2	<2	<2	<1	<0.1
31	23.10.2023	63.8	28.6	7.8	17.6	<0.1	<1	<10	<2	<2	<2	<1	<0.1
32	27.10.2023	68.4	32.9	10.5	20.4	<0.1	<1	<10	<2	<2	<2	<1	<0.1
33	03.11.2023	63.8	25.6	7.8	14.9	<0.1	<1	<10	<2	<2	<2	<1	<0.1
34	06.11.2023	60.4	24.1	6.7	15.3	<0.1	<1	<10	<2	<2	<2	<1	<0.1
35	10.11.2023	59.3	23.7	5.6	13.8	<0.1	<1	<10	<2	<2	<2	<1	<0.1
36	13.11.2023	62.7	25.9	7.2	16.1	<0.1	<1	<10	<2	<2	<2	<1	<0.1
37	17.11.2023	66.3	29.6	9.6	19.2	<0.1	<1	<10	<2	<2	<2	<1	<0.1
38	20.11.2023	63.2	25.8	8.1	17.3	<0.1	<1	<10	<2	<2	<2	<1	<0.1
39	24.11.2023	65.4	27.6	9.3	18.1	<0.1	<1	<10	<2	<2	<2	<1	<0.1
40	27.11.2023	61.8	24.2	8.4	16.3	<0.1	<1	<10	<2	<2	<2	<1	<0.1
41	01.12.2023	59.4	23.1	6.7	13.1	<0.1	<1	<10	<2	<2	<2	<1	<0.1
42	04.12.2023	55.6	21.8	5.9	12.4	<0.1	<1	<10	<2	<2	<2	<1	<0.1
43	08.12.2023	58.4	22.6	6.3	12.9	<0.1	<1	<10	<2	<2	<2	<1	<0.1
44	11.12.2023	61.3	24.3	7.8	14.8	<0.1	<1	<10	<2	<2	<2	<1	<0.1
45	15.12.2023	59.7	23.6	6.8	13.5	<0.1	<1	<10	<2	<2	<2	<1	<0.1
46	18.12.2023	62.8	24.3	7.4	15.2	<0.1	<1	<10	<2	<2	<2	<1	<0.1
47	22.12.2023	64.8	26.1	8.5	14.3	<0.1	<1	<10	<2	<2	<2	<1	<0.1
48	25.12.2023	60.8	22.5	7.3	13.7	<0.1	<1	<10	<2	<2	<2	<1	<0.1

IN TERMINAL GATE - (AAQ3)



**NATIONAL AMBIENT AIR QUALITY STANDARDS
CENTRAL POLLUTION CONTROL BOARD
NEW DELHI, INDIA**

New Delhi, on 17th November, 1986

The Ministry of Environment and Forests of the Government of India, New Delhi, on 17th Nov. 1986, has issued the following orders in pursuance of the provisions of the Air (Prevention and Control) Act, 1986, and the Air (Prevention and Control) Rules, 1986, and the Central Pollution Control Board (CPCB) has issued the following orders in pursuance of the provisions of the Act, 1986.

NATIONAL AMBIENT AIR QUALITY STANDARDS

Sl. No.	Pollutant	Units	Concentration in Ambient Air		Method of Assessment
			Maximum Permissible Concentration (MPC)	Weighted Average Concentration (WAC)	
1	Carbon Dioxide (CO ₂)	ppm	5	5	1. Continuous monitoring system 2. Gravimetric method
2	Carbon Monoxide (CO)	ppm	5	5	1. Continuous monitoring system 2. Gravimetric method
3	Lead (Pb)	ppm	0.5	0.5	1. Gravimetric method 2. Atomic absorption spectrophotometry
4	Nitrogen Dioxide (NO ₂)	ppm	0.1	0.1	1. Gravimetric method 2. Spectrophotometry
5	Ozone (O ₃)	ppm	0.1	0.1	1. UV photometer 2. Inductively coupled plasma atomic emission spectrometry
6	Sulphur Dioxide (SO ₂)	ppm	0.1	0.1	1. Gravimetric method 2. Spectrophotometry
7	Total suspended particulate matter (TSP)	ppm	1.0	1.0	1. Gravimetric method 2. Spectrophotometry
8	Total suspended particulate matter (TSP)	ppm	1.0	1.0	1. Gravimetric method 2. Spectrophotometry

9	Total suspended particulate matter (TSP)	ppm	1.0	1.0	1. Gravimetric method 2. Spectrophotometry
10	Total suspended particulate matter (TSP)	ppm	1.0	1.0	1. Gravimetric method 2. Spectrophotometry
11	Total suspended particulate matter (TSP)	ppm	1.0	1.0	1. Gravimetric method 2. Spectrophotometry
12	Total suspended particulate matter (TSP)	ppm	1.0	1.0	1. Gravimetric method 2. Spectrophotometry
13	Total suspended particulate matter (TSP)	ppm	1.0	1.0	1. Gravimetric method 2. Spectrophotometry
14	Total suspended particulate matter (TSP)	ppm	1.0	1.0	1. Gravimetric method 2. Spectrophotometry
15	Total suspended particulate matter (TSP)	ppm	1.0	1.0	1. Gravimetric method 2. Spectrophotometry

* The above standards apply to all areas, except in the case of a special case where a higher standard is required.

** In the case of a special or a special case, the standard may be relaxed to a level of 1.0 ppm for TSP, 0.5 ppm for CO, and 0.1 ppm for SO₂ and NO₂.

*** The above standards apply to all areas, except in the case of a special case where a higher standard is required.

ii. AMBIENT NOISE LEVEL INTENSITY

Collection of ambient noise levels at four locations. Spot noise levels were measured with a precalibrated Noise Level Meter - SL- 4023 SD for day and night periods.

DETAILS OF NOISE MONITORING LOCATIONS

STATION CODE	LOCATIONS	Geographical Location
N1	Port operating building	13.270444° N 80.334657° E
N2	RMU Building	13.273412° N 80.337600° E
N3	In Terminal Gate	13.273715° N 80.333810° E

Fig - 4. Noise Level Sampling Locations

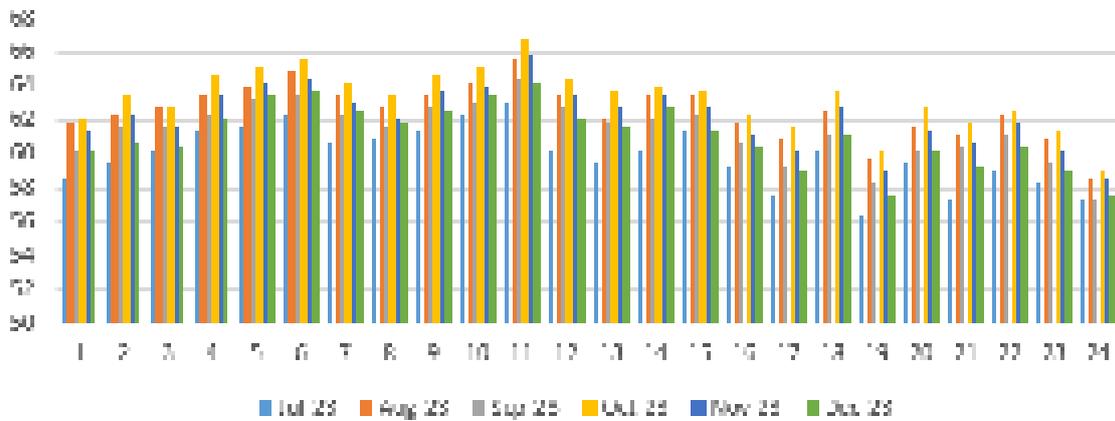


The noise levels monitored during the study period are given hereunder in form of Leq day, Leq night compared with CPCB Standards.

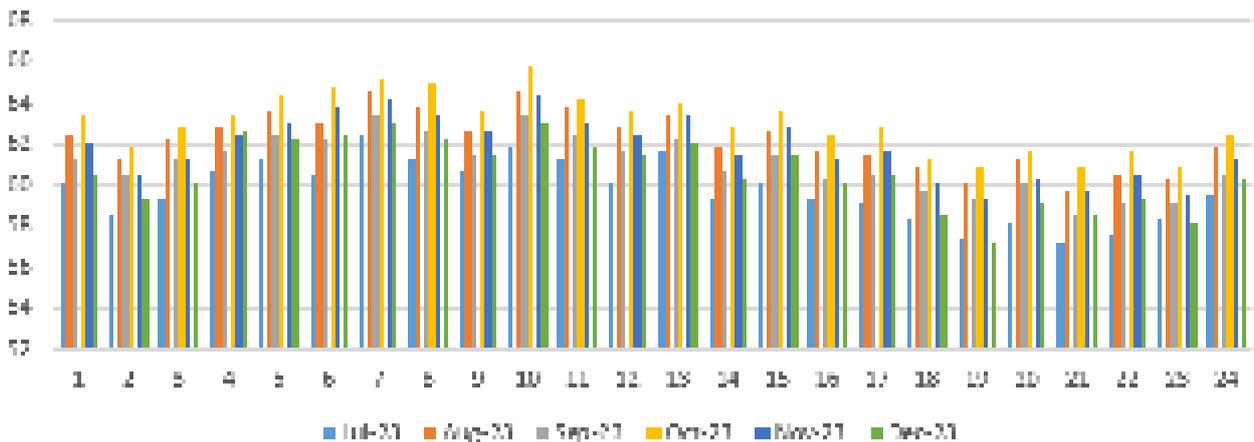
ANNEXURE - 3 RESULTS OF AMBIENT NOISE LEVEL MONITORING DATA

Location		IN TERMINAL GATE - (N1)						RMU BUILDING - (N2)					
Month & Year		July-23	Aug-23	Sept-23	Oct-23	Nov-23	Dec-23	July-23	Aug-23	Sept-23	Oct-23	Nov-23	Dec-23
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.N	Time of Sampling												
1	06.00 – 07.00 (Day)	58.6	61.8	60.3	62.1	61.3	60.1	60.1	62.4	61.2	63.4	62.1	60.4
2	07.00 – 08.00	59.4	62.3	61.7	63.5	62.4	60.7	58.6	61.2	60.4	61.9	60.5	59.3
3	08.00 – 09.00	60.1	62.8	61.5	62.9	61.6	60.5	59.4	62.3	61.2	62.8	61.3	60.1
4	09.00 – 10.00	61.3	63.5	62.4	64.8	63.5	62.1	60.7	62.9	61.7	63.5	62.4	62.7
5	10.00 – 11.00	61.6	64.1	63.2	65.1	64.2	63.4	61.3	63.7	62.5	64.3	63.1	62.3
6	11.00 – 12.00	62.3	64.9	63.5	65.7	64.5	63.8	60.5	63.1	62.3	64.8	63.9	62.5
7	12.00 – 13.00	60.7	63.5	62.4	64.2	63.1	62.5	62.4	64.5	63.4	65.1	64.2	63.1
8	13.00 – 14.00	60.9	62.7	61.6	63.4	62.2	61.9	61.2	63.9	62.7	64.9	63.5	62.2
9	14.00 – 15.00	61.4	63.6	62.7	64.6	63.7	62.6	60.7	62.7	61.5	63.7	62.6	61.5
10	15.00 – 16.00	62.3	64.2	63.1	65.2	64.1	63.4	61.8	64.5	63.4	65.7	64.3	63.1
11	16.00 – 17.00	63.1	65.7	64.5	66.9	65.8	64.2	61.2	63.9	62.5	64.2	63.1	61.8
12	17.00 – 18.00	60.2	63.5	62.7	64.5	63.4	62.1	60.1	62.8	61.6	63.6	62.5	61.4
13	18.00 – 19.00	59.4	62.1	61.9	63.7	62.9	61.6	61.6	63.5	62.3	64.1	63.4	62.1
14	19.00 – 20.00	60.2	63.4	62.2	64.1	63.5	62.7	59.3	61.8	60.7	62.9	61.5	60.3
15	20.00 – 21.00	61.4	63.5	62.3	63.8	62.9	61.3	60.2	62.6	61.5	63.7	62.9	61.5
16	21.00 – 22.00	59.3	61.9	60.6	62.3	61.2	60.5	59.4	61.7	60.3	62.5	61.3	60.1
17	22.00 – 23.00 (Night)	57.6	60.8	59.3	61.5	60.3	58.9	59.1	61.5	60.4	62.8	61.6	60.4
18	23.00 – 00.00	60.1	62.6	61.2	63.8	62.7	61.2	58.3	60.8	59.7	61.2	60.1	58.6
19	00.00 – 01.00	56.5	59.7	58.4	60.3	59.1	57.6	57.4	60.1	59.3	60.9	59.4	57.2
20	01.00 – 02.00	59.4	61.5	60.3	62.7	61.4	60.1	58.2	61.3	60.1	61.6	60.3	59.1
21	02.00 – 03.00	57.3	61.2	60.4	61.9	60.6	59.3	57.1	59.7	58.6	60.8	59.7	58.6
22	03.00 – 04.00	59.1	62.4	61.2	62.6	61.8	60.5	57.6	60.4	59.2	61.7	60.5	59.4
23	04.00 – 05.00	58.2	60.8	59.6	61.3	60.2	59.1	58.3	60.3	59.1	60.9	59.6	58.1
24	05.00 – 06.00	57.4	58.6	57.3	59.1	58.6	57.6	59.5	61.8	60.4	62.4	61.2	60.3

IN TERMINAL GATE (N1)

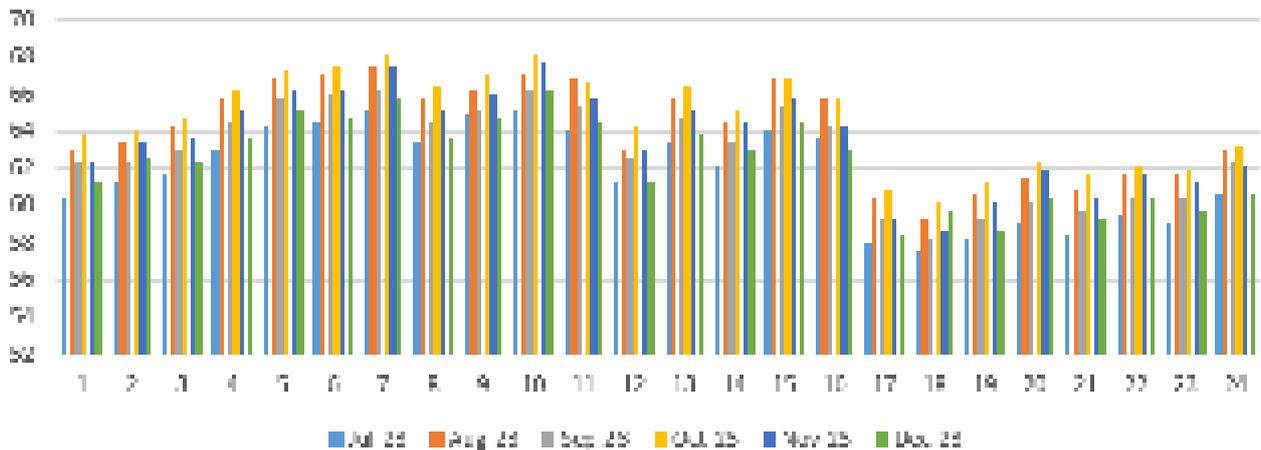


RMU BUILDING - (N2)



Location		PORT OPERATING BUILDING – (N3)					
Month & Year		July-23	Aug-23	Sept- 23	oct- 23	Nov- 23	Dec- 23
Parameter & Unit		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)	60.4	63.1	62.3	63.9	62.4	61.2
2	07.00 –08.00	61.3	63.5	62.4	64.1	63.5	62.5
3	08.00 – 09.00	61.8	64.2	63.1	64.8	63.7	62.4
4	09.00 – 10.00	63.1	65.8	64.5	66.2	65.1	63.7
5	10.00 – 11.00	64.3	66.9	65.7	67.4	66.2	65.1
6	11.00 – 12.00	64.5	67.2	66.1	67.6	66.3	64.8
7	12.00 – 13.00	65.1	67.5	66.3	68.1	67.5	65.9
8	13.00 – 14.00	63.4	65.9	64.5	66.4	65.2	63.6
9	14.00 – 15.00	64.9	66.3	65.1	67.2	66.1	64.7
10	15.00 – 16.00	65.2	67.2	66.3	68.1	67.8	66.3
11	16.00 – 17.00	64.1	66.8	65.4	66.7	65.9	64.5
12	17.00 – 18.00	61.3	63.1	62.5	64.2	63.1	61.2
13	18.00 – 19.00	63.4	65.9	64.8	66.4	65.2	63.8
14	19.00 –20.00	62.2	64.5	63.5	65.1	64.5	62.9
15	20.00 – 21.00	64.1	66.9	65.4	66.9	65.8	64.6
16	21.00 – 22.00	63.7	65.7	64.2	65.7	64.3	63.1
17	22.00 – 23.00 (Night)	58.1	60.5	59.3	60.9	59.4	58.4
18	23.00 – 00.00	57.6	59.4	58.2	60.1	58.7	59.8
19	00.00 – 01.00	58.3	60.7	59.4	61.3	60.2	58.6
20	01.00 – 02.00	59.1	61.6	60.2	62.4	61.9	60.5
21	02.00 – 03.00	58.4	60.9	59.7	61.8	60.5	59.3
22	03.00 – 04.00	59.6	61.7	60.4	62.1	61.7	60.4
23	04.00 – 05.00	59.2	61.8	60.5	61.9	61.2	59.8
24	05.00 – 06.00	60.6	63.1	62.4	63.2	62.1	60.7

PORT OPERATING BUILDING – (N3)



Ambient Air Quality Standards in respect of Noise

Area Code	Category of Area / Zone	Limits in dB(A) Leq*	
		Day Time	Night Time
(A)	Industrial area	75	70
(B)	Commercial area	65	60
(C)	Residential area	55	50
(D)	Silence Zone	50	45

- Note:**
1. Day time shall mean from 6:00 a.m. to 10:00 p.m.
 2. Night time shall mean from 10:00 p.m. to 6:00 a.m.
 3. Silence zone is an area comprising not less than 100 metres around hospitals, educational institutions, courts, religious places or any other area which is declared as such by the competent authority.
 4. Mixed categories of areas may be declared as one of the four above mentioned categories by the competent authority.

* dB(A) Leq denotes the time weighted average of the level of sound in decibels on scale A which is audible to human hearing.

A "decibel" is a unit in which noise is measured.

"A", in dB(A) Leq, denotes the frequency weighting in the measurement of noise and corresponds to frequency response characteristics of the human ear.

Leq is an energy mean of the noise level over a specified period.



iii. DG SET EMISSIONS

Sampling of Flue gas emission of 2000 KVA DG Set was done and its emissions were determined along with its noise intensity. The Detailed report has been is enclosed as Annexure - 4

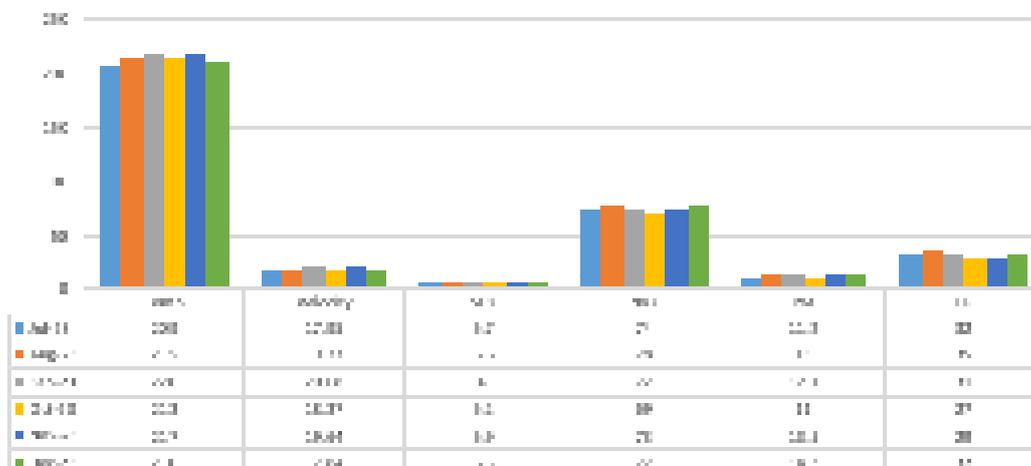
DETAILS OF EMISSION MONITORING LOCATIONS

STATION CODE	LOCATIONS	Geographical Location
SM-01	DG – 1 1500 KVA (Near MRSS)	13°16'13.40"N 80°20'8.15"E
SM-02	DG – 2 1500 KVA (Near MRSS)	13°16'13.40"N 80°20'8.15"E
SM-03	DG – 3 1500 KVA (Near MRSS)	13°16'13.40"N 80°20'8.15"E
SM-04	DG-4 125 KVA (Near MRSS)	13°16'13.16"N 80°20'7.19"E

ANNEXURE - 4 RESULTS OF SOURCE EMISSION MONITORING DATA

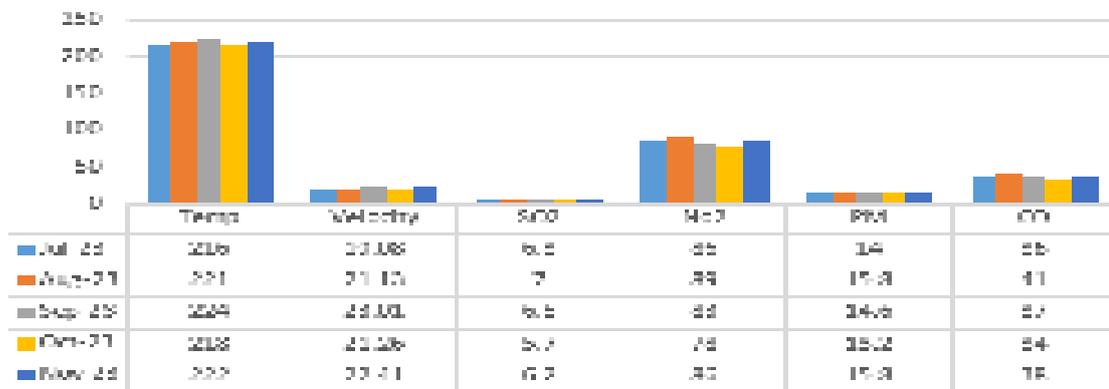
STACK MONITORING							
Location		DG 1500 KVA - 1					
Month & Year		July - 23	Aug - 23	Sept - 23	Oct - 23	Nov - 23	Dec - 23
S.No.	Parameters						
1	Stack Temperature, °C	209	215	220	213	217	210
2	Flue Gas Velocity, m/s	17.92	19.23	20.68	18.37	19.64	17.84
3	Sulphur Dioxide, mg/Nm3	5.7	6.6	6.0	5.2	5.9	6.3
4	NOX (as NO2) in ppmv	74	78	72	69	73	77
5	Particular matter, mg/Nm3	11.2	13.0	12.1	11.0	13.5	14.3
6	Carbon Monoxide, mg/Nm3	32	35	31	27	29	32
7	Gas Discharge, Nm3/hr	14578	15348	15986	14869	15579	15938

DG Set 1500 KVA - 1



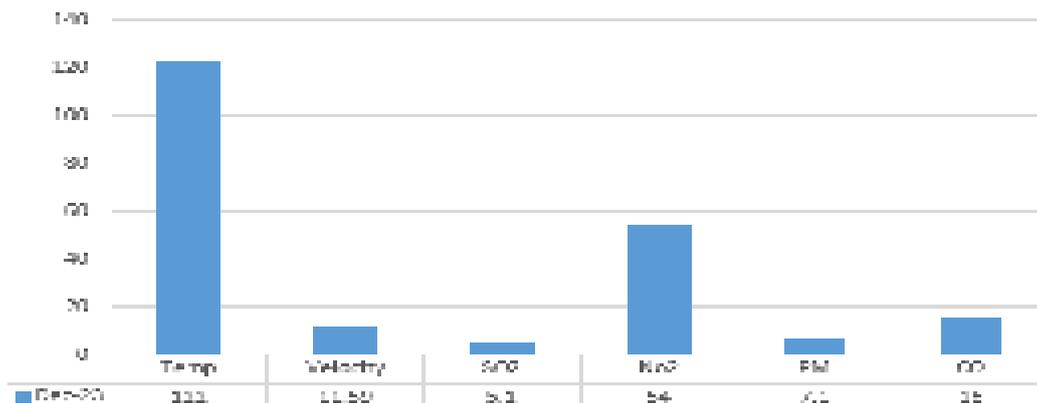
STACK MONITORING							
Location		DG 1500 KVA - 2					
Month & Year		July - 23	Aug - 23	Sept - 23	Oct - 23	Nov - 23	Dec - 23
S.No.	Parameters						
1	Stack Temperature, °C	216	221	224	218	222	-
2	Flue Gas Velocity, m/s	19.08	21.13	23.01	21.26	22.41	-
3	Sulphur Dioxide, mg/Nm3	6.3	7.0	6.5	5.7	6.2	-
4	NOX (as NO2) in ppmv	86	89	83	78	86	-
5	Particular matter, mg/Nm3	14.0	15.8	14.6	13.2	15.8	-
6	Carbon Monoxide, mg/Nm3	36	41	37	34	38	-
7	Gas Discharge, Nm3/hr	16329	17124	18045	17324	17863	-

DG Set 1500 KVA



STACK MONITORING							
Location		DG 125 KVA					
Month & Year		July - 23	Aug - 23	Sept - 23	Oct - 23	Nov - 23	Dec - 23
S.No.	Parameters						
1	Stack Temperature, °C	-	-	-	-	-	122
2	Flue Gas Velocity, m/s	-	-	-	-	-	11.59
3	Sulphur Dioxide, mg/Nm3	-	-	-	-	-	5.1
4	NOX (as NO2) in ppmv	-	-	-	-	-	54
5	Particular matter, mg/Nm3	-	-	-	-	-	7.10
6	Carbon Monoxide, mg/Nm3	-	-	-	-	-	16
7	Gas Discharge, Nm3/hr	-	-	-	-	-	1010

DG Set 125 KVA



Parameter	Site Category	Yield (kg/ha) of the plant, including or not as per government list	Estimated yield (kg/ha) during 2019		
			Before 1.7.2019	Between 1.7.2019 and 1.7.2020	After 1.7.2020
Milk yield (kg/ha) of the cows (as per govt list)	A	10000 kg/ha	1000	950	110
	B	10000 kg/ha			
	A	10000 kg/ha	1000	100	100
	B	10000 kg/ha			
Milk yield (kg/ha) of the cows (as per govt list)	Site A and B		100	100	
Milk yield (kg/ha) of the cows (as per govt list)	Site A and B		10	10	
	Site A and B		100	100	
Milk yield (kg/ha) of the cows (as per govt list)	Site A and B		100	100	

¹ Based on the yield of the Government approved (govt) available data, 10000 kg/ha of milk yield and 11 kg/ha.

² Based on the yield of the Government approved (govt) available data, 10000 kg/ha of milk yield and 10 kg/ha.



iv. STP WATER SAMPLE ANALYSIS

Water samples were collected at the following points.

- 25 KLD Inlet and Treated Water Outlet

DETAILS OF STP WATER LOCATIONS

STATION CODE	LOCATIONS	Geographical Location
STP – 1	25 KLD	13°16'15.33"N 80°20'0.46"E

Analysis results of the water sample collected from the above location are enclosed as Annexure - 5.

ANNEXURE - 5 RESULTS OF STP WATER QUALITY DATA

STP WATER													
Location		STP 25KLD INLET						STP 25KLD OUTLET					
Month & Year		July - 23	Aug- 23	Sept - 23	Oct - 23	Nov - 23	Dec - 23	July - 23	Aug - 23	Sept - 23	Oct - 23	Nov - 23	Dec - 23
S.N	Parameters												
1	pH @ 25°C	7.04	6.92	6.80	6.71	6.89	6.63	7.10	7.03	7.14	7.05	7.15	7.04
2	Total Suspended	97.0	89.0	95.0	86.0	79.0	83.0	21.0	18.0	22.0	17.0	15.0	18.0
3	BOD at 27°C for 3	116	102	120	106	102	110	14.0	10.0	16.0	13.0	11.0	14.0
4	Fecal Coliform	1060	1030	1120	1060	900	952	110	97.0	118	104	90	98
5	COD	320	296	330	304	289	314	50.1	36.2	45.9	39.7	35.1	41.0
6	Oil & Grease	5.8	5.3	6.0	5.0	4.7	5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
7	Total Dissolved Solids	794	728	810	760	726	816	710	664	724	687	644	720
8	Chlorides (as Cl)	389	376	395	380	362	378	342	330	342	327	315	324
9	Sulphates (as SO4)	54	49	53	48	40	45	40	36	39	35	31	35

NOTICE OF ENVIRONMENTAL IMPACT AND CLARIFICATION

WATER SUPPLY

San Diego, the 1987-1988 (1987)

Section 15090 - In review of the project submitted by sections 15 and 22 of the Government Proceedings Act, 1987 (1987), the Environmental Impact Study and the following table below is provided to Environmental Proceedings Act, 1987 (1987).

1. **Water supply and environmental impact:** These water supply is called the Government Proceedings Act, 1987 (1987).

(1) The table below shows the data of the project and the following table.

2. In the Government Proceedings Act, 1987, in Section 15, after sub-section (1) and the table below shows the following table below and below table below.

No.	Section	Section	Section
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v. DRINKING WATER SAMPLE ANALYSIS

Drinking Water samples were collected at the Canteen or Office Building. Analysis results of the water sample collected from the above location are enclosed as Annexure - 6.

vi. RAW WATER SAMPLE ANALYSIS

Raw water samples were collected at the Pond. Analysis results of the water sample collected from the above location are enclosed as Annexure - 7.

ANNEXURE - 6 RESULTS OF WATER SAMPLE (DRINKING WATER) QUALITY DATA

DRINKING WATER								
S.No.	Month & Paramete	Unit	July - 23	Aug- 23	Sept - 23	Oct - 23	Nov - 23	Dec - 23
1	pH @ 25°C	-	6.75	6.83	6.71	6.89	6.91	6.84
2	Total Hardness as CaCo3	mg/L	15.8	17.6	19.7	16.9	14.23	12.3
3	Chloride as Cl	mg/L	15.6	18.2	21.3	16.4	14.2	11.2
4	Total Dissolved Solids	mg/L	49.8	53.4	58.6	49.2	40.5	33.9
5	Calcium as Ca	mg/L	3.87	4.24	4.67	4.18	3.49	2.96
6	Sulphate as SO4	mg/L	BDL (D.L.0.01)					
7	Total Alkalinity as CaCo3	mg/L	26.4	30.2	33.7	27.6	24.8	20.6
8	Magnesium as Mg	mg/L	1.49	1.71	1.96	1.59	1.34	1.21
9	Color	Hazen	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
10	Odour	-	Unobjectionable	Unobjectionable	Unobjectionable	Unobjectionable	Unobjectionable	Unobjectionable
11	Taste	-	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
12	Turbidity	NTU	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
13	Nitrate as No3	mg/L	BDL(DL:1.0)	BDL(DL:1.0)	BDL(DL:1.0)	BDL(DL:1.0)	BDL(DL:1.0)	BDL(DL:1.0)
14	Iron as Fe	mg/L	0.05	0.07	0.09	0.06	0.04	0.02
15	Total Residual Chlorine	mg/L	BDL (D.L.<0.01)					
16	Copper as Cu	mg/L	BDL (D.L.0.01)					
17	Manganese as Mn	mg/L	BDL (D.L.0.01)					
18	Fluoride as F	mg/L	BDL (D.L.0.01)					
19	Phenolic compounds as	mg/L	Nil	Nil	Nil	Nil	Nil	Nil
20	Mercury as Hg	mg/L	BDL (D.L.0.01)					
21	Cadmium as Cd	mg/L	BDL (D.L.0.01)					
22	Selenium as Se	mg/L	BDL (D.L.0.01)					
23	Arsenic as As	mg/L	BDL (D.L.0.01)					
24	Lead as Pb	mg/L	BDL (D.L.0.01)					
25	Zinc as Zn	mg/L	BDL (D.L.0.01)					
26	Anionic Detergents as MBAS	mg/L	Nil	Nil	Nil	Nil	Nil	Nil
27	Total Chromium as Cr	mg/L	BDL (D.L.0.01)					
28	Phenolphthalein Alkalinity as CaCO ₃	mg/L	Nil	Nil	Nil	Nil	Nil	Nil
29	Aluminium as Al	mg/L	BDL (D.L.0.01)					
30	Boron as B	mg/L	BDL (D.L.0.01)					
31	Mineral Oil	mg/L	BDL (D.L.0.01)					
32	Polynuclear Aromatic Hydrocarbons as	mg/L	BDL (D.L.0.0001)					
33	Pesticides	mg/L	Absent	Absent	Absent	Absent	Absent	Absent
34	Cyanide as CN	mg/L	BDL (DL : 0.01)					
35	E. coli	MPN/100ml	Absent	Absent	Absent	Absent	Absent	Absent
36	Total Coliform	MPN/100ml	Absent	Absent	Absent	Absent	Absent	Absent

ANNEXURE - 7 RESULTS OF RAINWATER HARVESTING POND WATER SAMPLE QUALITY DATA

RAW WATER SAMPLE								
Month & Year		Unit	July - 23	Aug- 23	Sept - 23	Oct - 23	Nov - 23	Dec - 23
S.No.	Parameters							
1	pH @ 25°C	-	-	-	-	-	7.41	7.25
2	Total Hardness as CaCo3	mg/L	-	-	-	-	362	340
3	Chloride as Cl	mg/L	-	-	-	-	580	557
4	Total Dissolved Solids	mg/L	-	-	-	-	1280	1226
5	Calcium as Ca	mg/L	-	-	-	-	62.6	60.3
6	Sulphate as SO4	mg/L	-	-	-	-	71.6	67.1
7	Total Alkalinity as CaCo3	mg/L	-	-	-	-	390	360
8	Magnesium as Mg	mg/L	-	-	-	-	49.8	46.2
9	Color	Hazen	-	-	-	-	<1.0	<1.0
10	Odour	-	-	-	-	-	Unobjectionable	Unobjectionable
11	Taste	-	-	-	-	-	Agreeable	Agreeable
12	Turbidity	NTU	-	-	-	-	0.58	0.49
13	Nitrate as No3	mg/L	-	-	-	-	10.5	9.04
14	Iron as Fe	mg/L	-	-	-	-	0.19	0.15
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	-	-	-	-	0.58	0.52
19	Phenolic compounds as	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	-	-	-	-	0.039	0.035
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	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	Per 100ml	-	-	-	-	Absent	Absent
36	Total Coliform	Per 100ml	-	-	-	-	Absent	Absent

vii. Marine Sampling

Marine Water samples and sediment samples were collected at locations South side berth and North side berth. Analysis data of Marine and sediments as represented in Annexure - 8 & 9.

DETAILS OF MARINE WATER AND SEDIMENT LOCATIONS

STATION CODE	LOCATIONS	Geographical Location
MW - 1 / MS - 1	CB - 1	13 ⁰ 18' 50" N 80 ⁰ 20' 51" E
MW - 2 / MS - 2	CB - 2	13 ⁰ 18' 46" N 80 ⁰ 20' 49" E
MW - 3 / MS - 3	BERTH - 3	13 ⁰ 18' 41" N 80 ⁰ 21' 4" E

Fig - 5. Water and Marine Sampling Locations



ANNEXURE – 8 RESULTS OF MARINE WATER QUALITY DATA

MARINE WATER														
S.NO	PARAMETER	UNITS	Berth Area											
			July - 23		Aug- 23		Sept - 23		Oct - 23		Nov - 23		Dec - 23	
			Surface	Bottom										
Physicochemical Parameters			Surface	Bottom										
1	Colour	Hazan	21	35	21	35	21	38	19	35	17	33	14	29
2	Odour	-	Unobject ionable	Unobjectio nable	Unobjecti onable									
3	pH @ 25°C	-	8.02	8.01	8.02	8.01	8.09	8.05	8.16	8.10	8.28	8.14	9.21	8.10
4	Temperature	°C	28.6	28.5	28.6	28.5	28.5	28.4	28.3	28.2	28.1	28.0	28.0	27.8
5	Turbidity	NTU	20	27	20	27	18	25	16	23	14	21	12	17
6	Total Suspended Solids	mg/L	31	38	31	38	29	35	26	32	22	29	25	33
7	BOD at 27 oC for 3 days	mg/L	3.4	3.6	3.4	3.6	3.3	3.4	3.1	3.3	3.0	3.1	3.1	3.3
8	COD	mg/L	98.5	106	98.5	106	95.6	101	92.8	98.4	89.8	95.3	84.6	90.5
9	Dissolved oxygen	mg/L	3.4	3.0	3.4	3.0	3.5	3.2	3.6	3.3	3.7	3.4	3.5	3.3
10	Salinity at 25 °C	ppt	35.9	36.1	35.9	36.1	35.7	35.9	35.5	35.7	35.3	35.5	35.1	35.3
11	Oil & Grease	mg/L	BDL (DL : 1.0)											
Nutrient Parameters														
12	Nitrate as No3	mg/L	6.89	9.21	6.89	9.21	6.24	8.78	5.89	8.26	5.71	8.08	5.40	7.62
13	Nitrite as No2	mg/L	3.01	3.69	3.01	3.69	2.89	3.50	2.76	3.39	2.62	3.25	2.48	3.11
14	Ammonical Nitrogen as N	mg/L	BDL (DL : 1.0)											
15	Total Nitrogen	mg/L	BDL (DL : 1.0)											
16	Inorganic phosphates as PO4	mg/L	4.70	6.80	4.70	6.80	4.65	6.75	4.48	6.50	4.35	6.38	4.18	6.20
17	Silica as SiO2	mg/L	6.22	7.39	6.22	7.39	5.95	7.20	5.78	7.05	5.62	6.93	5.36	6.58
18	Particulate Organic Carbon	µgC/L	13	16	13	16	11	14	10	12	08	11	06	10
19	Pertoleum Hydrocarbons	µg/L	BDL (DL : 1.0)											
Heavy Metals														
20	Cadmium as Cd	mg/L	BDL (DL : 0.001)	BDL (DL : 0.01)	BDL (DL : 0.001)	BDL (DL : 0.01)	BDL (DL : 0.001)	BDL (DL : 0.01)						
21	Copper as Cu	mg/L	BDL (DL : 0.01)											
22	Total Iron as Fe	mg/L	0.75	0.84	0.75	0.84	0.71	0.80	0.63	0.77	0.61	0.71	0.57	0.68
23	Zinc as Zn	mg/L	BDL (DL : 0.01)											
24	Lead as Pb	mg/L	BDL (DL : 0.01)											
25	Mercury as Hg	mg/L	BDL (DL : 0.001)											
26	Nickel as Ni	mg/L	BDL (DL : 0.01)											
27	Total Chromium as Cr	mg/L	BDL (DL : 0.01)											
Bacteriological Parameters														
28	Escherichia Coli (ECLO)	per100ml	Absent											
29	Faecal Coliform (FCLO)	per100ml	Absent											
30	Pseudomonas aeruginosa (PALO)	per100ml	Absent											
31	Streptococcus faecalis (SFCLO)	per100ml	Absent											
32	Shigella (SHLO)	per100ml	Absent											
33	Salmonella (SLO)	per100ml	Absent											
34	Total Coliform (TC)	per100m	Absent											
35	Total Viable Count (TVC)	cfu/ml	9.0	15.0	6.0	11.0	9.0	15.0	12	18	09	15	14	21
36	Vibrio cholera (VC)	per100m	Absent											
37	Vibrio parahaemolyticus (VPHLO)	per100m	Absent											

CB - 1														
Month & Year			July - 23		Aug- 23		Sept - 23		Oct - 23		Nov - 23		Dec - 23	
S.No	Parameters	Unit	Surface	Bottom	Surface	Bottom	Surface	Bottom	Surface	Bottom	Surface	Bottom	Surface	Bottom
38	Primary Productivity	mg C/m ³ /hr	8.75	9.13	8.72	9.10	8.74	9.13	8.77	9.15	8.79	9.17	8.81	9.19
39	Chlorophyll a	mg /m ³	6.12	6.75	6.10	6.72	6.14	6.75	6.17	6.79	6.19	6.81	6.21	6.84
40	Phaeopigment	mg /m ³	2.91	3.56	2.89	3.53	2.92	3.55	2.93	3.57	2.94	3.59	2.96	3.62
41	Total Biomass	ml /100 m ³	1.88	2.17	1.86	2.16	1.89	2.19	1.91	2.21	1.92	2.22	1.94	2.23
PHYTOPLANKTON														
42	Bacteriastrium hyalinum	nos/ml	17	15	19	16	22	18	25	20	29	17	31	19
43	Bacteriastrium varians	nos/ml	15	19	13	17	15	19	13	16	15	21	17	24
44	Chaetoceros didymus	nos/ml	13	10	12	08	13	10	17	13	19	16	21	17
45	Chaetoceros decipiens	nos/ml	12	17	14	21	11	18	13	21	10	19	12	23
46	Biddulphia mobiliensis	nos/ml	23	19	25	17	28	19	32	22	35	26	38	28
47	Ditylum brightwellii	nos/ml	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
48	Gyrosigma sp	nos/ml	7	5	9	6	11	8	8	5	11	9	8	6
49	Cladophyxis sps	nos/ml	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
50	Coscinodiscus centralis	nos/ml	19	16	22	18	25	21	28	23	33	24	31	22
51	Coscinodiscus granii	nos/ml	12	8	14	10	17	13	19	14	22	18	25	20
52	Cylcotella sps	nos/ml	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
53	Hemidiscus hardmanianus	nos/ml	21	15	19	12	23	15	27	17	34	21	31	18
54	Laudaria annulata	nos/ml	23	18	26	21	28	23	33	25	29	22	27	20
55	Pyropacus horologicum	nos/ml	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
56	Pleurosigma angulatum	nos/ml	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
57	Leptocylindrus danicus	nos/ml	16	11	19	13	16	11	18	13	15	10	14	08
58	Guinardia flaccida	nos/ml	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
59	Rhizosolenia alata	nos/ml	12	9	15	12	18	13	25	16	30	19	34	21
60	Rhizosolenia imbricata	nos/ml	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
61	Rhizosolenia semispina	nos/ml	23	20	21	17	23	19	25	21	21	16	24	19
62	Thalassionema nitzschioides	nos/ml	25	22	28	20	31	23	28	18	34	21	38	23
63	Triceratium reticulatum	nos/ml	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
64	Ceratium trichoceros	nos/ml	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
65	Ceratium furca	nos/ml	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
66	Ceratium macroceros	nos/ml	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
67	Ceracium longipes	nos/ml	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
ZOOPLANKTONS														
68	Acrocalanus gracilis	nos/ml	18	17	21	19	23	17	27	19	34	22	42	27
69	Acrocalanus sp	nos/ml	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
70	Paracalanus parvus	nos/ml	11	13	13	17	156	19	18	23	15	20	21	25
71	Eutintinus sps	nos/ml	4	2	6	3	3	2	5	3	9	5	9	4
72	Centropages furcatus	nos/ml	15	12	17	13	25	16	28	19	32	22	24	14
73	Corycaeus dana	nos/ml	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
74	Oithona brevicornis	nos/ml	15	22	18	26	21	28	24	32	20	28	20	27
75	Euterpina acutifrons	nos/ml	11	16	13	19	16	21	11	16	16	23	23	31
76	Metacalanus aurivilli	nos/ml	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
77	Copipod nauplii	nos/ml	10	8	12	10	15	11	17	12	19	13	18	13
78	Cirripede nauplii	nos/ml	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
79	Bivalve veliger	nos/ml	18	14	21	16	23	18	25	21	31	26	29	27
80	Gastropod veliger	nos/ml	15	19	17	21	19	23	22	27	17	24	11	16

ANNEXURE - 9 RESULTS OF MARINE SEDIMENT QUALITY DATA

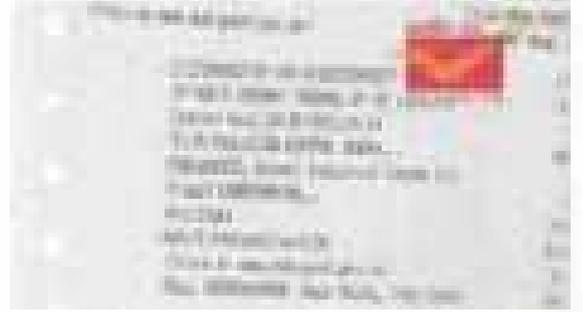
		SEA SEDIMENT						
Location		CB - 1						
Month & Year		Uni	July - 23	Aug- 23	Sept - 23	Oct - 23	Nov - 23	Dec - 23
S.No.	Parameters							
1	Total organic matter	%	0.63	0.59	0.63	0.57	0.54	0.51
2	% Sand	%	21	23	21	23	26	29
3	%silt	%	36	33	37	39	36	41
4	%Clay	%	43	44	42	38	38	30
5	Iron (as Fe)	mg/kg	19.5	18.6	20.1	18.9	17.8	19.5
6	Aluminium (as Al)	mg/kg	8925	8813	9056	8852	8781	8452
7	Chromium (as cr)	mg/kg	51	48	51	48	45	41
8	Copper (as cu)	mg/kg	45	43	45	43	41	38
9	Manganese (as Mn)	mg/kg	53	50	53	51	47	45
10	Nickel (as Ni)	mg/kg	47	45	47	44	42	38
11	Lead (as Pb)	mg/kg	18	16	18	16	14	11
12	Zinc (as Zn)	mg/kg	235	221	240	234	224	218
13	Mercury(as Hg)	mg/kg	BDL(D.L. 0.1)					
14	Total phosphorus as P	mg/kg	141	136	141	135	131	124
15	Octane	mg/kg	BDL(D.L. 0.1)					
16	Nonane	mg/kg	BDL(D.L. 0.1)					
17	Decane	mg/kg	BDL(D.L. 0.1)					
18	Undecane	mg/kg	0.59	0.56	0.50	0.48	0.43	0.39
19	Dodecane	mg/kg	BDL(D.L. 0.1)					
20	Tridecane	mg/kg	BDL(D.L. 0.1)					
21	Tetradecane	mg/kg	BDL(D.L. 0.1)					
22	Phntadecane	mg/kg	BDL(D.L. 0.1)					
23	Hexadecane	mg/kg	BDL(D.L. 0.1)					
24	Heptadecane	mg/kg	BDL(D.L. 0.1)					
25	Octadecane	mg/kg	BDL(D.L. 0.1)					
26	Nonadecane	mg/kg	BDL(D.L. 0.1)					
27	Elcosane	mg/kg	BDL(D.L. 0.1)					
I. Nematoda								
28	Oncholaimussp	nos/m ²	22	25	29	32	35	32
29	Tricomasp	nos/m ²	23	22	23	25	27	24
II. Foraminifera								
30	Ammoniaebecarii	nos/m ²	18	20	18	21	17	19
31	Quinquinasp	nos/m ²	28	25	28	32	29	33
32	Discorbinellasp.,	nos/m ²	16	19	21	24	28	30
33	Bolivinaspathulata	nos/m ²	13	15	18	19	21	23
34	Elphidiumsp	nos/m ²	17	19	21	18	23	27
35	Noniondepressula	nos/m ²	19	22	24	22	26	29
III. Molluscs-Bivalvia								
36	Meretrixveligers	nos/m ²	23	26	29	34	38	35
37	Anadoraveligers	nos/m ²	18	17	19	15	18	15
	Total No. of individuals	nos/m ²	198	210	230	242	262	267
	Shanon Weaver Diversity Index		2.30	2.27	2.29	2.27	2.27	2.28

AECTPL/ENV/TNPCB/ES/2023/26

Date: 23.09.2023

To,

The Member Secretary,
Tamil Nadu Pollution Control Board,
76, Mount Salai,
Guindy,
Chennai - 600 032



Dear Sir,

Sub: Submission of Environmental Statement (Form V) for the financial year ending 31st March, 2023 of Adani Ennore Container Terminal Private Limited (AECTPL) - Reg.

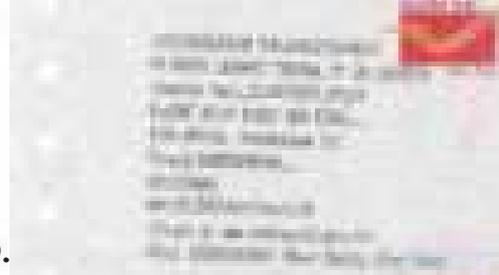
Ref: 1. Consent to Operate Order No. 2108136876855 dated 24.08.2021 under Water Act
2. Consent to Operate Order No. 2108236876855 dated 24.08.2021 under Air Act

With reference to the captioned subject and cited references above, we submit herewith the Environmental Statement of M/s Adani Ennore Container Terminal Private Limited, in Form-V prescribed under Rule 14 of the Environment (Protection) Rules 1986 for the financial year ending 31st March 2023.

Submitted for your kind information and records.

Thanking you,

For, M/s. ADANI ENNORE CONTAINER TERMINAL PRIVATE LIMITED.



Sudip Dasgupta
Chief Executive Officer



Enclosure: as above

Copy To:

- 1) The Joint Chief Environmental Engineer, Tamilnadu Pollution Control Board, First Floor, 950/1, Poonamallee High Road, Arumbakkam, Chennai-600 106
- 2) The District Environmental Engineer, Tamil Nadu Pollution Control Board, Gummidipoondi - 601201.



Adani Ennore Container Terminal Pvt Ltd
Adani House
C/o. Kamarajar Port Limited
Ponneri Taluk, Tiruvallur District
Tamil Nadu- 600 120.

Tel +91 44 2824 3062

info@adani.com
www.adani.com

CIN: U61200GJ2014PTC078795



Form-V

(See rule 14 of Environment (Protection) Rules, 1986)

Environmental Statement for the financial year ending 31st March 2023

PART - A

i) Name and Address of the owner / occupier of the industry operation or process	Mr. Sudip Des Gupta Chief Executive Officer Adani Ennore Container Terminal Private Limited C/O Kamarajar Port Limited Vattar Post, Ennore Thiruvattur District - 600 120 Tamil Nadu, India
ii) Industry Category	Primary (Red) Secondary - 1055 - Ports and Harbour, Jetties and Dredging Operations.
iii) Production Capacity	Cargo Handling Capacity 11.58 MMTPA of Container cargo
iv) Year of establishment	2016
v) Date of the last environmental statement submitted	Vide our Letter No. AECOTPL/TNFCB/2022-23/128 dated 22.09.2022

PART - B

WATER AND RAW MATERIAL CONSUMPTION

(i) Water Consumption:

S. No	Water Consumption (m ³ /Calendar Day)	2021-2022	2022-2023
1.	Process	NIL	NIL
2.	Cooling	NIL	NIL
3.	Domestic	12.6	12.1

(ii) Raw Material Consumption:

S. No.	Name of Raw Material	Name of Products	Consumption of Raw Material per Unit of output	
			During the previous financial year (2021-22)	During the current financial year (2022-23)
1	Not Applicable	Not Applicable	NIL	NIL

The unit does not undergo any manufacturing process. Hence, there is no raw material consumption.

PART - C

POLLUTION DISCHARGE TO ENVIRONMENT/ UNIT OF OUTPUT

(Parameters as specified in the consent issued)

Pollutants	Quality of Pollutants Discharged (Mass/day)	Concentration of Pollutants discharges (mass/volume)	Percentage of variation from prescribed standards with reason	
a) Water	STP Treated Water Characteristics -			
	Parameter	Consent Limit	Actual	% Variation with prescribed standard
	pH	7.5-9	7.6	Nil
	Total Suspended Solids (mg/l)	30	25.83	Nil
	BOD (3 days at 20°C) (mg/l)	20	18.18	Nil
Fecal Coliform (MPN/100ml)	1000	214.17	Nil	
b) Air	<p>DG sets are provided as standby power source and are used during power failure only. The Height of DG stacks as per CPCB/ TNPCB Standards. All the monitored parameters are within standards.</p> <p>All the DG Sets are retrofitted to reduce the Particulate Matter emission level. Efficiency of the retrofitting equipment is observed above 90% against the TNPCB requirement of >70%.</p> <p>All the monitored parameters are well within the prescribed standards.</p>			
Particulate Matter (mg/m ³)	DG stack emission report is enclosed as Annexure 1			
Sulphur Dioxide (mg/m ³)				
Nitrogen Oxide (ppm)				

PART-D**HAZARDOUS WASTES**

(As specified under Hazardous Waste Management and Handling Rules 1989)

Hazardous Wastes	Total Quantity (Kg)	
	During the previous Financial Year (2021-22)	During the current Financial Year (2022-23)
(a) From Process	<ul style="list-style-type: none"> Used/Spent Oil (S.1) - 2500 Liters (2.500 Tons) Wastes or residue containing oil (S.2) - 800 Liters (0.72 Tons) 	Nil
(b) From Pollution control facilities	Nil	Nil

PART-E**SOLID WASTES**

TOTAL QUANTITY GENERATED			
Solid Waste		During the previous Financial Year (2021-22)	During the current Financial Year (2022-23)
a)	From process	Nil	Nil
b)	From pollution control facilities- STP	99.3 kgs	105.8 kgs
c)	1. Quantity recycled or reused within the Unit	99.3 kgs	105.8 kgs
	2. Sent	Nil	Nil
	3. Disposed	Nil	Nil

PART-E

Please specify the characterization (in terms of Composition and quantum) of Hazardous as well as solid wastes and indicate disposal practice adopted for both these categories of waste:

- "Zero Waste to Landfill" Initiative – No waste is being sent to landfill or incineration facility. AECTPL is having Integrated Waste Management System (IWMS) to properly segregate & recover the materials and are handled as per 5R (Reduce, Reuse, Recycle, Recover and Re-process) principle.
- AECTPL has awarded with Zero Waste to Landfill Management System (ZWL MS 2020) from TÜV Rheinland India Pvt. Ltd (Annexure – 7).
- Hazardous wastes include Used oil, Filters contaminated with Oil and Empty barrels / containers contaminated with hazardous wastes. All the hazardous wastes are collected and stored properly in Integrated Waste Management Shed & are being disposed to TNPCB authorized registered recycler in line with Hazardous and other Wastes (Management and Transboundary Movement) Rules, 2016 (As amended).
- The used batteries and E -wastes are also stored in Integrated Waste Management Shed and disposed off through approved vendor in line to E-Waste Management Rules 2016 (as amended).
- Hazardous waste Annual returns in Form 4 was submitted in line with the Hazardous and Other Wastes (Management & Trans Boundary Movement) Rules, 2016.
- E-waste returns in Form 3 was submitted in line with the E-waste Management Rules, 2016.
- 100% utilization of STP sludge for greenbelt maintenance as manure.
- AECTPL certified as "Single Use Plastic (SUP) Free" site from OI -ITC Centre of Excellence for Sustainable Development.

FART-G

Impact of the pollution abatement measures taken on conservation of natural resources and on the cost of production.

- Adani Ennore Container Terminal Private Limited is having electrified cranes only and hence the diesel consumption by the cranes is eliminated completely.
- All the DG Sets are retrofitted to reduce the Particulate Matter emission level. Efficiency of the retrofitting equipment is observed above 90% against the TNPCB requirement of >70%.
- All the domestic wastewaters being generated at port is treated at existing sewage treatment plant and the treated water is being reused within port premises for gardening/horticulture purpose.
- Sewage Treatment Plant (STP) is in continuous operation and the treated effluent water quality is meeting the TNPCB norms. The total cost spent on STP operation during the year 2022-23 is Rs. 5.11 Lakhs.
- Regular Environmental monitoring is being carried out through NABL accredited laboratory. All the monitored environmental parameters are well within the prescribed norms & the details of monitored data is being submitted regularly to TNPCB, CPCB, MoEF&CC and other concerned authorities.
- Unit is continuously developing and maintaining Greenbelt within the port premises.
- Implemented Integrated Waste Management System (IWMS) for managing all types of wastes in line with 3R (Reduce, Reuse, Recycle, Recover and Reprocess) principle.

FART-H

Additional measures/investment proposal for Environmental protection including abatement of pollution, prevention of pollution.

Regular Expenditure (Cost in INR lakhs/year)		
S. No.	Description	Cost
1	Environmental monitoring & Environment Studies	13.28
2	Green belt & Horticulture development	5.11
3	Annual maintenance contractor of STP operation	5.11
4	Operation & Maintenance of Integrated Waste Management System	3.14
5	Housekeeping	8.27

PART-3

ANY OTHER PARTICULARS IN RESPECT TO ENVIRONMENT

- Handling of all types of wastes in line with 5R (Reduce, Reuse, Recycle, Recover and Reprocess) Principle.
- Paperless Operation is in place (except for statutory requirements) using application tools and Software – Terminal Info Gateway (TIG).
- Energy Conservation Committee to measure the amount of energy consumed and take actions to reduce the energy consumed through port operations.
- Water Warriors committee to identify and reduce the water consumption. The committee would propose innovative water solutions.
- Integrated Management System (ISO 9001:2015, 14001:2015, 45001:2018 and 30001:2018) certified Port.
- Obtained "5S" Certification at MOP.
- AICTEPL is bestowed with the top honors and the details of accolades received during the year 2022-23 are mentioned here under (photos attached at Annexure-3);
 - EKDP's "Platinum Award" under Environment Improvement category

• **Community Development:**

Katupalli Port has been propagating the community development through a broad based Corporate Social Responsibility (CSR) program in the project area through Adani Foundation since 2018 to ensure inclusive growth and catering to the developmental needs of the community at the grassroots level. The project area encompasses 17 panchayats covering about 45 villages within 10 km radius of the Katupalli Port. The key interventions introduced in the project area are as under:

- Education
- Community Health
- community infrastructure facility
- Sustainable Livelihood development
- Tree Plantation & Bio-Diversity development program
- Special Focus Groups
- COVID / Cyclone relief measures

Significant highlights during the year 2022-23 are as follows.

Education: 20 Adani Evening Education Centers where 600 students from fishermen, tribal and other backward communities get benefit through this program.

Established Computer Smart Lab for government school students, where 450 students get benefit through this program, Pudukkottai Panchayat, Mirpur and Tiruvallur, Tamilnadu.

Health: Addressing health issues of rural communities through mobile health care program where 1500 persons get benefit every month through this program.

Supplies: Creating awareness and preventing unwanted health issues faced by mothers and children below 5 years of age working closely with government system and ensuring to improve the health condition of the children below 5 years of age.

Sustainable Livelihood Development: Natural Farming: Ensuring 100 farmers do natural farming by assisting them to ensure to adopt and implement the natural farming protocols as per the norms of government where government will certify them under PGS program.

Livelihood Enhancement program for 121 women through group based entrepreneurship program and providing livelihood support to 30 individuals- widows, destitute and persons with disabilities.

Community Infrastructure Development: Installed 10 high mast lights in the rural communities, Established 5 RO plants in the community, Government Schools and Government Hospitals in addressing its access to drinking water, Community Toilet for women was constructed. Decided Kattupalli pond and gave life to the pond, built toilet block for girl students of government school students, Pudukkottai Panchayat which will be benefited by girl students from four panchayats, planned to build a community hall for Sarangkuppam and to do Decolouration of boat parking areas of fishermen in 18 locations.

Date: 23.09.2023

(Signature of a person carrying out an industry operation or process)

Name : **Sudip Dasgupta**

Designation: **Chief Executive Officer**

Address : Adani Ennore Container Terminal Pvt Ltd
C/O Kamarajar Port Limited
Vallur post, Ennore
Tiruvallur District- 600 120.



ANNEXURE - 1

AECTPL- STACK MONITORING (April'2022 to March'2023)													
Location		DG - 1 1500KVA											
Month & Year		Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	Feb-23	Mar-23
S.No.	Parameters	20.04.22	21.05.22	19.06.22	21.07.22	19.08.22	16.09.22	22.10.22	16.11.22	27.12.22	24.01.23	17.02.23	24.03.23
1	Stack Temperature, °C	241.0	253.0	240.0	228.0	218.0	221.0	237.0	214.0	225.0	216.0	210.0	207.0
2	Flue Gas Velocity, m/s	23.3	24.1	24.9	23.5	21.1	22.4	24.0	22.1	21.3	21.0	22.8	22.6
3	Gas Discharge, Nm ³ /hr	6124.0	6159.0	6520.0	6316.0	5771.0	6093.0	6342.0	6096.0	5739.0	5771.0	6346.0	6340.0
4	Sulphur Dioxide, mg/Nm ³	7.5	7.9	7.4	6.9	6.0	6.9	8.1	7.8	7.0	7.7	6.4	6.3
5	NOX (as NO ₂) in ppmv	136.0	142.0	135.0	122.0	110.0	118.0	129.0	117.0	98.0	98.0	92.0	87.0
6	Particular matter, mg/Nm ³	11.0	9.6	8.2	8.9	8.1	9.2	8.5	9.3	7.4	31.6	8.5	11.3
7	Carbon Monoxide, mg/Nm ³	38.0	40.0	38.0	33.0	35.0	37.0	34.0	31.0	28.0	68.0	30.0	41.0
Location		DG-2 1500KVA											
Month & Year		Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	Feb-23	Mar-23
S.No.	Parameters	20.04.22	21.05.22	19.06.22	21.07.22	19.08.22	16.09.22	22.10.22	16.11.22	27.12.22	24.01.23	17.02.23	24.03.23
1	Stack Temperature, °C	230.0	-	-	238.0	244.0	231.0	219.0	210.0	218.0	214.0	231.0	125.0
2	Flue Gas Velocity, m/s	22.0	-	-	23.9	23.1	23.8	22.0	22.5	22.0	20.7	21.0	13.2
3	Gas Discharge, Nm ³ /hr	5879.0	-	-	6295.0	6004.0	6362.0	6005.0	6262.0	6052.0	5720.0	5595.0	626.0
4	Sulphur Dioxide, mg/Nm ³	7.1	-	-	8.4	8.7	9.2	7.8	7.3	6.5	7.3	7.8	6.1
5	NOX (as NO ₂) in ppmv	130.0	-	-	136.0	139.0	132.0	115.0	104.0	94.0	93.0	96.0	76.0
6	Particular matter, mg/Nm ³	9.6	-	-	9.4	10.3	9.8	7.4	8.1	7.6	8.6	7.0	9.7
7	Carbon Monoxide, mg/Nm ³	35.0	-	-	39.0	41.0	37.0	30.0	27.0	25.0	31.0	36.0	32.0

Location		DO-3 1800VIA											
Month & Year		Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	Feb-23	Mar-23
Site	Parameter	09-04-22	01-05-22	19-06-22	07-07-22	19-08-22	19-09-22	02-10-22	19-11-22	07-12-22	24-01-23	17-02-23	04-03-23
1	Soak Temperature, °C	-	-	-	217.0	218.0	218.0	221.0	221.0	-	-	-	-
2	Flow Gas Velocity, m/s	-	-	-	20.1	20.7	21.7	22.8	23.7	-	-	-	-
3	Gas Discharge, km3/hr	-	-	-	6000.0	6600.0	6600.0	6100.0	5600.0	-	-	-	-
4	Sulfur Dioxide, mg/Nm3	-	-	-	8.0	8.4	8.8	8.0	8.8	-	-	-	-
5	NOx (as NO2) in ppm	-	-	-	120.0	132.0	125.0	132.0	115.0	-	-	-	-
6	Particulate matter, mg/Nm3	-	-	-	8.0	8.3	8.0	8.8	8.0	-	-	-	-
7	Carbon Monoxide, mg/Nm3	-	-	-	16.0	16.0	16.0	16.0	12.0	-	-	-	-

Location		DO-4 1200VIA											
Month & Year		Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	Feb-23	Mar-23
Site	Parameter	09-04-22	01-05-22	19-06-22	07-07-22	19-08-22	19-09-22	02-10-22	19-11-22	07-12-22	24-01-23	17-02-23	04-03-23
1	Soak Temperature, °C	-	120.0	121.0	118.0	113.0	120.0	120.0	120.0	-	-	-	-
2	Flow Gas Velocity, m/s	-	12.9	12.0	12.8	13.0	14.7	13.2	13.0	-	-	-	-
3	Gas Discharge, km3/hr	-	380.0	370.0	400.0	470.0	700.0	600.0	620.0	-	-	-	-
4	Sulfur Dioxide, mg/Nm3	-	4.8	4.2	4.4	4.8	5.0	5.4	5.1	-	-	-	-
5	NOx (as NO2) in ppm	-	28.0	30.0	38.0	38.0	60.0	57.0	60.0	-	-	-	-
6	Particulate matter, mg/Nm3	-	4.9	4.0	4.8	4.0	5.4	5.0	5.8	-	-	-	-
7	Carbon Monoxide, mg/Nm3	-	21.0	10.0	18.0	21.0	23.0	21.0	18.0	-	-	-	-

Report No.:	EC-IAQ-2023-07218	Report Date:	25.07.2023
Customer Name & Address:	M/s. Enviro Coal Terminal Pvt. Ltd. Puducherrykottam Village, Vallur-Pond, Perambalur, Perambalur District-601 126.		
Customer Reference:	EC-ITPL-VG02822-23 CH 20004/2022	Sample Reference No.:	EC-IAQ-2023-07218
Sample Drawn By:	ECI	Sample Received On:	26.07.2023
Sample Collected Date:	18.07.2023	Test Commenced On:	26.07.2023
City of Sample Received:	Pitru Pudur & 25th Station	Test Completed On:	25.07.2023
Sample Description:	Ambient Air	Sampling Method:	IS 5152 Part 1
Sample Mark:	Flow Weight Bridge (FTL)		

S.No	PARAMETERS	UNITS	RESULTS	TEST METHOD	Permissible limits of CPCB
1.	Acetone (as TSP)	$\mu\text{g}/\text{m}^3$	< 1.0	ISO 15649 Method 0312	100
2.	Acetone (as AQ)	$\mu\text{g}/\text{m}^3$	< 0.1	IS 5152 Part 03	1.0
3.	Benzene (as TSP)	$\mu\text{g}/\text{m}^3$	< 1.0	IS 5152 Part 11	5.0
4.	Benzene (as AQ)	$\mu\text{g}/\text{m}^3$	< 1.0	IS 5152 Part 12	1.0
5.	Carbon Monoxide (as CO)	$\mu\text{g}/\text{m}^3$	< 1.3	IS 5152 Part 10	2.0
6.	Lead (as Pb)	$\mu\text{g}/\text{m}^3$	< 0.1	IS 5152 Part 20	1.0
7.	Propanal (as H)	$\mu\text{g}/\text{m}^3$	< 0.1	IS 5152 Part 22	20
8.	Isocyanic acid (as NO ₂)	$\mu\text{g}/\text{m}^3$	22.9	IS 5152 Part 08	50
9.	Ozone (as O ₃)	$\mu\text{g}/\text{m}^3$	< 9.8	IS 5152 Part 09	100
10.	Particulate Matter (PM ₁₀)	$\mu\text{g}/\text{m}^3$	322	IS 5152 Part 04	50
11.	Respirable Particulate Matter (PM ₁₀)	$\mu\text{g}/\text{m}^3$	29.0	IS 5152 Part 05	100
12.	Sulphur Dioxide (as SO ₂)	$\mu\text{g}/\text{m}^3$	7.7	IS 5152 Part 02	50

--- End of Report ---

Verified By: 

Remarks: In the above mentioned location meets the requirements of CPCB standards with respect to the parameters tested.

For ENVIRO CARE INDIA PRIVATE LIMITED
(Laboratory Division)




Authorized Signatory

- NOTE:**
- The results apply only to the date tested.
 - Any discrepancy shall be reported immediately to the client.
 - Report shall not be tampered anywhere except in the copy in the client's hand without the permission of the laboratory.
 - Labours informed by customer, the cost being not, will be charged for more than 15 days from date of issue of test report.
 - Legal liability of test laboratory is limited to the service contract.
 - Any dispute arising out of the report is governed by Madurai jurisdiction only.



TEST REPORT

Report No.:	EC-ANG-202307020	Report Date:	24-07-2023
Customer Name & Address:	M/s. Soma Coal Terminal Pvt. Ltd Puchativakkam Village, Vilar Puzh, Pinnac Taluk, Thiruvallur District-600 120.		
Customer Reference:	ECTPL/CO/2023-23 Dr.24/9x/2023	Sample Reference No.:	EC-ANG-202307020
Sample Given By:	EC	Sample Received On:	18-07-2023
Sample Collected Date:	19-07-2023	Test Commenced On:	18-07-2023
City of Sample Received:	Vilar Puzh & Pinnac Taluk	Test Completed On:	24-07-2023
Sample Description:	Ambient Air	Sampling Method:	IS 5182:Part 4
Sample Mark:	Near Main Gate		

S.No	PARAMETERS	UNITS	RESULTS	TEST METHOD	Permissible limits of CPCB
1.	Ambient (as TSP)	$\mu\text{g}/\text{m}^3$	< 1.0	NCOB Method-2012	400
2.	Ambient (as AQ)	$\mu\text{g}/\text{m}^3$	< 0.1	IS 5182:Part 22	0.3
3.	Benzene (C ₆ H ₆)	$\mu\text{g}/\text{m}^3$	< 1.0	IS 5182:Part 11	3.0
4.	Toluene+Xylene (BTEX)	$\mu\text{g}/\text{m}^3$	< 1.0	IS 5182:Part 12	1.0
5.	Carbon Monoxide (as CO)	$\mu\text{g}/\text{m}^3$	< 1.0	IS 5182:Part 10	3.0
6.	Lead (as Pb)	$\mu\text{g}/\text{m}^3$	< 0.1	IS 5182:Part 22	1.0
7.	Nickel (as Ni)	$\mu\text{g}/\text{m}^3$	< 0.1	IS 5182:Part 22	20
8.	Nitrogen dioxide (as NO ₂)	$\mu\text{g}/\text{m}^3$	25.1	IS 5182:Part 08	80
9.	Ozone (as O ₃)	$\mu\text{g}/\text{m}^3$	< 9.9	IS 5182:Part 09	100
10.	Particulate Matter (PM ₁₀)	$\mu\text{g}/\text{m}^3$	28.4	IS 5182:Part 24	80
11.	Respirable Particulate Matter (PM _{2.5})	$\mu\text{g}/\text{m}^3$	84.3	IS 5182:Part 23	100
12.	Sulphur Dioxide (as SO ₂)	$\mu\text{g}/\text{m}^3$	7.0	IS 5182:Part 07	80

End of Report

 Verified By: *S. Ch*

Remark: In the above mentioned location needs to be requirements of CPCB standards with respect to the parameters listed.	For ENVIRO CARE INDIA PRIVATE LIMITED (Laboratory Division)  Authorized Signatory
---	---

43, 2nd Street, Harvey Nagar, Aramboli, Madurai - 625 106. Tel: +91 432 4289000

- Note:**
- The report is valid only to the test order.
 - Any re-test/retest and re-issued test report is free.
 - Report shall not be re-issued/ amended/ altered in full and in part same format without the permission of the laboratory.
 - Claims returned by customer, the test issue will not be retained for issues than 15 days from issue of date of test report.
 - Test facility of the laboratory is limited to the weekend amount.
 - Any second printing out of the report is subjected to Manual Accreditation (M/A).



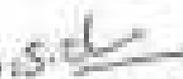
TEST REPORT

Accredited by NABL (Chemical & Physical)

Report No :	DCI-AAA-2023030221	Report Date :	25.07.2023
Customer Name & Address	M/s. Bansa Coal Terminal Pvt. Ltd Pashchimban Wharf, Vishal Post, Harnetai, Jharkhand Thermal Distance: 100		
Customer Reference :	ECTPL/COAL/0011-01/01/04/2023	Sample Reference No :	DCI-AAA-2023030221
Sample Drawn By :	ECI	Sample Received On :	20.07.2023
Sample Collected Date :	19.07.2023	Test Commenced On :	20.07.2023
City of Sample Received :	Visal Post & 25m Solution	Test Completed On :	25.07.2023
Sample Description :	Airborne SO ₂	Sampling Method :	IS 5162-14
Sample Mark:	None Given		

S.No	PARAMETERS	UNIT	RESULTS	TEST METHOD	Permissible limits of CPCB
1.	Arsenic (as As)	µg/m ³	< 1.0	IS 5162 Method 09(a)	400
2.	Arsenic (as As)	µg/m ³	< 2.1	IS 5162 Part 20	6.0
3.	Benzene (C ₆ H ₆)	µg/m ³	< 1.0	IS 5162 Part 11	6.0
4.	Benzene-a-Pyrene (BaP)	µg/m ³	< 1.0	IS 5162 Part 12	1.0
5.	Carbon Monoxide (as CO)	µg/m ³	< 1.0	IS 5162 Part 10	2.0
6.	Lead (as Pb)	µg/m ³	< 0.1	IS 5162 Part 22	1.0
7.	Nickel (as Ni)	µg/m ³	< 0.1	IS 5162 Part 23	20
8.	Manganese dioxide (as MnO ₂)	µg/m ³	26.8	IS 5162 Part 08	80
9.	Ozone (as O ₃)	µg/m ³	< 0.8	IS 5162 Part 09	180
10.	Particulate Matter (PM ₁₀)	µg/m ³	23.4	IS 5162 Part 24	60
11.	Respirable Particulate Matter (PM ₁₀)	µg/m ³	40.8	IS 5162 Part 20	500
12.	Sulphur Dioxide (as SO ₂)	µg/m ³	6.0	IS 5162 Part 02	80

— End of Report —

 Verified By: 

Remarks: In the above mentioned location meets the requirements of CPCB standards with respect to the parameters listed.

 For ENVIRO CARE INDIA PRIVATE LIMITED
 (Laboratory Division)


 Authorized Signatory

P-42, 2nd Street, Harvey Nagar, Anwarli, Mumbai - 400 016, Tel: +91-452-4330199

- Note:**
1. The results relate only to the test results.
 2. Any corrective not granted shall remain the responsibility of the client.
 3. Responsibility for the maintenance of the equipment is the client's.
 4. Unlabeled material is not to be used for testing.
 5. The test items are not to be returned for reuse after 15 days from date of issue of test report.
 6. Total liability of our laboratory is limited to the invoice amount.
 7. Any dispute arising out of this report is referred to National Accreditation Body.



TEST REPORT

Accredited by NABL (Chemical Analysis)

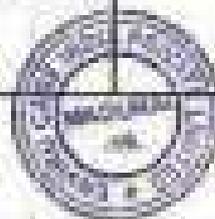
Report No.:	ECI-AAA-2023070202	Report Date:	05.07.2023
Customer Name & Address:	M/s. Shree Coal Terminal Pvt. Ltd. Puruthuvattam Village, Vellan Puzh, Perambalur, Thiruvallur District-601 100		
Customer Reference:	ECITPL/AA/2023-03 (2) 29040002	Sample Reference No.:	ECI-AAA-2023070202
Sample Drawn By:	SD	Sample Received On:	05.07.2023
Sample Collected Date:	19.07.2023	Test Commenced On:	20.07.2023
Qty of Sample Received:	Filter Paper & Dist Solution	Test Completed On:	05.07.2023
Sample Description:	Ambient Air	Sampling Method:	IS 5182 P14
Sample Mark:	None Sub Station - 1		

S.No	PARAMETERS	UNITS	RESULTS	TEST METHOD	Permissible limits of CPCB
1.	Ambient (as NH ₃)	µg/m ³	< 1.0	ISO 15785 Method 0210	400
2.	Ambient (as SO ₂)	µg/m ³	< 0.1	IS 5182 Part 22	6.0
3.	Ambient (as CO)	µg/m ³	< 1.0	IS 5182 Part 11	6.0
4.	Ambient (as Pb)	µg/m ³	< 1.0	IS 5182 Part 12	1.0
5.	Ambient (as O ₃)	µg/m ³	< 1.2	IS 5182 Part 10	3.0
6.	Ambient (as PM ₁₀)	µg/m ³	< 0.1	IS 5182 Part 23	1.0
7.	Ambient (as NO ₂)	µg/m ³	< 0.1	IS 5182 Part 22	20
8.	Ambient (as NO)	µg/m ³	23.5	IS 5182 Part 20	60
9.	Ambient (as SO ₂)	µg/m ³	< 0.1	IS 5182 Part 22	180
10.	Respirable Particulate Matter (PM ₁₀)	µg/m ³	20.7	IS 5182 Part 24	50
11.	Respirable Particulate Matter (PM _{2.5})	µg/m ³	54.5	IS 5182 Part 23	100
12.	Ambient (as SO ₂)	µg/m ³	8.3	IS 5182 Part 22	60

← End of Report →

 Verified By: 

Remark: In the above mentioned location there are no requirements of CPCB standards with respect to the parameters tested.

 For ENVIRO CARE INDIA PRIVATE LIMITED
 (Laboratory Division)


 Authorized Signatory

43, 3rd Street, Harvey Nagar, Avasthali, Madurai - 625 006, Tel: +91 452 538102

- Note:
- The results apply only to the test made.
 - All samples are to be analyzed within 15 days of the date of collection.
 - Report shall not be reproduced elsewhere except to the client for the same purpose without the permission of the Laboratory.
 - Sample returned by customer. The test items will not be shipped to client until 15 days after date of issue of test report.
 - The liability of the Laboratory is limited to the service provided.
 - The results are valid only if the report is supported by original documents only.



TEST REPORT

Report No.:	EC/ENVIRO/2023/001206	Report Date:	25.07.2023
Customer Name & Address:	M/s. Enviro Care Testrol Pvt. Ltd. Plot No. 10, Industrial Area, Indira Nagar, Chennai-600 024 Tamil Nadu - 600 024		
Customer Reference:	EC/ENVIRO/2023/001206 Date: 20.07.2023	Sample Reference No.:	EC-NA-2023070106
Sample Drawn By:	ECI	Sample Received On:	21.07.2023
Sample Collected Date:	20.07.2023	Test Commenced On:	21.07.2023
Qty of Sample Received:	Throttle & M in back	Test Completed On:	25.07.2023
Sample Description:	Stack	Sampling Method:	IS 11295 Pt 1
Sample Mark:	ENI 500 KVA (Other Unit) - 2 - (Stack/Down)		

S. No	PARAMETERS	UNITS	RESULTS	TEST METHOD	Max. Permissible TSPCB norms for General Emission Standards
1	Ambient Temperature	°C	32	IS 11295 Part 03	NA
2	Carbon dioxide (as CO ₂)	% vol	9.3	IS 13279	NA
3	Carbon Monoxide (as CO)	% vol	0.3	IS 13279	1.0
4	Flow rate	Nm ³ /hr	380	IS 11295 Part 03	NA
5	Flue Gas velocity	m/sec	9.3	IS 11295 Part 03	NA
6	Oxides of Nitrogen (as NO _x)	mg/Nm ³	50.3	IS 11295 Part 07	NA
7	Oxygen (as O ₂)	% vol	13.1	IS 13279	NA
8	Particulate Matter (PM)	mg/Nm ³	143.7	IS 11295 Part 01	150
9	Flue gas height from G Level	m	10.0	---	NA
10	Stack diameter at exit hole	m	0.15	---	NA
11	Stack height from G Level	m	13.0	---	NA
12	Stack Temperature	°C	131	IS 11295 Part 03	NA
13	Sulphur Dioxide (as SO ₂)	mg/Nm ³	21.9	IS 11295 Part 02	NA

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

 Verified By: 
Remarks: All the above mentioned stack meets the requirements of TSPCB standards with respect to the parameters listed. NA - Not Applicable

 For ENVIRO CARE INDIA PRIVATE LIMITED
 (Laboratory Division)


 Authorized Signatory


43, 2nd Street, Harvey Nagar, Chennai - 600 016, Tel: +91 432 4200 003

Note: 1. This report is valid only for the test done.

2. Any alteration, edit, addition, change over should not happen.

3. Report shall not be re-issued/printed/photocopied in full and in the same format without the permission of the laboratory.

4. Original intended by customer, the test report will not be returned for error after 15 days from date of issue of test report.

5. Total liability of test laboratory is limited to the amount charged.

6. Any dispute arising out of the report is governed by Madras Jurisdiction (Act).



TEST REPORT

Approved by: **NTPL Limited** (Recognized)

Report No :	ECI-IM-2023071207	Report Date :	21.07.2023
Customer Name & Address :	M/s. Enviro Coal Terminal Pvt. Ltd Purathottam Village Valur-Post, PannerTank, Thiruvellar District-601 120.		
Customer Reference :	PO: EHVACCOAL013340955010074 Date: 20.06.2023	Sample Reference No :	ECI-IM-2023071207
Sample Drawn By :	ECI	Sample Received On :	21.07.2023
Sample Collected Date :	21.07.2023	Test Commenced On :	21.07.2023
City of Sample Received :	Thiruvellar & 50 m from	Test Completed On :	21.07.2023
Sample Description :	Stack	Sampling Method :	E / 11205.P1
Sample Mark :	FD 300 RWA (Ship Unloader - 1) - Down-Down		

S.No	PARAMETERS	UNITS	RESULTS	TEST METHOD	Max. Permissible INPCB norms for General Emission Standards
1	Ambient Temperature	°C	32	IS 11205 Part 03	NA
2	Carbon Dioxide (as CO ₂)	% (vol)	0.4	IS 11205	NA
3	Carbon Monoxide (as CO)	% (vol)	0.2	IS 11205	1.0
4	Flow rate	m ³ /hr	481	IS 11205 Part 03	NA
5	Flue Gas velocity	m/sec	11.1	IS 11205 Part 03	NA
6	Oxides of Nitrogen (as NO _x)	mg/m ³	36.0	IS 11205 Part 07	NA
7	Oxygen (as O ₂)	% (vol)	17.8	IS 11205	NA
8	Particulate Matter (PM)	mg/m ³	105.2	IS 11205 Part 21	150
9	Port hole Height from G Level	m	10.0	---	NA
10	Stack Diameter at port hole	m	3.16	---	NA
11	Stack Height from G Level	m	10.0	---	NA
12	Stack Temperature	°C	126	IS 11205 Part 03	NA
13	Sulphur Dioxide (as SO ₂)	mg/m ³	21.3	IS 11205 Part 09	NA

*** End of Report ***

Verified By: 

Remarks: In the above mentioned stack meets the requirements of INPCB standards with respect to the parameters tested. Not - Not Applicable

For ENVIRO CARE INDIA PRIVATE LIMITED
(Laboratory Division)




Authorized Signatory

#43, 2nd Street, Harvey Nagar, Arakkottam, Madurai - 625 108. Tel : +91 452 4300100

- NOTE:**
1. The results given only to the client orders.
 2. Any corrective/alteration shall be intimated by report.
 3. Report shall not be re-issued/anywhere except to the client without the permission of the laboratory.
 4. Sample analyzed by customers - the test results will not be retained for more than 12 days from date of issue of test report.
 5. Only validity of the laboratory is limited to the scope above.
 6. Any queries coming out of the report is subjected to Madurai, Arakkottam, Dindur.



TEST REPORT

Issued by: HSE/Chemical/1/000000

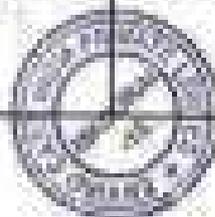
Report No.:	ECI-94-202301258	Report Date:	28.07.2023
Customer Name & Address:	M/s. Enviro Coal Terminal Pvt. Ltd Pachhalivakhan Village, Vijaya-Pet, PonnasTaluk, Thiruvellar District-600 102		
Customer Reference:	MSD 23ANDCOAL/ES-241800010014 15-06-2023	Sample Reference No.:	ECI-94-202301258
Sample Drawn By:	ECI	Sample Received On:	24.07.2023
Sample Collected Date:	05.07.2023	Test Commenced On:	21.07.2023
Qty of Sample Received:	Thirteen (13) kg Sulfur	Test Completed On:	26.07.2023
Sample Description:	Sulfur	Sampling Method:	IS: 11255-01
Sample Mark:	100 200 300 (Blue Station - 01, 02, 03, 04, 05, 06, 07, 08, 09, 10, 11, 12, 13)		

S.No	PARAMETERS	UNITS	RESULTS	TEST METHOD	Max. Permissible TSPCM norms for General Emission Standards
1.	Ambient Temperature	°C	32	IS 11255 Part 01	NA
2.	Carbon dioxide (as CO ₂)	% (dry)	0.9	IS 11270	NA
3.	Carbon Monoxide (as CO)	% (dry)	10.2	IS 11270	1.0
4.	Flue rate	kg/hr	491	IS 11255 Part 02	NA
5.	Flue Gas velocity	m/sec	10.8	IS 11255 Part 02	NA
6.	Oxides of Nitrogen (as NO _x)	mg/m ³	28.4	IS 11255 Part 07	NA
7.	Oxygen (as O ₂)	% (dry)	17.8	IS 11270	NA
8.	Particulate Matter (PM ₁₀)	mg/m ³	15.5	IS 11255 Part 01	NA
9.	Stack hole height from G Level	m	5.0	---	7m
10.	Stack Diameter at poll hole	m	0.20	---	NA
11.	Stack Height from G Level	m	6.4	---	NA
12.	Stack Temperature	°C	95	IS 11255 Part 02	NA
13.	Sulphur Dioxide (as SO ₂)	mg/m ³	14.3	IS 11255 Part 02	NA

--- End of Report ---

 Verified By: 

Remarks: In the above mentioned stack meets the requirements of TSPCM standards with respect to the parameters listed. NA - Not Applicable.

 For ENVIRO CARE INDIA PRIVATE LIMITED
 (Laboratory Division)


 Authorized Signatory

43, 3rd Street, Marvey Nagar, Anna Nagar, Chennai - 600 106, Tel: +91 432 4300000

Note: 1. The results shall apply to the date tested.

2. Any alteration of a tested shall invalidate the report.

3. Report shall not be re-issued or revised unless by lab and in its serial format without the permission of the laboratory.

4. Report generated by a customer, who has, should not last as beyond the more than 15 days from date of issue of the report.

5. Total copies of any report to be limited to the number shown.

6. Any misuse arising out of this report is subjected to National Jurisdiction Only.



TEST REPORT

Approved by: **NABL** (Central & Regional)

Report No.:	ECI-BA-2023MYT006	Report Date:	25.07.2023
Customer Name & Address:	M/s. Ennore Coal Terminal Pvt. Ltd Puthukkottam Village, Vellan Padi, Ponnaiyandam, Thiruvallur District-602 120.		
Customer Reference:	PG ENVIRONMENTAL/23/2402/2023/0074 Date: 20.07.2023	Sample Reference No.:	ECI-BA-2023MYT006
Sample Drawn By:	ECI	Sample Received On:	21.07.2023
Sample Collected Date:	20.07.2023	Test Commenced On:	21.07.2023
City of Sample Received:	Thiruvallur & 50 m from	Test Completed On:	25.07.2023
Sample Description:	Stack	Shipping Method:	IS-11255-PT
Sample Mark:	DG 402 824 (Electrical Power) - Steiner (Steel)		

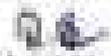
S.No	PARAMETERS	UNITS	RESULTS	TEST METHOD	Max. Permissible TSPCB norms for General Emission Standards
1.	Ambient Temperature	°C	33	IS 11255 Part 03	NA
2.	Carbon Dioxide (as CO ₂)	% (v/v)	15.6	IS 11255	NA
3.	Carbon Monoxide (as CO)	% (v/v)	0.2	IS 11255	1.0
4.	Flow rate	Sec/m ³	400	IS 11255 Part 03	NA
5.	Flue Gas velocity	m/sec	11.4	IS 11255 Part 03	NA
6.	Oxides of Nitrogen (as NO _x)	mg/m ³	35.8	IS 11255 Part 07	NA
7.	Oxygen (as O ₂)	% (v/v)	18.3	IS 11255	NA
8.	Particulate Matter (PM)	mg/m ³	92.9	IS 11255 Part 01	100
9.	Flue gas Height from G Level	m	2.0	---	NA
10.	Stack Diameter at port hole	m	0.18	---	NA
11.	Stack height from G Level	m	7.8	---	NA
12.	Stack Temperature	°C	135	IS 11255 Part 02	NA
13.	Sulfur Dioxide (as SO ₂)	mg/m ³	12.4	IS 11255 Part 03	NA

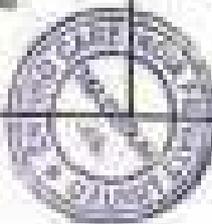
--- End of Report ---

Verified By: 

Remarks: In the above mentioned stack tests the requirements of TSPCB standards with respect to the parameters tested.
 NA - Not Applicable

For ENVIRO CARE INDIA PRIVATE LIMITED
 (Analytical Division)


 Authorized Signatory



443, 2nd Street, Harvey Nagar, Arasavali, Madurai - 625 100, Tel: +91 402 4001133

Note: 1. The results were only for the test period.

2. Any alterations, not approved shall invalidate this report.

3. Report shall not be reproduced without prior permission in full and in the same format without the authorization of this laboratory.

4. Unless informed to customer, the test report will not be certified for more than 15 days from date of issue of test report.

5. Total liability of this laboratory is limited to the contract amount.

6. Any claims arising out of this report is subject to Madurai jurisdiction only.



TEST REPORT

Accredited by NABL (Protocol 2/2008/01)

Report No :	ECI-SM-202307000	Report Date :	21.07.2023
Customer Name & Address :	M/s. Enviro Gas Terminal Pvt. Ltd Puchat Industrial Village Vohar Pool, Faridkot Distt. Tehsildar District-620 122		
Customer Reference :	PO: 87680004102420000000000000000000 Date: 20.07.2023	Sample Reference No :	ECI-SM-20230700000
Sample Given By :	ECI	Sample Received On :	21.07.2023
Sample Collected Date :	20.07.2023	Test Commenced On :	21.07.2023
Qty of Sample Received :	Thirteen (13) ml Gas	Test Completed On :	21.07.2023
Sample Description :	Steel	Sampling Method :	IS-11255 Part 01
Sample Mark :	CO-400-KVA Sub Station - 2 (Ramp/Steel)		

S.No	PARAMETERS	UNITS	RESULT	TEST METHOD	Max. Permissible TSPCB limits for General Emission Standards
1	Ambient Temperature	°C	32	IS-11255 Part 03	NA
2	Carbon dioxide (as CO ₂)	% (v/v)	0.4	IS-11270	NA
3	Carbon Monoxide (as CO)	% (v/v)	0.3	IS-11270	1.0
4	Flow rate	M ³ /hr	480	IS-11255 Part 03	NA
5	Flue Gas velocity	m/sec	11.0	IS-11255 Part 03	NA
6	Concn of Nitrogen (as NO _x)	mg/m ³	34.8	IS-11255 Part 07	NA
7	Oxygen (as O ₂)	% (v/v)	21.1	IS-11270	NA
8	Particulate Matter (PM ₁₀)	mg/m ³	60.0	IS-11255 Part 05	100
9	Post hole Height from G Level	m	5.5	---	NA
10	Stack Diameter at post hole	m	0.15	---	NA
11	Stack Height from G Level	m	7.0	---	NA
12	Stack Temperature	°C	148	IS-11255 Part 03	NA
13	Sulphur Dioxide (as SO ₂)	mg/M ³	19.8	IS-11255 Part 02	NA

← End of Report →

 Verified By : 

Remarks: In the above mentioned stack meets the requirements of TSPCB standards with respect to the parameters tested.

NA = Not Applicable

 For ENVIRO CARE INDIA PRIVATE LIMITED
 (Laboratory Division)


 Authorized Signatory

#43, 2nd Street, Harrow Nagar, Amritsar, Punjab - 151 001, India. Tel: +91 987 420 1222

Note: 1. The results will only be valid as stated.

- Any tampering will attract legal liabilities with respect.
- Report shall not be reproduced, stored in any way or the report formed without the permission of the laboratory.
- Report prepared by customer. All test results will not be binding for third party. It shall also not be used in any court.
- 100% liability of the laboratory is limited to the amount paid.
- All disputes arising out of the report is referred to Mutual Jurisdiction only.



Report No.:	ECI-WA-202107000	Report Date:	24.07.2023	
Customer Name & Address:	M/s. Ennore Cool Terminal Pvt. Ltd. Puzhuthalveeran Village Vandal Post, Pamban Taluk, Thiruvallur District-600 130			
Customer Reference:	PO: 4PH0K0CAL03-240000010004 Date: 20.06.2023	Sample Reference No.:	ECI-WA-202107000	
Sample Drawn By:	ECI	Sample Received On:	21.07.2023	
Sample Collected Date:	21.07.2023	Test Commenced On:	21.07.2023	
City of Sample Received:	JJ	Test Completed On:	25.07.2023	
Sample Description:	Water	Sampling Method:	IS 3025 Part 31	
Sample Mark:	Ground Water at Dock Yard (Plasticine Well no 12 & 13)			
S.No	PARAMETERS	UNITS	RESULTS	TEST METHOD
1	Appearance	-	Clear	IS 3025
2	Arsenic (as As)	mg/L	NDL (DL = 0.01)	IS 3025 Part 37
3	Cadmium (as Cd)	mg/L	NDL (DL = 0.01)	IS 3025 Part 41
4	Calcium (Ca)	mg/L	210	IS 3025 Part 40
5	Carbonate Hardness (as CaCO ₃)	mg/L	405	IS 3025 Part 21
6	Chlorides (Cl)	mg/L	700	IS 3025 Part 32
7	Color	Hazen	< 1.0	IS 3025 Part 54
8	Electrical Conductivity (EC) @ 25°C	µmhos/cm	3000	IS 3025 Part 14
9	Iron (as Fe)	mg/L	0.02	IS 3025 Part 33
10	Lead (as Pb)	mg/L	NDL (DL = 0.01)	IS 3025 Part 47
11	Magnesium (as Mg)	mg/L	30	IS 3025 Part 48
12	Mercury (Hg)	mg/L	NDL (DL = 0.01)	IS 3025 Part 49
13	Non - Carbonate Hardness (as CaCO ₃)	mg/L	150	IS 3025 Part 21
14	Odor	-	Agreeable	IS 3025 Part 05
15	pH Value @ 25°C	-	8.5	IS 3025 Part 11
16	Phosphorus (as P)	mg/L	ND	IS 3025 Part 23
17	Residual Silica (as SiO ₂)	mg/L	8.2	IS 3025 Part 35
18	Residual Chlorine	mg/L	< 0.1	IS 3025 Part 26
19	Residual Free Chlorine (RFC)	mg/L	< 0.1	IS 3025 Part 26
20	Sulphate (as SO ₄ ²⁻)	mg/L	370	IS 3025 Part 24
21	Total Alkalinity (as CaCO ₃)	mg/L	405	IS 3025 Part 22

E-43, 2nd Street, Harvey Nagar, Aravank, Madurai - 625 118. Tel : +91 962 4351111

Note: 1. The results listed only in this test report.

2. Any correction not advised shall remain the client's responsibility.

3. Recurrence test can be requested. Additional charges will be levied in the same manner without the purchase of the laboratory.

4. Results returned by e-mail. The test items will be valid only if received by the client within 15 days from date of issue of test report.

5. This having no signature is invalid for the purpose of the report.

6. Any dispute arising out of this report is subject to Madurai jurisdiction only.



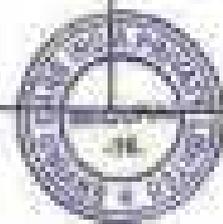
TEST REPORT

Sampled by: **NRSL**, Chennai & Regional

Report No: IC/ENR/2003/07000			
22.	Total Dissolved Solids (TDS) @ 100°C	mg/L	1999
23.	Total Hardness (as CaCO ₃)	mg/L	241
24.	Total Suspended Solids (TSS) @ 100°C	mg/L	<1.0
25.	Turbidity	NTU	<1.0
			IS 3025 Part 10

Verified By:  ----- End of Report -----

Remarks : DL - Below Detectable Limit, DL - Detectable Limit	For ENVIRO CARE INDIA PRIVATE LIMITED (Laboratory Division)  Authorized Signatory
---	--



43, 2nd Street, Harvey Nagar, Alwarthi, Madurai - 625 105, Tel : +91-452-4788100

- Note :**
1. The results mentioned in this report are valid only if the sample is properly preserved and analyzed within the specified time period.
 2. Results are not valid if the sample is not properly preserved and analyzed within the specified time period.
 3. Results are not valid if the sample is not properly preserved and analyzed within the specified time period.
 4. Results are not valid if the sample is not properly preserved and analyzed within the specified time period.
 5. Results are not valid if the sample is not properly preserved and analyzed within the specified time period.
 6. Results are not valid if the sample is not properly preserved and analyzed within the specified time period.



TEST REPORT

Approved by: **NRDL Chennai & Bangalore**

Report No.:	EC-WA-202307001	Report Date:	21-07-2023
Customer Name & Address:	M/s. Enirox Cool Treatment Pvt. Ltd Puthuthooskan Village Vellore-Post, PaveraiLakki Thiruvallur District 600138		
Customer Reference:	PD FFA02003AL02-040800010074 Date:20.06.2023	Sample Reference No.:	EC1-WA-202307001
Sample Drawn By:	ECI	Sample Received On:	21-07-2023
Sample Collected Date:	20-07-2023	Test Commenced On:	21-07-2023
City of Sample Received:	J.L.	Test Completed On:	24-07-2023
Sample Description:	Water	Sampling Method:	IS 3025 Part 01
Sample Mark:	Effluent - Raw Water (Catch Pt)		

S No	PARAMETERS	UNITS	RESULTS	TEST METHOD
1.	Ammonical Nitrogen (N)	mg/L	15.7	IS 3025 Part 36
2.	Arsenic (as As)	mg/L	NDL (DL + 0.01)	IS 3025 Part 37
3.	Bio-chemical oxygen demand (BOD) @ 20°C for 5 days	mg/L	70	IS 3025 Part 44
4.	Bloom (as B)	mg/L	+ 0.2	IS 3025 Part 37
5.	Calcium (as Ca)	mg/L	NDL (DL + 0.001)	IS 3025 Part 41
6.	Chemical Oxygen Demand (COD)	mg/L	362	IS 3025 Part 38
7.	Chlorides (as Cl)	mg/L	+ 138	IS 3025 Part 32
8.	Copper (as Cu)	mg/L	NDL (DL + 0.01)	IS 3025 Part 42
9.	Cyanide (as CN)	mg/L	+ 0.02	IS 3025 Part 37
10.	Fluoride (as F)	mg/L	0.67	IS 3025 Part 40
11.	Free Ammonia (as NH ₃)	mg/L	6.3	APHA 2017 4500 NH ₃ C
12.	Hexavalent Chromium (as Cr ⁶⁺)	mg/L	+ 0.01	IS 3025 Part 33
13.	Lead (as Pb)	mg/L	NDL (DL + 0.01)	IS 3025 Part 47
14.	Mercury (as Hg)	mg/L	NDL (DL + 0.001)	IS 3025 Part 48
15.	Nickel (as Ni)	mg/L	NDL (DL + 0.01)	IS 3025 Part 54
16.	Oil & Grease	mg/L	+ 1.0	IS 3025 Part 39
17.	Particle Size of suspended solids	micron	+ 800	APHA 2017 Section 2000 A Section
18.	Potential Sodium	%	34	IS 3025 Part 43
19.	Pesticides (Total)	mg/L	NDL (DL + 0.00001%)	USEPA
20.	pH Value @ 20°C	-	8.3	IS 3025 Part 11
21.	Phenolic Compound (as C6H5OH)	mg/L	+ 0.001	IS 3025 Part 45
22.	Phosphate (as PO ₄)	mg/L	2.2	APHA 2017 4500-P (C)

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Note: 1. The results relate only to the test details.

2. Any objection to the report shall be raised within 15 days.

3. Report shall not be reproduced anywhere except in full and in the same format unless the permission of the laboratory is obtained.

4. Unstable information is not provided. The test results will not be returned for more than 15 days from date of issue of final report.

5. Total liability of our laboratory is limited to the amount analyzed.

6. Any change during and of the report is subjected to laboratory permission only.



TEST REPORT

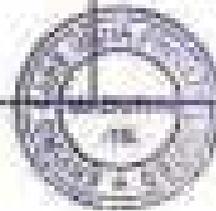
Accredited by NABL, Chemical & Biological

Report No: EC-WA-2023/0201			
23. Residual Chlorine	mg/L	= 0.1	IS 3025 Part 2B
24. Residual Sodium Carbonate	mg/L	15.8	IS 11894
25. Selenium (as Se)	mg/L	NDL (DL = 0.01)	IS 3025 Part 5B
26. Sulphate (as SO ₄ ²⁻)	mg/L	2027	IS 3025 Part 2B
27. Turbidity (as NTU)	mg/L	= 0.24	APHA22" Limit-4500 O ₂ / l
28. Temperature	°C	28	IS 3025 Part 2B
29. Total Chlorides (as Cl)	mg/L	504 (DL = 0.01)	IS 3025 Part 2B
30. Total Dissolved Solids(TDS) @ 100°C	mg/L	1923	IS 3025 Part 2B
31. Total Kjeldahl Nitrogen (as N)	mg/L	0.4	APHA22" 10000mg/L
32. Total Suspended Solids(TSS) @100°C	mg/L	87	IS 3025 Part 17
33. Arsenic (As)	mg/L	NDL (DL = 0.01)	IS 3025 Part 4B

--- End of Report ---

 Verified By: 

 Remarks : - NDL - Below Detectable Limit,
 DL - Detectable Limit

 For ENVIRO CARE INDIA PRIVATE LIMITED
 (Laboratory Division)


 Authorized Signatory

E-01, 2nd Street, Harvey Nagar, Anandhi, Madurai - 625 106. Tel: +91 452 4355100

- Notes :**
- The results apply only to the test carried.
 - Any preservation and storage shall guarantee the result.
 - Report shall not be reissued/modified/added to the report in the week period without the permission of the laboratory.
 - Unless otherwise specified, the test shall be carried out as per IS 3025 Part 2B of the test report.
 - Total Hardness of test sample is limited by the method adopted.
 - Any dispute arising out of this report is subject to the local jurisdiction only.



TEST REPORT

 Analyzed by: **MSB/Chemistry/3/2023/02**

Report No.:	ECI-IND-2023/07002	Report Date:	21-07-2023
Customer Name & Address:	M/s. Ennore Coal Terminal Pvt. Ltd. Puthuvattam Village Vakkal Post - Puzosai Sub. Thiruvallur District 600 120		
Customer Reference:	PO CENCO/COAL/03-24/08/01/0074 Date:28.08.2022	Sample Reference No.:	ECI-IND-2023/07002
Sample Drawn By:	ECI	Sample Received On:	21-07-2023
Sample Collected Date:	20-07-2023	Test Commenced On:	21-07-2023
City of Sample Received:	SI	Test Completed On:	24-07-2023
Sample Description:	WATER	Sampling Method:	IS 3025 Part 01
Sample Month:	Effluent Treated Water (Settling Pond)		

S.No	PARAMETER	UNITS	RESULT	TEST METHOD	Max. Permissible Limits of TNPCB Std for Treated Effluent
1.	Ammonical Nitrogen (N)	mg/L	3.0	IS 3025 Part 24	50
2.	Arsenic (as As)	mg/L	BDL (DL = 0.01)	IS 3025 Part 37	0.5
3.	Bio chemical oxygen demand (BOD) @ 27°C for 5 days	mg/L	24	IS 3025 Part 44	30
4.	Boron (as B)	mg/L	< 0.2	IS 3025 Part 39	2.0
5.	Calcium (as Ca)	mg/L	BDL (DL = 0.001)	IS 3025 Part 41	2.0
6.	Chemical Oxygen Demand (COD)	mg/L	130	IS 3025 Part 48	250
7.	Chloride (as Cl)	mg/L	534	IS 3025 Part 33	1000
8.	Copper (as Cu)	mg/L	BDL (DL = 0.01)	IS 3025 Part 40	1.0
9.	Cyanide (as CN)	mg/L	< 0.02	IS 3025 Part 37	0.2
10.	Fluoride (as F)	mg/L	0.10	IS 3025 Part 50	2.0
11.	Free Ammonia (as NH ₃)	mg/L	1.2	APHA 4500-NH ₃ -C	3.0
12.	Hexavalent Chromium (as Cr ⁶⁺)	mg/L	< 0.01	IS 3025 Part 52	0.1
13.	Lead (as Pb)	mg/L	BDL (DL = 0.01)	IS 3025 Part 47	0.1
14.	Mercury (as Hg)	mg/L	BDL (DL = 0.001)	IS 3025 Part 49	0.05
15.	Nickel (as Ni)	mg/L	BDL (DL = 0.01)	IS 3025 Part 54	0.0
16.	Oil & Grease	mg/L	< 1.0	IS 3025 Part 36	10
17.	Particle Size of suspended solids	micron	< 800	APHA 2270 Method 2000 A Section	Should pass 150 Micron I.S. Sieve
18.	Persulfate Sodium	%	18	IS 3025 Part 46	---
19.	Phosphate (Total)	mg/L	BDL (DL=0.00001)	USEPA	Absent

B-43, 2nd Street, Marney Nagar, Annamalai, Madurai - 625 018. Tel. : +91 452 335 011

- Note:**
1. This report valid only for the date stated.
 2. Any correction for uncorrected shall invalidate this report.
 3. Report shall not be re-issued without request in full and on the basis of test within the jurisdiction of the laboratory.
 4. Unlabeled reference by customer, the test done will not be charged for more than 15 days from date of issue of the report.
 5. Total liability of our laboratory is limited to the amount given.
 6. Any charges arising out of this report is subjected to regular assessment. Only.



Report No: EC/WR/2023/0100					
20.	pH Value @ 25°C	-	7.7	IS 3025 Part 11	8.5-9
21.	Free Chlorine (as Cl ₂)	mg/L	< 0.01	IS 3025 Part 43	1.0
22.	Phosphate (as PO ₄)	mg/L	< 0.1	APHA21™Epochem500 P-0	5.0
23.	Residual Chlorine	mg/L	< 0.1	IS 3025 Part 26	1.0
24.	Residual Sodium Carbonate	mg/lit	1.7	IS 11824	-
25.	Selenium (as Se)	mg/L	ND, DL = 0.01	IS 3025 Part 55	0.05
26.	Sulphate (as SO ₄ ²⁻)	mg/L	282	IS 3025 Part 24	1000
27.	Sulphide (as H ₂ S)	mg/L	< 0.04	APHA21™Sulphide 4000 S-1	0.5
28.	Temperature	°C	26	IS 3025 Part 09	40
29.	Total Chromium (as Cr)	mg/L	ND, DL = 0.01	IS 3025 Part 52	0.0
30.	Total Dissolved Solids(TDS) @ 180°C	mg/L	100	IS 3025 Part 16	2000
31.	Total Hardness Nitrogen(as N)	mg/L	17.8	APHA21™NH3/Nitrogen C	100
32.	Total Suspended Solids(TSS) @ 100°C	mg/L	20	IS 3025 Part 17	100
33.	Zinc (as Zn)	mg/L	ND, DL = 0.01	IS 3025 Part 49	1.0

← End of Report →

Verified By:



Remarks: The above sample meets the requirements of IS:3025 norms with respect to the parameters tested.
 ND - Below Detectable Limit, DL - Detectable Limit
 NA - Not Applicable

 For ENVIRO CARE INDIA PRIVATE LIMITED
 (Laboratory Division)


 Authorized Signatory


E-41, 2nd Street, Harvey Nagar, Anand, Madhya Pradesh - 481 104 Tel: +91-432-425110

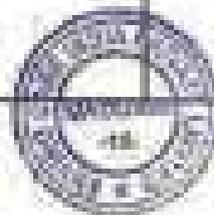
- NOTE:**
- The issuing report only is the final report.
 - Any correction will attract penal charges (for re-test).
 - Report shall not be re-issued anywhere except at the lab and in the same format without the permission of the laboratory.
 - Unless informed by customer, the test items will not be repeated for more than 10 days from date of issue of test report.
 - Total liability of the laboratory is limited to the issuing amount.
 - Any dispute arising out of the report is subjected to Indian Jurisdiction only.



TEST REPORT

Issued by: NABL (Chemical & Biological)

Report No.:	ECI-NA-202307108	Report Date:	26.07.2023
Customer Name & Address	M/s. Enviro Coal Terminal Pvt. Ltd Panchsattark Village Jafra-Post, PurneaDistt Thiruvananthapuram District 695 120		
Customer Reference:	PO: ETVNCOAL/ES-247000010074 Date:26.06.2023	Sample Reference No:	ECI-NA-202307108
Sample Description:	Noise	Monitoring Date:	18.07.2023
Monitored By:	ECI	Date Received On:	20.07.2023
S.No	Location	Day Time	
		Minimum	Maximum
1	Open Cash House	68.2	67.5
Limit		68 (A)	
TNPCB Max. Permissible Limit for Day Time (Industrial Area)		75	
Reference Method		IS 9500	
*** End of Report ***			
Verified By:			
Remarks: In the above mentioned locations noise is in compliance of TNPCB standards.	For ENVIRO CARE INDIA PRIVATE LIMITED (Laboratory Division)  Authorized Signatory		



P-02, 2nd Street, Harvey Nagar, Arakkal, Madurai - 625 136, Tel : +91 922 4300100

Note: 1. The results valid only for the test period.

2. Any correction and addition shall invalidate this report.

3. Report shall not be reproduced anywhere except in full and in the same format without the permission of the laboratory.

4. Letters referred by employees, the post charges will not be received by more than 15 days from date of issue of test report.

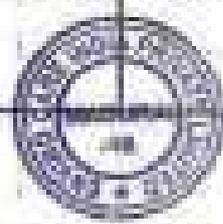
5. True copying of the laboratory is limited to the printed amount.

6. Any dispute arising out of the report is subjected to Madurai Jurisdiction Only.



TEST REPORT

Analyzed by NABL Chemist & Biologist

Report No.:	ED-NM-202307199	Report Date:	25.07.2023
Customer Name & Address:	M/s. Enviro Coal Terminal Pvt. Ltd. Puchalakkam Village Yallar Post, Ponnai Taluk Tiruvallur District-600 120		
Customer Reference:	PO: ENTCOCT04A/23-240852/10014 Date: 20.06.2023	Sample Reference No.:	ED-NM-202307199
Sample Description:	Air	Monitoring Date:	19.07.2023
Method used by:	CC1	Date Received On:	20.07.2023
S.No	Location	Night Time	
		Minimum	Maximum
1.	Near Sub Station	62.8	87.5
Unit		dB (A)	
TNPCB Max. Permissible Limit for Night Time (Industrial Area)		70	
Reference Method		IS 5509	
--- End of Report ---			
Verified By: 		For ENVIRO CARE INDIA PRIVATE LIMITED (Laboratory Division)	
Remarks: In the above mentioned location, noise test is conducted as per requirements of TNPCB standards.		 Authorized Signatory	
			

42, 2nd Street, Marney Nagar, Arambam, Madurai - 625 108. Tel: +91 842 4202733

Note 1: This report is valid only if you have signed.

- Any comparison can be made only if you have signed this report.
- Report shall remain confidential anywhere except to you and to the same extent without the permission of the laboratory.
- Unless instructed by customer, the test reports will not be attached for record level. If you want you can send us your report.
- Final reading of any laboratory is subject to the laboratory's opinion.
- Any dispute arising out of this report is subject to Madurai Jurisdiction only.





TEST REPORT

Accredited by NABL (Chemical & Biological)

Report No.:	EC/AAQ/2023/08144	Report Date:	30.08.2023
Customer Name & Address:	M/s. Enviro Care Terminal Pvt. Ltd Puduchikkulam Village, Vellar Road, Perambalur, Tiruvellar District-600 120.		
Customer Reference:	PO ENVIROCARE/CS/2023/010214 Date: 26.08.2023	Sample Reference No.:	EC/AAQ/2023/08144
Sample Drawn By:	EC	Sample Received On:	29.08.2023
Sample Collected Date:	29.08.2023	Test Commenced On:	29.08.2023
City of Sample Received:	Filter Paper & 25ml Solution	Test Completed On:	30.08.2023
Sample Description:	Ambient Air	Sampling Method:	IS 5182 P14
Sample Mark:	Near Main Gate.		

S.No	PARAMETERS	LIMITS	RESULTS	TEST METHOD	Permissible limits of CPCB
1	Ammonia (as NH ₃)	µg/m ³	< 1.0	IS 5182 Method 019	400
2	Arsenic (as As)	µg/m ³	< 0.1	IS 5182 Part 20	0.5
3	Benzene (C ₆ H ₆)	µg/m ³	< 1.0	IS 5182 Part 11	5.0
4	Benzene-a-Pyrene (BaP)	µg/m ³	< 1.0	IS 5182 Part 12	1.0
5	Carbon Monoxide (as CO)	mg/m ³	< 1.0	IS 5182 Part 13	2.0
6	Lead (as Pb)	µg/m ³	< 0.1	IS 5182 Part 22	1.0
7	Mercury (as Hg)	µg/m ³	< 0.1	IS 5182 Part 23	20
8	Nitrogen dioxide (as NO ₂)	µg/m ³	22.6	IS 5182 Part 06	80
9	Ozone (as O ₃)	µg/m ³	< 0.1	IS 5182 Part 05	180
10	Particulate Matter (PM ₁₀)	µg/m ³	26.3	IS 5182 Part 24	60
11	Respirable Particulate Matter (PM _{2.5})	µg/m ³	57.4	IS 5182 Part 25	60
12	Sulphur Dioxide (as SO ₂)	µg/m ³	7.8	IS 5182 Part 02	80

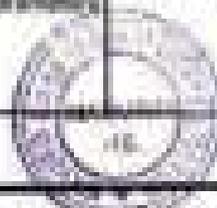
— End of Report —

Verified By: *S. Ch*

Remarks: In the above mentioned location meets the requirements of CPCB standards with respect to the parameters tested.

FOR ENVIRO CARE INDIA PRIVATE LIMITED
(Laboratory Division)

Authorized Signatory



H3, 2nd Street, Harvey Nagar, Arambur, Madurai - 625016. Tel: 0452 4355103
Email: lab@envirocareindia.com | Web: www.envirocareindia.com

Footer: 1. This report refers only to the item tested.

2. Any Customer not present shall invalidate this report.

3. Report shall not be re-issued/modified anywhere except at the end of the same, without the permission of the laboratory.

4. Samples returned by customer, the end items will not be analyzed for more than 15 days from date of issue of test report.

5. Total liability of end customer yet limited to the scope amount.

6. Any dispute arising out of this report is subjected to Madurai Jurisdiction only.





TEST REPORT

Accredited by NABL / Chemical & Biological

Report No :	EC/AAQ-2025/08148	Report Date :	30/08/2025
Customer Name & Address :	M/s. Enviro Cost Terminal Pvt. Ltd Puthuvattam Village, Vallur Post, Ponnai Taluk, Thiruvallur District-605 100.		
Customer Reference :	PC/ENVO/COA/23-24/08/00000014 Date 28.08.2023	Sample Reference No :	EC/AAQ-2025/08148
Sample Drawn By :	ECI	Sample Received On :	25/08/2023
Sample Collected Date :	24/08/2023	Test Commenced On :	25/08/2023
Qty of Sample Received :	Filter Paper & 25ml Solution	Test Completed On :	30/08/2023
Sample Description :	Around Air	Sampling Method :	IS 5182-P14
Sample Mark:	New - 500m		

S.No	PARAMETERS	UNITS	RESULTS	TEST METHOD	Permissible Levels of CPCB
1	Arsenic (as As)	µg/m ³	< 1.0	IS 5182-Method 07/13	400
2	Arsenic (as As)	µg/m ³	< 0.1	IS 5182-Part 22	5.0
3	Benzene (C ₆ H ₆)	µg/m ³	< 1.0	IS 5182-Part 11	5.0
4	Benzene a Pyrene (BaP)	µg/m ³	< 1.0	IS 5182-Part 12	1.0
5	Carbon Monoxide (as CO)	mg/m ³	< 1.2	IS 5182-Part 10	3.0
6	Lead (as Pb)	µg/m ³	< 0.1	IS 5182-Part 22	1.0
7	Nickel (as Ni)	µg/m ³	< 0.1	IS 5182-Part 22	20
8	Nitrogen dioxide (as NO ₂)	µg/m ³	25.0	IS 5182-Part 06	80
9	Ozone (as O ₃)	µg/m ³	< 9.0	IS 5182-Part 09	180
10	Particulate Matter (PM ₁₀)	µg/m ³	34.0	IS 5182-Part 24	80
11	Respirable Particulate Matter (PM ₁₀)	µg/m ³	40.8	IS 5182-Part 23	100
12	Sulphur Dioxide (as SO ₂)	µg/m ³	8.7	IS 5182-Part 08	80

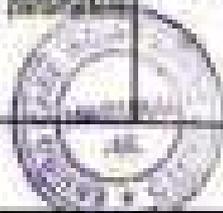
← End of Report →

Verified By :

Remarks: In the above mentioned location meets the requirements of CPCB standards with respect to the parameters tested.

For ENVIRO CARE INDIA PRIVATE LIMITED
(Laboratory Director)

Authorized Signatory



403, 2nd Street, Harvey Nagar, Anandrad, Madurai - 625016. Tel: 0452 4355103
Email: lab@envirocareindia.com; Web: www.envirocareindia.com

- NOTE:**
- The results herein apply to the item tested.
 - Any Correction has entered above / outside the report.
 - Report shall not be considered / accepted / valid in full and in the same format without the permission of the laboratory.
 - Unless informed by Customer, the test shall not be used as received for more than 30 days from date of issue of test report.
 - ISO 15189:2013 compliance is limited to the issues covered.
 - The validity of this report is restricted to Madurai Jurisdiction Only.





TEST REPORT

Accredited by NABL (Chemical & Biological)

Report No.:	ECI-AAQ-202306146	Report Date:	20.08.2023
Customer Name & Address:	M/s. Emerald Coast Terminal Pvt. Ltd Pudhupattanam Village Vellore Road, Ponnur Taluk, Thiruvellar District-605 126		
Customer Reference:	NO CORPORATE/23-24/000010016 Date: 20.08.2023	Sample Reference No.:	ECI-AAQ-202306146
Sample Drawn By:	S.S.	Sample Received On:	20.08.2023
Sample Collected Date:	24.08.2023	Test Commenced On:	20.08.2023
City of Sample Received:	1st Floor, Paper & 2nd Section	Test Completed On:	20.08.2023
Sample Description:	Ambient Air	Sampling Method:	IS 5182 Pt 1a
Sample Mark:	Near Sub Station - 1		

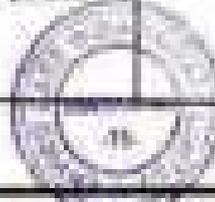
S.No.	PARAMETERS	UNITS	RESULTS	TEST METHOD	Permissible limits of CPCB
1.	Arsenic (as As ₂)	µg/m ³	< 1.0	IS 5182 Method 0010	100
2.	Arsenic (as As)	µg/m ³	< 0.1	IS 5182 Part 02	0.0
3.	Benzene (C ₆ H ₆)	µg/m ³	< 1.0	IS 5182 Part 11	0.0
4.	Benzene-a-Pyrene (BaP)	µg/m ³	< 1.0	IS 5182 Part 12	1.0
5.	Carbon Monoxide (as CO)	µg/m ³	< 1.0	IS 5182 Part 13	0.0
6.	Lead (as Pb)	µg/m ³	< 0.1	IS 5182 Part 02	1.0
7.	Nickel (as Ni)	µg/m ³	< 0.1	IS 5182 Part 02	0.0
8.	Nitrogen Dioxide (as NO ₂)	µg/m ³	22.8	IS 5182 Part 05	80
9.	Ozone (as O ₃)	µg/m ³	< 0.8	IS 5182 Part 09	100
10.	Particulate Matter (PM ₁₀)	µg/m ³	81.5	IS 5182 Part 04	80
11.	Respirable Particulate Matter (PM _{2.5})	µg/m ³	36.1	IS 5182 Part 03	100
12.	Sulphur Dioxide (as SO ₂)	µg/m ³	7.8	IS 5182 Part 02	80

--- End of Report ---

Verified By: S. S.

Remarks: In the above mentioned location meets the requirements of CPCB standards with respect to the parameters tested.

For ENVIRO CARE INDIA PRIVATE LIMITED
(Laboratory Director)



S. S.
Authorized Signatory

843, 2nd Street, Harvey Nagar, Anna Nagar, Madurai - 625016. Tel: 0452 4385100
Email: info@envirocareindia.com | Web: www.envirocareindia.com

Disclaimer: The results were only valid for the test period.
 1. Any tampering with original data will void the report.
 2. Results are valid for the period mentioned in the report. The sample should be preserved and the preservation of the sample should be maintained. The test results are not to be used for more than 30 days from date of issue of the report.
 3. This report is not valid for any other use.
 4. Any dispute arising out of this report is referred to Madurai, Tamil Nadu, India.





TEST REPORT

Accredited by NABL (Chemical & Biological)

Report No.:	EC/EM/2023/08/183	Report Date:	30/08/2023
Customer Name & Address:	M/s. Enviro Coal Terminal Pvt. Ltd Puchutthakam Village, Nellore Dist., Polavur Taluk, Thiruvallur District-605 126		
Customer Reference:	PO ENVROCDTL/23-24/000010874 Date: 28.08.2023	Sample Reference No.:	EC/EM/2023/08/183
Sample Drawn By:	SD	Sample Received On:	28/08/2023
Sample Collected Date:	29/08/2023	Test Commenced On:	29/08/2023
Qty of Sample Received:	Thimble & 10 ml Sub	Test Completed On:	30/08/2023
Sample Description:	Stack	Sampling Method:	IS 11255 Pt1
Sample Mark:	DG:100 FVA (Shg Units) - 2] - (Sector/Const)		

S.No	PARAMETERS	UNITS	RESULTS	TEST METHOD	Max. Permissible TSPCM norms for General Emission Standards
1	Ambient Temperature	°C	32	IS 11255 Part 03	NA
2	Carbon dioxide (as CO ₂)	% (v/v)	17.1	IS 13270	NA
3	Carbon Monoxide (as CO)	% (v/v)	0.3	IS 13270	1.0
4	Flow rate	M ³ /hr	387	IS 11255 Part 03	NA
5	Flue Gas velocity	m/sec	8.8	IS 11255 Part 03	NA
6	Oxides of Nitrogen (as NO _x)	mg/m ³	49.2	IS 11255 Part 07	NA
7	Oxygen (as O ₂)	% (v/v)	17.1	IS 13270	NA
8	Particulate Matter (PM)	mg/m ³	107.8	IS 11255 Part 01	150
9	Stack hole Height from G Level	m	10.0	---	NA
10	Stack Diameter at post hole	m	0.15	---	NA
11	Stack Height from G Level	m	12.0	---	NA
12	Stack Temperature	°C	148	IS 11255 Part 03	NA
13	Sulphur Dioxide (as SO ₂)	mg/m ³	25.4	IS 11255 Part 02	NA

← End of Report →

Verified By: *S. Ch*

Remarks: In the above mentioned stack tests the requirements of TSPCM standards with respect to the parameters listed are - Not Applicable

For ENVIRO CARE INDIA PRIVATE LIMITED
(Laboratory Director)

Authorized Signature

443, 2nd Street, Harvey Nagar, Anna Nagar, Chennai - 600016. Tel: 0452 4355103
Email: info@envirocareindia.com | Web: www.envirocareindia.com

Note: 1. The results were only as per test report.

2. Any Correction and amendment provided in this report.

3. Report shall not be reproduced anywhere except in full and in the word format without the permission of the laboratory.

4. Unless informed by customer, the test items will not be tested for more than 15 days from date of issue of test report.

5. Total liability of our laboratory is limited to the invoice amount.

6. Any dispute arising out of the report is subject to Mutual Settlement Only.





TEST REPORT

Accredited by NABL (Chemical & Biological)

Report No.:	EC/EM/202308/184	Report Date:	30.08.2023
Customer Name & Address:	M/s. Enviro Coal Terminal Pvt. Ltd Puduchovakkam Village, Vallur Road, Ponnaiyilakki, Thiruvallur District-601 120		
Customer Reference:	PO ENVRO-COAL-03-DATED/01/04/24 Date: 20.08.2023	Sample Reference No.:	EC/046/202308/184
Sample Drawn By:	ECI	Sample Received On:	29.08.2023
Sample Collected Date:	29.08.2023	Test Commenced On:	29.08.2023
Qty of Sample Received:	1000kg & 50 ml Size	Test Completed On:	30.08.2023
Sample Description:	Stack	Sampling Method:	IS-11255-P1
Sample Mark:	CO-900 HVA (Ship Unloader - 7) - Blower(Dust)		

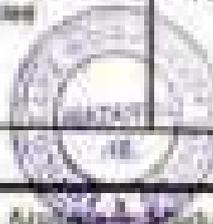
S. No.	PARAMETERS	UNITS	RESULTS	TEST METHOD	Max. Permissible TSPCM norms for General Emission Standards
1.	Ambient Temperature	°C	32	IS 11255 Part 03	NA
2.	Carbon dioxide (as CO ₂)	% vol	0.4	IS 11270	NA
3.	Carbon Monoxide (as CO)	% vol	0.2	IS 11270	1.0
4.	Flow rate	Nm ³ /hr	369	IS 11255 Part 03	NA
5.	Flue Gas velocity	m/sec	8.2	IS 11255 Part 03	NA
6.	Conc. of Nitrogen (as NO _x)	mg/Nm ³	36.4	IS 11255 Part 07	NA
7.	Oxygen (as O ₂)	% vol	17.5	IS 11270	NA
8.	Particulate Matter (PM)	mg/Nm ³	109.4	IS 11255 Part 05	150
9.	Flue gas height from G Level	m	12.0	---	NA
10.	Stack Diameter at port hole	m	0.15	---	NA
11.	Stack height from G Level	m	12.0	---	NA
12.	Stack Temperature	°C	132	IS 11255 Part 03	NA
13.	Sulphur Dioxide (as SO ₂)	mg/Nm ³	20.7	IS 11255 Part 02	NA

--- End of Report ---

Verified by: *S. Ch*

Remarks: In the above mentioned stack meets the requirements of TSPCM standards with respect to the parameters tested
NA - Not Applicable

For ENVIRO CARE INDIA PRIVATE LIMITED
(Laboratory Division)



[Signature]
Authorized Signatory

843, 2nd Street, Harvey Nagar, Anna Nagar, Chennai - 600016 | Tel: 0452 4255103
Email: lab@envirocareindia.com | Web: www.envirocareindia.com

- Notes:**
- The report refers only to the items tested.
 - The Commission and should not constitute this report.
 - Report will not be reprinted anywhere except in full and in the same format without the permission of the laboratory.
 - Should authorized by customer, the test items will not be allowed for more than 10 days from date of issue of test report.
 - Legal liability of our laboratory is limited to the original amount.
 - Any dispute arising out of this report is subjected to Madurai Jurisdiction Only.





TEST REPORT

Accredited by NABL (Chemical & Biological)

Report No.:	EC-EM-2023-041185	Report Date:	30/08/2023
Customer Name & Address:	M/s. Ennore Coal Terminal Pvt. Ltd Puducherry Village, Vilavar Post, Pannar Tank, Thiruvallur District-600 120		
Customer Reference:	PO: ENVIRONMENTAL-ANALYSIS-2023 Date 29/08/2023	Sample Reference No.:	EC/EM-2023041185
Sample Drawn By:	FCI	Sample Received On:	29/08/2023
Sample Collected Date:	29/08/2023	Test Completed On:	30/08/2023
City of Sample Received:	Thiruvallur & 50 ml. Soln	Test Completed On:	30/08/2023
Sample Description:	Stack	Sampling Method:	IS-11225-P1
Sample Mark:	DO 200 PVA (with Filter) - 2 (Emission/Outlet)		

S.No	PARAMETERS	UNITS	RESULTS	TEST METHOD	Max. Permissible TSPCB Norms for General Emission Standards
1	Ambient Temperature	°C	33	IS-11225-Part 03	N/A
2	Carbon Dioxide (as CO ₂)	% (v/v)	0.3	IS-13271	N/A
3	Carbon Monoxide (as CO)	% (v/v)	0.2	IS-13271	1.5
4	Flue gas	ppm/Sec	757	IS-11225-Part 03	N/A
5	Flue Gas velocity	m/sec	10.8	IS-11225-Part 03	N/A
6	Concentration of Nitrogen (as NO _x)	mg/m ³	36.3	IS-11225-Part 07	N/A
7	Oxygen (as O ₂)	% (v/v)	17.8	IS-13271	N/A
8	Particulate Matter (PM)	mg/m ³	13.4	IS-11225-Part 01	150
9	Part hole height from G Level	m	8.0	---	N/A
10	Stack Diameter at exit hole	m	6.30	---	PM
11	Stack height from G Level	m	8.0	---	PM
12	Stack Temperature	°C	152	IS-11225-Part 03	N/A
13	Sulphur Dioxide (as SO ₂)	mg/m ³	84.0	IS-11225-Part 02	N/A

--- End of Report ---

Verified By: *Sidhu*

Remarks: In the above mentioned stack meets the requirements of TSPCB standards with respect to the parameters listed
N/A - Not Applicable

For ENVIRO CARE INDIA PRIVATE LIMITED
(Laboratory Director)

Authorized Signatory

443, 2nd Street, Harvey Nagar, Anna Nagar, Madurai - 625016. Tel: 0452-4355100
Email: lab@envirocareindia.com | Web: www.envirocareindia.com

Note: 1. The results apply only to the test order.

- Any Complaints not allowed shall constitute this report.
- Report shall not be reproduced or printed except in full and in the same format without the permission of the laboratory.
- Orders referred for laboratory, the test items, and not be returned for more than 15 days from date of issue of test report.
- Validity of our laboratory is limited to the Indian sub-continent.
- Any charges arising out of this report is subjected to Madurai Jurisdiction Only.





TEST REPORT

Accredited by NABL (Chemical & Biological)

Report No.:	ECI/EM/2023/08188	Report Date:	20/08/2023
Customer Name & Address:	M/s. Ennore Coal Terminal Pvt. Ltd Puduchepuram Village, Vedar Post, Perventakka, Thiruvellar District-626 122		
Customer Reference:	PO ENRCHCOALCO-240000810094 Date: 05/08/2023	Sample Reference No.:	ECI/EM/2023/08188
Sample Drawn By:	ECI	Sample Received On:	20/08/2023
Sample Collected Date:	25/08/2023	Test Commenced On:	20/08/2023
City of Sample Received:	Thiruvellar & 50 rd. Salem	Test Completed On:	20/08/2023
Sample Description:	Stack	Sampling Method:	E-11205-P1
Sample Mark:	CO-42/114 (Electrical Room) - Exhaust (Inlet)		

S.No.	PARAMETERS	UNITS	RESULTS	TEST METHOD	Max. Permissible TSPCB norms for General Emission Standards
1.	Ambient Temperature	°C	32	IS 11205 Part 03	NA
2.	Carbon dioxide (as CO ₂)	% vol	6.5	IS 11270	NA
3.	Carbon Monoxide (as CO)	% vol	0.2	IS 11270	1.0
4.	Flow rate	m ³ /hr	487	IS 11205 Part 02	NA
5.	Flue Gas velocity	m/sec	8.2	IS 11205 Part 02	NA
6.	Oxides of Nitrogen (as NO _x)	mg/m ³	25.0	IS 11205 Part 07	NA
7.	Oxygen (as O ₂)	% vol	18.0	IS 11270	NA
8.	Particulate Matter (PM)	mg/m ³	14.4	IS 11205 Part 01	150
9.	Part from Height from G Level	m	6.0	---	NA
10.	Stack Diameter at port hole	m	0.15	---	NA
11.	Stack height from G Level	m	7.0	---	NA
12.	Stack Temperature	°C	130	IS 11205 Part 02	NA
13.	Sulphur Dioxide (as SO ₂)	mg/m ³	11.8	IS 11205 Part 02	NA

--- End of Report ---

Verified By: 

Remarks: In the above mentioned stack meets the requirements of TSPCB standards with respect to the parameters tested.
NA -- Not Applicable

For ENVIRO CARE INDIA PRIVATE LIMITED

(Laboratory Director)


Authorized Signatory

843, 2nd Street, Harvey Nagar, Arasikere, Madurai - 625016. Tel: 0452 4350100
Email: lab@envirocareindia.com | Web: www.envirocareindia.com

Note: 1. The results were only to the item tested.

2. Any Correction fee related shall be within the report.

3. Report shall not be reproduced in printed mode without the prior written permission of the laboratory.

4. Unless referred by customer, the test items will not be reported for more than 15 days from date of issue of test report.

5. Total liability of our laboratory is limited to the invoice amount.

6. Any dispute arising out of this report is referred to Madurai jurisdiction (In)





TEST REPORT

Accredited by NABL / Chemical & Biological /

Report No.:	EC-EM-202306187	Report Date:	30/06/2023
Customer Name & Address:	M/s. Enviro Coal Terminal Pvt. Ltd Puduchiyathan Village Yakur Post, Ponnur Taluk Thiruvallur District-605 122		
Customer Reference:	PO L/IN/000004/23-24/0000010074 Date: 28.06.2023	Sample Reference No.:	EC-EM-202306187
Sample Drawn By:	EC	Sample Received On:	28/06/2023
Sample Collected Date:	29/06/2023	Test Commenced On:	29/06/2023
Qty of Sample Received:	Thirteen (13) m/s	Test Completed On:	30/06/2023
Sample Description:	Stack	Sampling Method:	IS-11255-P1
Sample Mark:	CG-400 R/G (Sub Station - I) -Standard/Over		

S.No	PARAMETERS	UNITS	RESULTS	TEST METHOD	Max. Permissible THPCB norms for General Emission Standards
1	Ambient Temperature	°C	32	IS-11255 Part 03	NA
2	Carbon dioxide (as CO ₂)	% (v/v)	0.4	IS-13270	400
3	Carbon Monoxide (as CO)	% (v/v)	0.3	IS-13270	1.0
4	Flow rate	m ³ /hr	307	IS-11255 Part 03	NA
5	Flue Gas velocity	m/sec	9.4	IS-11255 Part 03	NA
6	Oxides of Nitrogen (as NO _x)	mg/m ³	37.5	IS-11255 Part 07	NA
7	Droplet (as Oil)	% (v/v)	30.7	IS-13270	NA
8	Particulate Matter (PM)	mg/m ³	99.0	IS-11255 Part 01	100
9	Port hole Height from G Level	m	0.0	---	NA
10	Stack Diameter at port hole	m	0.15	---	NA
11	Stack Height from G Level	m	7.0	---	NA
12	Stack Temperature	°C	148	IS-11255 Part 02	NA
13	Sulphur Dioxide (as SO ₂)	mg/m ³	13.2	IS-11255 Part 02	NA

--- End of Report ---

Verified By: *S.ich*

Remarks: In the above mentioned stack tests the requirements of THPCB standards with respect to the parameters tested.
NA - Not Applicable

For ENVIRO CARE INDIA PRIVATE LIMITED
(Laboratory Division)

Authorized Signatory

843, 2nd Street, Harvey Nagar, Anna Nagar, Chennai - 600016. Tel: 0452-4550100.
Email: lab@envirocareindia.com | Web: www.envirocareindia.com

Note: 1. The results given only to best best limit

2. Any comments are invited about contents of this report

3. Report shall not be reprinted or reissued except as per written approval from office of the laboratory

4. Copies obtained by purchase, the test items will not be returned for more than 30 days from date of issue of test report

5. Staff working in our laboratory is trained in the correct manner

6. Any dispute arising out of the report is subject to Internal Arbitration Only





TEST REPORT

Accredited by NABL | Chemical & Biological

Report No.	ECI-WA-202308188	Report Date	30.08.2023
Customer Name & Address	M/s. Essore Coal Terminal Pvt. Ltd Puthuvakkal Village Vilathil Post, Pinner Taluk Thiruvellar District-600 120		
Customer Reference :	PO ENVIROCOAL/03-24/00500/0004 Date:20.08.2023	Sample Reference No.	ECI-WA-202308188
Sample Order By :	ECI	Sample Received On :	25.08.2023
Sample Collected Date :	24.08.2023	Test Commenced On :	25.08.2023
City of Sample Received	IL	Test Completed On :	30.08.2023
Sample Description :	Water	Sampling Method	IS 3025 Part 01
Sample Mark:	Ground Water at Stock Yard (Phosphate Well) (H & I)		

S.No	PARAMETERS	UNITS	RESULTS	TEST METHOD
1	Appearance	-	Clear	IS 3025
2	Arsenic (as As)	mg/L	BDL (DL = 0.01)	IS 3025 Part 27
3	Cadmium (as Cd)	mg/L	BDL (DL = 0.005)	IS 3025 Part 41
4	Calcium (as Ca)	mg/L	703	IS 3025 Part 40
5	Carbonate Hardness (as CaCO ₃)	mg/L	461	IS 3025 Part 21
6	Chlorides (Cl)	mg/L	706	IS 3025 Part 32
7	Color	Platin	< 1.0	IS 3025 Part 06
8	Electrical Conductivity (EC) @ 25°C	µmhos/cm	3786	IS 3025 Part 16
9	Iron (as Fe)	mg/L	0.03	IS 3025 Part 53
10	Lead (as Pb)	mg/L	BDL (DL = 0.01)	IS 3025 Part 47
11	Magnesium (as Mg)	mg/L	64	IS 3025 Part 40
12	Mercury (as Hg)	mg/L	BDL (DL = 0.005)	IS 3025 Part 48
13	Non-Carbonate Hardness (as CaCO ₃)	mg/L	107	IS 3025 Part 21
14	Odor	-	Agreeable	IS 3025 Part 05
15	pH Value @ 25°C	-	7.8	IS 3025 Part 11
16	Phosphate (as P)	mg/L	58	IS 3025 Part 23
17	Reactive Silica (as SiO ₂)	mg/L	1.6	IS 3025 Part 38
18	Residual Chlorine	mg/L	< 0.1	IS 3025 Part 26
19	Residual Free Chlorine (RFC)	mg/L	< 0.1	IS 3025 Part 26

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Email: info@envirocareindia.com | Web: www.envirocareindia.com

- NOTE:**
- The results refer only to the test items.
 - Any deviation not stated shall exclude this report.
 - Report shall not be reissued. Reprints shall be at the cost of the client without the permission of the laboratory.
 - Unless informed by customer, the test items will not be retained for more than 15 days from date of issue of test report.
 - Integrity of our reporting is linked to the scope of work.
 - Any dispute arising out of this report is subjected to Madurai Jurisdiction Only.





TEST REPORT

Accredited by NABL (Chemical & Biological)

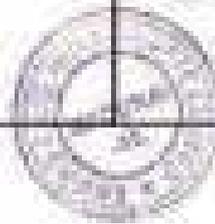
20	Sulphate (as SO ₄ ²⁻)	mg/L	340	IS 3025 Part 04
21	Total Alkalinity (as CaCO ₃)	mg/L	481	IS 3025 Part 03
22	Total Dissolved Solids(TDS) @ 100°C	mg/L	1812	IS 3025 Part 06
23	Total Hardness(as CaCO ₃)	mg/L	829	IS 3025 Part 01
24	Total Suspended Solids(TSS) @100°C	mg/L	<1.0	IS 3025 Part 17
25	Turbidity	NTU	<0.5	IS 3025 Part 10

--- End of Report ---

Verified By : *S. S. S.*

Remarks : BDL - Below Detectable Limit;
 DL - Detectable Limit

For ENVIRO CARE INDIA PRIVATE LIMITED
 (Laboratory Division)



[Signature]
 Authorized Signatory

443, 2nd Street, Harvey Nagar, Arasavalli, Madurai - 625018. Tel: 0452 4355100
 Email: info@envirocareindia.com | Web: www.envirocareindia.com

- NOTE:**
1. The results relate only to the data tested.
 2. Any Correction must be stated prior to testing the report.
 3. Retention should not be introduced anywhere except on full and in the same format without the permission of the Laboratory.
 4. Unless informed by customer, the test items will not be returned for more than 15 days from date of issue of test report.
 5. Legal liability of our laboratory is limited to the service provided.
 6. Any dispute arising out of this report is subjected to Madurai jurisdiction Only.





TEST REPORT

Accredited by NABL (Chemical & Biological)

Report No.:	ECI/04-2023/04188	Report Date:	30.08.2023
Customer Name & Address:	M/s. Suresh Coal Terminal Pvt. Ltd Puthuvayakkanam Village, Vattar-Poost, Ponnenttaluk, Thiruvattar District 680 130		
Customer Reference:	PO ENVIRONMENTAL (ES) SURVEILLANCE TESTS From 26.08.2023	Sample Reference No.:	ECI/04-2023/04188
Sample Drawn By:	ECI	Sample Received On:	26.08.2023
Sample Collected Date:	26.08.2023	Test Commenced On:	26.08.2023
City of Sample Received:	Thiruvattar & 50 m East	Test Completed On:	30.08.2023
Sample Description:	Stack	Sampling Method:	IS: 11255-P1
Sample Mark:	CO 300 KW (Bus Station -2) - Director/Driver		

S.No	PARAMETERS	UNITS	RESULTS	TEST METHOD	Max. Permissible TLVPCB norms for General Emission Standards
1.	Ambient Temperature	°C	32	IS 11255 Part 03	NA
2.	Carbon dioxide (as CO ₂)	% (v/v)	8.3	IS 13276	NA
3.	Carbon Monoxide (as CO)	% (v/v)	0.2	IS 13276	1.0
4.	Flow rate	m ³ /hr	137	IS 11255 Part 03	NA
5.	Flue Gas velocity	m/sec	15.6	IS 11255 Part 03	NA
6.	Oxides of nitrogen (as NO _x)	mg/m ³	38.3	IS 11255 Part 01	NA
7.	Oxygen (as O ₂)	% (v/v)	17.8	IS 13276	NA
8.	Particulate Matter (PM)	mg/m ³	73.4	IS 11255 Part 01	100
9.	Stack height from D Level	m	8.8	—	NA
10.	Stack Diameter at exit hole	m	0.30	—	NA
11.	Stack Height from G Level	m	8.8	—	NA
12.	Stack Temperature	°C	132	IS 11255 Part 03	NA
13.	Sulphur Dioxide (as SO ₂)	mg/m ³	14.0	IS 11255 Part 03	NA

— End of Report —

Verified By:

Remarks: In the above mentioned stack meets the requirements of TLVPCB standards with respect to the parameters tested
NA - Not Applicable

For ENVIRO CARE INDIA PRIVATE LIMITED
(Laboratory Director)

Authorized Signatory

#43, 2nd Street, Harvey Nagar, Anna Nagar - 600016 | Tel: 0452 4355100
Email: lab@envirocareindia.com | Web: www.envirocareindia.com

Notes: 1. The results relate only to the data herein.

2. Any correction and amendment shall invalidate this report.

3. Report shall not be considered as evidence (except in IS) and in the same format without the permission of the laboratory.

4. Unless otherwise mentioned, the test items will not be retained for more than 15 days from date of issue of test report.

5. Competency of our laboratory is limited to the intended purpose.

6. Any dispute arising out of the result is subjected to Mutual Amicable Dispute.





TEST REPORT Accredited by NABL (Chemical & Biological)

Report No. :	EC-AM-202308114	Report Date :	20.08.2023
Customer Name & Address :	M/s. Brown Coal Terminal Pvt. Ltd. Puthuchikkav Village Vellar Post, Ponnalaka Thiruvellar District-605 120		
Customer Reference :	PC: ENVICCAL23-24082010274 Date: 20.08.2023	Sample Reference No. :	EC-AM-202308114
Sample Description :	Noise	Monitoring Date :	24.08.2023
Monitored By :	DCI	Date Received On :	20.08.2023
S.No	Locations	Day Time	
		Minimap	Maximap
1	South East Corner Near Slagpits Gate	62.9	64.1
Unit		dB (A)	
TSPCM Max. Permissible Limit for Day Time (Industrial Area)		75	
Reference Method		IS 9500	
— End of Report —			
Verified By:			
Remarks: In the above mentioned locations noise is	For ENVIRO CARE INDIA PRIVATE LIMITED (Laboratory Division)		
comparisons of TSPCM standards.	 Authorized Signatory		

443, 2nd Street, Harvey Nagar, Adyar, Chennai - 600016 | Tel: 0452 4356103
 Email: lab@envirocareindia.com | Web: www.envirocareindia.com

- Notes:**
1. The results relate only to the item tested.
 2. Any Commission not stated shall include the client.
 3. Report shall not be reproduced anywhere except in full and in the same format without the permission of the laboratory.
 4. Misuse influenced by customer, the test items will not be accepted for more than 15 days from date of issue of test report.
 5. Total liability of our laboratory is limited to the invoice amount.
 6. Any dispute arising out of the report is subjected to Madurai Jurisdiction Only.

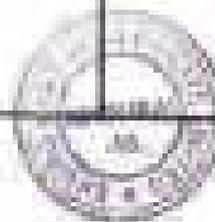




TEST REPORT

Accredited by NABL (Chemical & Biological)

Report No.:	ECI-NM-202308110	Report Date:	10.08.2023
Customer Name & Address:	M/s. Enviro Coal Terminal Pvt. Ltd. Puthukkottai Village Vadaipadi - Perambalur Thiruvallur District-600 120		
Customer Reference:	PO: ENVIROCOAL/23-24/0600010074 Date:20.08.2023	Sample Reference No.:	ECI-NM-202308110
Sample Description:	Noise	Monitoring Date:	14.08.2023
Monitored By:	ECI	Field Received On:	24.08.2023
S.No	Location	Night Time	
		Minimum	Maximum
1	South East Corner - Near Wagon Gate	60.5	61.5
Unit		dB (A)	
TAPCB Max. Permissible Limit for Night Time (Industrial Area)		70	
Reference Method		IS 9598	
*** End of Report ***			
Verified By:	<i>S. S. S.</i>		
Remarks: In the above mentioned location, noise levels are in compliance of TAPCB standards.	<p style="text-align: right;">FOR ENVIRO CARE INDIA PRIVATE LIMITED (Laboratory Division)</p> <p style="text-align: right;"><i>[Signature]</i> Authorized Signatory</p>		



843, 2nd Street, Harvey Nagar, Arambur, Madurai - 625018 | Tel: 0452-4355103
Email: lab@envirocareindia.com | Web: www.envirocareindia.com

- Notes:**
- The results relate only to the items listed.
 - Any Commission not attached shall invalidate this report.
 - Results shall not be reproduced anywhere except in full and in its true form without the permission of the laboratory.
 - Unless informed by customer, the test items will not be retained for more than 10 days from date of issue of test report.
 - Best quality of test materials is used in all routine analysis.
 - Any dispute arising out of this report is referred to Madurai Jurisdiction only.





TEST REPORT

Accredited by NABL (Chemical & Biological)

Report No.:	ECI/WR/2023/08170	Report Date:	01.08.2023
Customer Name & Address:	M/s. Ennore Coal Terminal Pvt. Ltd Puduppalukkam Village Water-Test, Poramboikadu Thiruvallur District-600 120		
Customer Reference No.:	70 515405004025-20/08/2023/0374 Date: 25.08.2023	Sample Reference No.:	ECI/WR/2023/08170
Sample Drawn By:	ECI	Sample Received On:	25.08.2023
Sample Collected Date:	24.08.2023	Test Commenced On:	25.08.2023
City of Sample Received:	Chennai	Test Completed On:	30.08.2023
Sample Description:	Water	Sampling Method:	IS: 3025 Part 31
Sample Mark:	T.P. Water - Raw Water (Catch Pt)		

S.No	PARAMETERS	UNITS	RESULTS	TEST METHOD
1	Ammoniacal Nitrogen (As)	mg/L	17.1	IS: 3025 Part 34
2	Arsenic (As) (As)	mg/L	NDL (DL = 0.05)	IS: 3025 Part 37
3	Bio-Chemical Oxygen Demand (BOD) @ 20°C for 5 days	mg/L	03	IS: 3025 Part 44
4	Iron (as Fe)	mg/L	+ 8.2	IS: 3025 Part 57
5	Cadmium (as Cd)	mg/L	NDL (DL = 0.005)	IS: 3025 Part 61
6	Chemical Oxygen Demand (COD)	mg/L	31.8	IS: 3025 Part 50
7	Chlorides (as Cl)	mg/L	1750	IS: 3025 Part 32
8	Copper (as Cu)	mg/L	NDL (DL = 0.01)	IS: 3025 Part 42
9	Cyanides (CN)	mg/L	+ 0.02	IS: 3025 Part 39
10	Fluoride (as F)	mg/L	0.85	IS: 3025 Part 60
11	Free Ammonia (as NH ₃)	mg/L	0.2	APHA 20°C Color 46.1 C
12	Hexavalent Chromium (as Cr ⁶⁺)	mg/L	+ 0.01	IS: 3025 Part 52
13	Lead (as Pb)	mg/L	NDL (DL = 0.01)	IS: 3025 Part 47
14	Mercury (as Hg)	mg/L	NDL (DL = 0.001)	IS: 3025 Part 45
15	Nickel (as Ni)	mg/L	NDL (DL = 0.01)	IS: 3025 Part 54
16	Oil & Grease	mg/L	+ 1.0	IS: 3025 Part 36
17	Particle Size of suspended solids	micron	+ 800	APHA 20°C Color 2500 A Section
18	Percent Solvent	%	00	IS: 3025 Part 40
19	Perchlorate (ClO ₄)	mg/L	NDL (DL = 0.00025)	USEPA

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Notes: 1. This report refers only to the test order.

2. Any correction has already been provided in this report.

3. Report should not be reproduced anywhere except in full and in the same format without the permission of the laboratory.

4. Issues informed by customer, the test items will not be accepted for more than 15 days from date of issue of test report.

5. Non-availability of our laboratory is marked in the report, where applicable.

6. Any change arising out of this report is subjected to written communication only.





TEST REPORT

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20	pH Value @ 25°C	—	8.4	IS 3025 Part 11
21	Phenolic Compound (as Cl ₂ SO ₂)	mg/L	< 0.001	IS 3025 Part 43
22	Phosphate (as PO ₄)	mg/L	2.2	APHA22™ "Lakes+000" P - D
23	Residual Chlorine	mg/L	< 0.1	IS 3025 Part 26
24	Residual Sodium Carbonate	mg/L	12.2	IS 11824
25	Selenium (as Se)	mg/L	NDL (DL = 0.01)	IS 3025 Part 56
26	Sulfate (as SO ₄ ²⁻)	mg/L	1825	IS 3025 Part 24
27	Sulfide (as H ₂ S)	mg/L	< 0.04	APHA22™ "Lakes+000" S - F
28	Temperature	°C	25	IS 3025 Part 09
29	Total Chlorine (as Cl)	mg/L	NDL (DL = 0.01)	IS 3025 Part 52
30	Total Dissolved Solids (TDS) @ 100°C	mg/L	9548	IS 3025 Part 16
31	Total Hardness (as CaCO ₃)	mg/L	91.7	APHA22™ "Lakes+000" H - C
32	Total Suspended Solids (TSS) @ 100°C	mg/L	73	IS 3025 Part 17
33	Zinc (as Zn)	mg/L	NDL (DL = 0.01)	IS 3025 Part 46

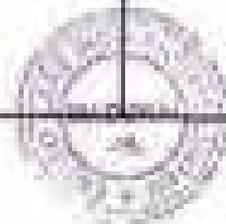
--- End of Report ---

Verified By :

S. Ch

Remarks : NDL - Below Detectable Limit,
DL - Detectable Limit

For ENVIRO CARE INDIA PRIVATE LIMITED
(Laboratory Division)



Authorized Signatory

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- Note:**
- The results given only are as per test done.
 - The Customer may choose to get immediate test report.
 - Report given will be (confirmed) signature based on the test and in the same format allowed for deposit of the laboratory.
 - Unless otherwise by customer, the test results will not be returned for more than 15 days from date of issue of test report.
 - Lead content of the laboratory is subject to the current edition.
 - Any dispute arising out of the results is subjected to Madurai Jurisdiction Only.





TEST REPORT

Accredited by NABL | Chemical & Biological

Report No.:	ECI-NA-202308/171	Report Date:	30.08.2023
Customer Name & Address:	M/s. Enviro Care Terminal Pvt. Ltd Puduchottaram Village Nellur Post, Pooneri Taluk Tiruvallur District-606 120		
Customer Reference:	PO: ENVRO/CAL/23-24/0660010074 Date 28.08.2023	Sample Reference No.:	ECI-NA-202308/171
Sample Drawn By:	ECI	Sample Received On:	25.08.2023
Sample Collected Date:	24.08.2023	Test Commenced On:	25.08.2023
Qty of Sample Received:	7 L	Test Completed On:	30.08.2023
Sample Description:	Water	Sampling Method:	IS: 3025 Part 31
Sample Mark:	Effluent Treated Water (Settling Pond)		

S.No	PARAMETERS	UNITS	RESULTS	TEST METHOD	Max. Permissible Limits of TNPCB for Treated Effluent
1	Ammonical Nitrogen (N)	mg/L	< 1	IS: 3025 Part 34	50
2	Arsenic (as As)	mg/L	NDL (DL = 0.01)	IS: 3025 Part 37	0.1
3	Bio chemical oxygen demand (BOD) @ 20°C for 5 days	mg/L	21	IS: 3025 Part 46	30
4	Boron (as B)	mg/L	< 0.2	IS: 3025 Part 37	2.0
5	Cadmium (as Cd)	mg/L	NDL (DL = 0.01)	IS: 3025 Part 41	2.0
6	Chemical Oxygen Demand (COD)	mg/L	158	IS: 3025 Part 36	250
7	Chlorides (Cl)	mg/L	448	IS: 3025 Part 32	1000
8	Copper (as Cu)	mg/L	NDL (DL = 0.01)	IS: 3025 Part 42	2.0
9	Cyanides (Cn)	mg/L	< 0.05	IS: 3025 Part 27	0.5
10	Fluoride (as F)	mg/L	0.17	IS: 3025 Part 30	2.0
11	Free Ammonia (as NH ₃)	mg/L	< 1.0	APHA22™4000 Nrs. C	5.0
12	Hexavalent Chromium (as Cr ⁶⁺)	mg/L	< 0.01	IS: 3025 Part 32	0.1
13	Lead (as Pb)	mg/L	NDL (DL = 0.01)	IS: 3025 Part 47	0.1
14	Mercury (as Hg)	mg/L	NDL (DL = 0.001)	IS: 3025 Part 48	0.01
15	Nickel (as Ni)	mg/L	NDL (DL = 0.01)	IS: 3025 Part 34	2.0

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 4. Orders placed by customer, the lab being notified to proceed for work, the 15 days from date of receipt of the report.
 5. Test laboratory shall laboratory is bound to the national standard.
 6. Any dispute arising out of this report is subject to NABL/AAR Jurisdiction (only).





TEST REPORT

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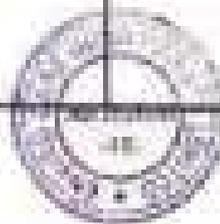
16	Oil & Grease	mg/L	< 1.0	IS 3025 Part 28	10
17	Particulate Matter (suspended solids)	mg/L	< 100	APHA 22 nd Edition 2000 A Section	Charl. pass 600 Micron 50 Sieve
18	Percent Sodium	%	00	IS 3025 Part 40	—
19	Free Chlorine (Total)	mg/L	NDL (CL = 0.00002%)	USEPA	Absent
20	pH Value @ 25°C	—	7.5	IS 3025 Part 11	6.5 - 8.5
21	Free Chlorine Compound (as Cl ₂)	mg/L	< 0.001	IS 3025 Part 40	1.0
22	Phosphate (as PO ₄)	mg/L	< 0.1	APHA 22 nd Edition 2000 F-D	0.1
23	Residual Chlorine	mg/L	< 0.1	IS 3025 Part 36	1.0
24	Residual Sodium Carbonate	mg/L	1.5	IS 11624	—
25	Selenium (as Se)	mg/L	NDL (CL = 0.01%)	IS 3025 Part 56	0.05
26	Sulfate (as SO ₄ ²⁻)	mg/L	212	IS 3025 Part 24	1000
27	Sulfonamide (µg/L)	mg/L	< 0.04	APHA 22 nd Edition 4500 E-F	0.1
28	Temperature	°C	28	IS 3025 Part 08	40
29	Total Chlorine (as Cl)	mg/L	NDL (CL = 0.01%)	IS 3025 Part 52	0.0
30	Total Dissolved Solids (TDS) @ 180°C	mg/L	1172	IS 3025 Part 16	2100
31	Total Fixed Nitrogen (TN)	mg/L	15.3	APHA 22 nd Edition 4500 C	100
32	Total Suspended Solids (TSS) @ 100°C	mg/L	28	IS 3025 Part 17	100
33	Dissolved O ₂	mg/L	NDL (CL = 0.0%)	IS 3025 Part 48	1.0

← End of Report →

Verified By: *[Signature]*

Remarks: The above sample meets the requirements of IS 3025 norms with respect to the parameters listed
NDL - Below Detectable Limit, CL - Detectable Limit
NA - Not Applicable

For ENVIRO CARE INDIA PRIVATE LIMITED
(Laboratory Division)



Authorized Signatory *[Signature]*

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TEST REPORT

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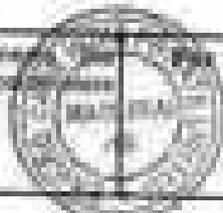
Report No.:	ECI-IND-2003060003	Report Date:	24.12.2023
Customer Name & Address:	M/s. Bansa Coal Terminal Pvt. Ltd Punalayathan Village, Vadur Post, Ponnur Taluk, Tiruvallur District-601 120		
Customer Reference:	FD E18DCCAL0032AB00010004 Date:26.06.2023	Sample Reference No.:	ECI-IND-2003060003
Sample Drawn By:	ECI	Sample Received On:	20.08.2023
Sample Collected Date:	26.06.2023	Test Commenced On:	20.08.2023
Qty of Sample Received:	Filter Paper & 25ml bottles	Test Completed On:	24.12.2023
Sample Description:	Ambient Air	Sampling Method:	IS 5182-PT4
Sample Mark:	Tear Weight Bridge (TTL)		

S.No	PARAMETERS	UNITS	RESULTS	TEST METHOD	Permissible limits of CPCB
1.	Ammonia (as NH ₃)	µg/m ³	< 1.0	IS 5182-Part 06:12	400
2.	Acetone (as Ac)	µg/m ³	< 0.1	IS 5182-Part 22	5.0
3.	Benzene (C ₆ H ₆)	µg/m ³	< 1.0	IS 5182-Part 11	5.0
4.	Benzene-a-Prime (BAP)	µg/m ³	< 1.0	IS 5182-Part 12	1.0
5.	Carbon Monoxide (as CO)	µg/m ³	< 1.2	IS 5182-Part 03	5.0
6.	Lead (as Pb)	µg/m ³	< 0.1	IS 5182-Part 22	1.0
7.	Mercur (as Hg)	µg/m ³	< 0.1	IS 5182-Part 22	20
8.	Manganese dioxide (as MnO ₂)	µg/m ³	23.4	IS 5182-Part 05	30
9.	Ozone (as O ₃)	µg/m ³	< 0.8	IS 5182-Part 09	100
10.	Particulate Matter (PM ₁₀)	µg/m ³	20.6	IS 5182-Part 24	50
11.	Respirable Particulate Matter (PM ₁₀)	µg/m ³	25.4	IS 5182-Part 23	100
12.	Respirable Dust (as SO ₂)	µg/m ³	8.2	IS 5182-Part 02	50

--- End of Report ---

Verified By: *S. S. S.*

Remarks: In the above mentioned location the requirements of CPCB standards are found to be complied.



ENVIRO CARE INDIA PRIVATE LIMITED
(Subsidiary Company)

[Signature]
Authorized Signatory

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- NOTE:
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 - All Certificate and standard shall be issued only upon request.
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 - Claims related to customer's fee and terms will not be considered for more than 75 days from date of issue of test report.
 - Confidentiality of data generated is limited to the results issued.
 - The report along with the test is subject to National Jurisdiction, India.





TEST REPORT

Accredited by NABL (Chemical & Biological)

Report No.:	ECI-AGG-2023090803	Report Date:	04.10.2023
Customer Name & Address:	M/s. Ennore Coal Terminal Pvt. Ltd Puduchinthalam Village, Vilva-Pond, Ponnaiyalka, Dindurur District 605 132.		
Customer Reference:	PO: PMMCCOM/23/24000010074 DMM 26.09.2023	Sample Reference No.:	ECI-AGG-2023090803
Sample Drawn By:	ECI	Sample Received On:	31.09.2023
Sample Collected Date:	28.09.2023	Test Commenced On:	30.09.2023
Qty of Sample Received:	Filter Paper & 20ml Solution	Test Completed On:	04.10.2023
Sample Description:	Ambient Air	Sampling Method:	IS 5182 P14
Sample Mark:	Your Airs Date.		

S.No.	PARAMETERS	UNITS	RESULTS	TEST METHOD	Particulate limits of CPCB
1.	Ammonia (as NH ₃)	µg/m ³	<1.0	NIOSH Method 0615	400
2.	Arsenic (as As)	ng/m ³	<0.1	IS 5182 Part 22	0.0
3.	Benzene (C ₆ H ₆)	µg/m ³	<1.0	IS 5182 Part 11	5.0
4.	Benzene/Petrol (B/P)	ng/m ³	<1.0	IS 5182 Part 12	1.0
5.	Carbon Monoxide (as CO)	ng/m ³	<1.0	IS 5182 Part 10	3.0
6.	Lead (as Pb)	µg/m ³	<0.1	IS 5182 Part 23	1.0
7.	Mercury (as Hg)	ng/m ³	<0.1	IS 5182 Part 25	0.0
8.	Nitrogen Dioxide (as NO ₂)	µg/m ³	20.8	IS 5182 Part 06	80
9.	Ozone (as O ₃)	µg/m ³	<0.8	IS 5182 Part 08	180
10.	Particulate Matter (PM ₁₀)	µg/m ³	24.8	IS 5182 Part 04	80
11.	Respirable Particulate Matter (PM _{2.5})	µg/m ³	39.1	IS 5182 Part 20	100
12.	Sulphur Dioxide (as SO ₂)	µg/m ³	6.3	IS 5182 Part 05	80

--- End of Report ---

Verified By: *S. S. S.*

Remarks: In the above mentioned location, results are in compliance with the requirements of CPCB standards with respect to the parameters listed.

For ENVIRO CARE INDIA PRIVATE LIMITED
(Laboratory Division)

[Signature]
Authorized Signatory

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Email: lab@envirocareindia.com | Web: www.envirocareindia.com

- NOTE:**
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 - Any deviation in procedural/analytical parameters shall be notified to the client before the commencement of the laboratory work.
 - Report shall not be considered/accepted/used if it is found in the same format without the approval of the laboratory.
 - Results obtained by duplicate test shall remain valid for maximum for 15 days from date of issue of test report.
 - Legal liability of our laboratory is limited to the amount agreed.
 - Any dispute arising out of this report is referred to National Arbitration Forum.





TEST REPORT

Accredited by NABL (Chemical & Biological)

Report No.:	ECL/AAQ/2023/09084	Report Date:	04.10.2023
Customer Name & Address:	M/s. Soma Coal Terminal Pvt. Ltd Pudhuvakkam Village, Vishu Pudur, Perambalur Dist., Tiruvallur District-600 100.		
Customer Reference:	PO: 05/10/2023/23-240000010074 Date: 26.08.2023	Sample Reference No.:	ECL/AAQ/2023/09084
Sample Drawn By:	ECI	Sample Received On:	30.08.2023
Sample Collected Date:	29.08.2023	Test Commenced On:	30.08.2023
Qty of Sample Received:	Filter Paper & 25ml Solution	Test Completed On:	04.10.2023
Sample Description:	Airport Air	Sampling Method:	IS 5102 P14
Sample Mark:	Open Street		

S.No	PARAMETERS	UNITS	RESULTS	TEST METHOD	Permissible levels of CPCB
1.	Arsenic (as As)	µg/m ³	<1.0	IS 5102 Method 101 B	400
2.	Arsenic (as As)	µg/m ³	<0.1	IS 5102 Part 20	6.0
3.	Benzene (C ₆ H ₆)	µg/m ³	<1.0	IS 5102 Part 11	5.0
4.	Benzyl-a-Pyrene (BaP)	ng/m ³	<1.0	IS 5102 Part 12	1.0
5.	Carbon Monoxide (as CO)	mg/m ³	<1.2	IS 5102 Part 16	2.0
6.	Lead (as Pb)	µg/m ³	<0.1	IS 5102 Part 22	1.0
7.	Nickel (as Ni)	µg/m ³	<0.1	IS 5102 Part 23	20
8.	Nitrogen dioxide (as NO ₂)	µg/m ³	22.4	IS 5102 Part 08	80
9.	Ozone (as O ₃)	µg/m ³	<0.2	IS 5102 Part 09	180
10.	Particulate Matter (PM ₁₀)	µg/m ³	21.6	IS 5102 Part 24	60
11.	Respirable Particulate Matter (RPM)	µg/m ³	44.5	IS 5102 Part 25	100
12.	Sulphur Dioxide (as SO ₂)	µg/m ³	9.9	IS 5102 Part 07	80

--- End of Report ---

Verified By: *S. S. S.*

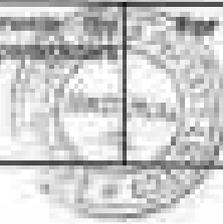
Remarks: In the above mentioned report, results are in compliance with the requirements of CPCB standards with respect to the parameters tested.

For ENVIRO CARE INDIA PRIVATE LIMITED

(Laboratory Division)

[Signature]

Authorized Signatory



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2. All Certificates are issued only to the client.
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5. Total liability of Enviro Care is limited to the service charges.
6. Any request, disagreement or the need to take action is Madurai Jurisdiction Only.





TEST REPORT

Accredited by NABL (Chemical & Biological)

Report No.:	ECI-ANQ-2023/09/008	Report Date:	04.10.2023
Customer Name & Address:	M/s. Shreee Coal Terminal Pvt. Ltd Kuchimintur Village, Vilva-Pad, Ponnur Taluk, Thiruvallur District-601 120.		
Customer Reference:	PO: ENHANCED/03/24000011054 Date:26.08.2023.	Sample Reference No.:	ECI-ANQ-2023/09/008
Sample Drawn By:	ECI	Sample Received On:	30.08.2023
Sample Collected Date:	29.08.2023	Test Commenced On:	30.08.2023
Qty of Sample Received:	Filter Paper & 20ml Solution	Test Completed On:	04.10.2023
Sample Description:	Ambient Air	Sampling Method:	IS 5182 P 14
Sample Mark:	Near Sub Station - I		

S.No	PARAMETERS	UNITS	RESULTS	TEST METHOD	Permissible limits of CPCB
1.	Ambient (as PM ₁₀)	µg/m ³	< 1.0	IS 5182 Method 9018	600
2.	Ambient (as PM _{2.5})	µg/m ³	< 0.1	IS 5182 Part 23	60
3.	Respirable (Sulfur)	µg/m ³	< 1.0	IS 5182 Part 11	60
4.	Benzene & Pyrene (BaP)	µg/m ³	< 1.0	IS 5182 Part 12	1.0
5.	Carbon Monoxide (as CO)	µg/m ³	< 1.2	IS 5182 Part 10	2.0
6.	Lead (as Pb)	µg/m ³	< 0.1	IS 5182 Part 02	1.0
7.	Nickel (as Ni)	µg/m ³	< 0.1	IS 5182 Part 02	30
8.	Manganese Dioxide (as Mn ₂ O ₃)	µg/m ³	25.8	IS 5182 Part 06	80
9.	Copper (as Cu)	µg/m ³	< 0.8	IS 5182 Part 09	100
10.	Total Suspended Matter (TSP - 10)	µg/m ³	25.4	IS 5182 Part 24	60
11.	Respirable Particulate Matter (PM ₁₀)	µg/m ³	25.3	IS 5182 Part 23	100
12.	Submicron Dust (as SO ₂)	µg/m ³	6.1	IS 5182 Part 07	10

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

Verified By:

Remarks: In the above mentioned location, the requirements of CPCB standards with respect to the ambient air quality.



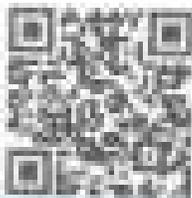
For ENVIRO CARE INDIA PRIVATE LIMITED
(Laboratory Division)

Authorized Signatory

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4. Labels followed by subscripts, shall be given and shall be retained for more than 18 days from date of issue of test report.
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6. Any marks written on or in the report is retained in the lab. Archived Copy.





TEST REPORT

Accredited By: (NABL / Chemical & Biological)

Report No.	EC-EM 202300008	Report Date	25.10.2023
Customer Name & Address	M/s. Green Coal Terminal Pvt. Ltd Purnathambam Village, Yalla Pool, Pudukkottai, Thiruvallur District-605 026		
Customer Reference	As per ENVIRONMENTAL DEPARTMENT'S letter dated 20.09.2023	Sample Reference No.	EC-EM 202300008
Sample Given By	ECI	Sample Received On	25.09.2023
Sample Collected Date	28.09.2023	Test Commenced On	30.09.2023
City of Sample Placement	Thiruvallur & EC on Job	Test Completed On	05.10.2023
Sample Description	Stack	Sampling Method	IS 11258 (F)
Sample Size	241.000 KVA (Dry) (Stack - 1) - (Stack Down)		

S.No.	PARAMETERS	UNITS	RESULTS	TEST METHOD	Max. Permissible TLPCB limits for General Emission Standards
1.	Ambient Temperature	°C	32	IS 11258 Part G3	NA
2.	Carbon dioxide (as CO ₂)	% (v/v)	0.0	IS 11258	NA
3.	Carbon Monoxide (as CO)	% (v/v)	0.4	IS 11258	NA
4.	Flow rate	Nm ³ /hr	1440	IS 11258 Part G3	NA
5.	Flue Gas velocity	m/min	15.5	IS 11258 Part G3	NA
6.	Concentration of MANGANESE (as Mn ₂)	mg/m ³	0.1	IS 11258 Part G1	NA
7.	Chlorine (as Cl ₂)	% (v/v)	0.0	IS 11258	NA
8.	Particulate Matter (PM ₁₀)	mg/m ³	117.9	IS 11258 Part G1	100
9.	Stack Height from G Level	m	15.0	---	NA
10.	Stack Diameter at exit row	m	0.15	---	NA
11.	Stack height from G Level	m	15.0	---	NA
12.	Stack Temperature	°C	185	IS 11258 Part G3	NA
13.	Sulphur dioxide (as SO ₂)	mg/m ³	21.3	IS 11258 Part G3	NA

--- End of Report ---

Verified By: *S. S. S.*

Remarks: In the above mentioned stack results the concentration of TLPCB standards will depend on the parameters mentioned. NA - Not Applicable



For ENVIRO CARE INDIA PRIVATE LIMITED

(Laboratory Director)

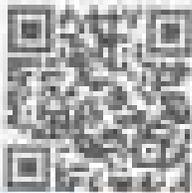
P. S. S.
Authorized Signatory

W-3, 2nd Street, Maruday Nagar, Arasikere, Madurai - 625 015, Tel: 0452 4355100
Email: info@envirocareindia.com | Web: www.envirocareindia.com

Notes:

1. This report is valid only for the purpose mentioned.
2. The report is not valid if the sample is not received by the laboratory within the stipulated time.
3. The report is not valid if the sample is not received by the laboratory within the stipulated time.
4. The report is not valid if the sample is not received by the laboratory within the stipulated time.
5. The report is not valid if the sample is not received by the laboratory within the stipulated time.





TEST REPORT

Accredited by NABL (Chemical & Biological)

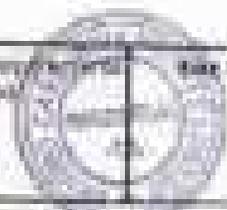
Report No.:	ICA-SM-2023060023	Report Date:	05.10.2023
Customer Name & Address:	Ms. Green Coal Terminal Pvt. Ltd. Panchanaburam Village, Hattur Road, Ponnur Taluk, Tiruvallur District-601 105		
Customer Reference:	ICA ENR01C004_05-04-2023010016 Date: 05.05.2023	Sample Reference No.:	ICA-SM-2023060023
Sample Given By:	U.S	Sample Received On:	03.09.2023
Sample Collected Date:	04.09.2023	Test Completed On:	03.09.2023
City of Sample Received:	Tiruvallur & 50m Stack	Test Completed On:	05.10.2023
Sample Description:	Flue	Detection Method:	IS 11055 Part II
Sample Mark:	IC 003 HVA - 50m Stack (Down)		

S.No.	PARAMETERS	LIMITS	RESULTS	TEST METHOD	Max. Permissible Level/ Limits for General Emission Standards
1.	Ambient Temperature	°C	33	IS 11055 Part 03	NA
2.	Carbon dioxide (as CO ₂)	% (v/v)	0.4	IS 10279	NA
3.	Carbon Monoxide (as CO)	% (v/v)	0.3	IS 10279	1.0
4.	Sulphur	% (by wt)	0.45	IS 11055 Part 03	NA
5.	Flue Gas velocity	m/sec	9.4	IS 11055 Part 03	NA
6.	Conc. of Nitrogen (as NO _x)	mg/m ³	22.8	IS 11055 Part 03	NA
7.	Oxygen (as O ₂)	% (v/v)	16.9	IS 10279	NA
8.	Particulate Matter (PM)	mg/m ³	50.6	IS 11055 Part 03	150
9.	Flue Gas Height from G Level	m	8.3	---	NA
10.	Stack Diameter at exit hole	m	0.20	---	0.8
11.	Stack Height from G Level	m	8.3	---	NA
12.	Stack Temperature	°C	114	IS 11055 Part 03	NA
13.	Sulphur Dioxide (as SO ₂)	mg/m ³	49.2	IS 11055 Part 03	NA

--- End of Report ---

Verified By:

Remarks: In the above mentioned stack report the test is done as per IS 11055 standards with respect to the parameters tested.
NA - Not Applicable



ENVIRO CARE INDIA PRIVATE LIMITED
Supervisory Division

Authorized Signatory

643, 2nd Street, Harvey Nagar, Arasavalli, Madurai - 625 016. Tel: 0452-4351101
Email: info@envirocareindia.com / www.envirocareindia.com

Note: This report is valid only for the purpose mentioned in the report. It is not valid for any other purpose. The report is valid only for the purpose mentioned in the report. It is not valid for any other purpose. The report is valid only for the purpose mentioned in the report. It is not valid for any other purpose.





TEST REPORT

Approved by NABL (Chemical & Biological)

Report No.:	EC-EM-2023/0079	Report Date:	08-10-2023
Customer Name & Address:	M/s. Ennore Coal Terminal Pvt. Ltd Puducherry, Vengal, Nambur Road, Pambanipeta, Thiruvallur District-605 126.		
Customer Reference:	FD ENMCOAL/OT/340000010079 Date:28.08.2023	Sample Reference No.:	EC-EM-2023/0079
Sample Drawn By:	ECI	Sample Received On:	29.09.2023
Sample Collected Date:	29.09.2023	Test Commenced On:	01.10.2023
Qty of Sample Received:	Thimble & 50 ml Size	Test Completed On:	08-10-2023
Sample Description:	Flue Gas	Sampling Method:	IS-11205 P1
Sample Mark:	EC-200-47A (Thimble Flue Gas) - Ennore (Coal)		

S.No	PARAMETERS	UNITS	RESULTS	TEST METHOD	Max. Permissible THPCB limit for General Emission Standards
1.	Ambient Temperature	°C	32	IS 11205 Part 03	NA
2.	Carbon dioxide (as CO ₂)	% (v/v)	0.0	IS 13273	NA
3.	Carbon monoxide (as CO)	% (v/v)	0.0	IS 13273	1.0
4.	Flue gas	km/hr	448	IS 11205 Part 03	NA
5.	Flue Gas velocity	m/sec	8.8	IS 11205 Part 03	NA
6.	Oxides of Nitrogen (as NO _x)	pphm ²	24.8	IS 11205 Part 07	NA
7.	Oxygen (as O ₂)	% (v/v)	19.7	IS 13273	NA
8.	Particulate Matter (PM)	pphm ²	88.3	IS 11205 Part 04	100
9.	Particulate Matter (as TSP)	µm	5.5	---	NA
10.	Stack Diameter at exit point	m	2.15	---	NA
11.	Stack Height from to Land	m	7.0	---	NA
12.	Stack Temperature	°C	144	IS 11205 Part 03	NA
13.	Sulphur Dioxide (as SO ₂)	pphm ²	13.8	IS 11205 Part 03	NA

--- End of Report ---

Verified By:

Remarks: In the above mentioned test, pass the requirements of THPCB standards with respect to all parameters tested. N/A - Not Applicable

ENVIRO CARE INDIA PRIVATE LIMITED

(Laboratory Division)

Authorized Signatory



843, 2nd Street, Harvey Road, Anna Nagar, Madurai - 625 016. Tel: 0452 238400.
Email: info@envirocareindia.com | Web: www.envirocareindia.com





TEST REPORT

Accredited by NABL | Division: E-600004 |

Report No.:	ECI-SM-202309071	Report Date:	08-10-2023
Customer Name & Address:	M/s. Enviro Care Services Pvt. Ltd Puduchattampala Village Vellanpudi, Ponnambalam Thiruvalla (2480000) TSS		
Customer Reference:	PO: DWKXCDAY_03-248000010216 Date: 26.08.2023	Sample Reference No.:	ECLEM-202309071
Sample Drawn By:	ECI	Sample Received On:	23.08.2023
Sample Collected Date:	23.08.2023	Test Commenced On:	24.08.2023
City of Sample Received:	Thiruvalla & 50 m South	Test Completed On:	04.10.2023
Sample Description:	Stack	Sampling Method:	IS 11200 P1
Customer Mark:	TAT 400 P10 (Sub System - 1) (Banner Cover)		

S.No.	PARAMETER	UNIT	RESULTS	TEST METHOD	Max. Permissible TSPCB limits for General Emission Stack tests
1.	Ambient Temperature	°C	33	IS 11200 Part 03	NA
2.	Carbon Dioxide (as CO ₂)	% (vol)	8.3	IS 55170	NA
3.	Carbon Monoxide (as CO)	% (vol)	8.4	IS 11270	1.0
4.	Flow rate	m ³ /hr	488	IS 11200 Part 03	NA
5.	Flow Gas velocity	m/sec	10.1	IS 11200 Part 03	NA
6.	Conc of Nitrogen (as N ₂)	mg/m ³	33.7	IS 11200 Part 03	NA
7.	Oxygen (as O ₂)	% (vol)	21.8	IS 55170	NA
8.	Particulate Matter (PM)	mg/m ³	97.1	IS 11200 Part 03	180
9.	Plot hole Height from G Level	m	8.0	---	NA
10.	Stack Diameter at plot hole	m	0.15	---	NA
11.	Stack Height from G Level	m	7.0	---	NA
12.	Stack Temperature	°C	548	IS 11200 Part 03	NA
13.	Sulphur Dioxide (as SO ₂)	mg/m ³	18.4	IS 11200 Part 03	NA

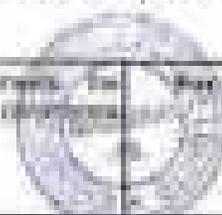
--- End of Report ---

Verified By:

Sich

Remarks: In the above mentioned stack tests, the requirements of TSPCB standards with respect to the parameters tested.

NA - Not Applicable



FOR ENVIRO CARE INDIA PRIVATE LIMITED

(Laboratory Director)

Sich

Authorized Signatory

IND, 2nd Street, Harvey Nasser, Arambur, Madurai - 625015 | Tel: 0452-4335103
Email: lab@envirocareindia.com | Web: www.envirocareindia.com

Notes: 1. The results are given as they are.
2. Any comments should be indicated on the report.
3. Please print the CA certificate and send it to the same (along with the payment) with the report.
4. Quoted charges are valid only for the duration of the validity of the accreditation of the laboratory.
5. The validity of the accreditation is given in the accreditation certificate.
6. For more information, please contact the laboratory.





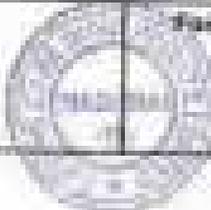
TEST REPORT

Accredited by NABL (Chemical & Biological)

Report No: EC-WA-1000094728				
10.	Residual Chlorine	mg/L	<0.1	IS 3025 Part 20
11.	Residual Free Chlorine (RFC)	mg/L	<0.1	IS 3025 Part 20
12.	Chlorides (as Cl ⁻)	mg/L	431	IS 3025 Part 20
13.	Total Hardness (as CaCO ₃)	mg/L	470	IS 3025 Part 20
14.	Total Dissolved Solids (TDS) @ 180°C	mg/L	213	IS 3025 Part 10
15.	Total Hardness (as CaCO ₃)	mg/L	402	IS 3025 Part 20
16.	Total Suspended Solids (TSS) @100°C	mg/L	<1.0	IS 3025 Part 17
17.	Turbidity	NTU	<1.0	IS 3025 Part 10

Verified By: *[Signature]* ← End of Report →

Remarks: DL - Below Detectable Limit
 DL - Detectable Limit



FOR ENVIRO CARE INDIA PRIVATE LIMITED
(Laboratory Division)
[Signature]
Authorized Signatory

403, 2nd Floor, Harvey Nagar, Anna Road, Madurai - 625010. Tel: 0452-4355100
 Email: info@www.ecindia.com | Web: www.ecindia.com





TEST REPORT

Accredited by NABL (Civil and Structural)

Report No.	EC/WR/2023/0127		Report Date	16.10.2023
Customer Name & Address	M/s. Sanyo Cool Terminal Pvt. Ltd Purandhar Nagar Vidya Park, Pimpri Thane District-400 512			
Customer Reference No.	PO: EWG/2023/28-28/2023/0127 Date: 06.09.2023	Sample Reference No.	EC/WR/2023/0127/1	
Sample Drawn By	UD	Sample Received On	09.10.2023	
Sample Collection Date	06.09.2023	Test Completed On	09.10.2023	
Qty of Sample Received	3 L	Test Completed On	09.10.2023	
Sample Description	Water	Sampling Method	IS 3025 Part 31	
Sample No.	Effluent - Raw Water (DAG) W4			
S.No	PARAMETERS	UNITS	RESULT	TEST METHOD
1	Ammonical Nitrogen (N)	mg/L	21.4	IS 3025 Part 34
2	Ammonia (as N)	mg/L	309.58 (+0.01)	IS 3025 Part 37
3	Ammonical Nitrogen (as N) (500 @ 21°C for 3 days)	mg/L	88	IS 3025 Part 44
4	Boron (as B)	mg/L	+0.2	IS 3025 Part 37
5	Cadmium (as Cd)	mg/L	889.12L (+0.01)	IS 3025 Part 49
6	Chemical Oxygen Demand (COD)	mg/L	452	IS 3025 Part 50
7	Chromate (Cr)	mg/L	4286	IS 3025 Part 32
8	Cyanide (as C)	mg/L	NDL (DL = 0.01)	IS 3025 Part 40
9	Cyanide (CN)	mg/L	+0.02	IS 3025 Part 37
10	Fluoride (as F)	mg/L	0.52	IS 3025 Part 36
11	Free Ammonia (as NH ₃)	mg/L	0.3	APHA 21 st Edition 180.1
12	Lead (as Pb)	mg/L	+0.01	IS 3025 Part 32
13	Mercury (as Hg)	mg/L	NDL (DL = 0.01)	IS 3025 Part 47
14	Mercury (as Hg)	mg/L	NDL (DL = 0.001)	IS 3025 Part 46
15	Nickel (as Ni)	mg/L	NDL (DL = 0.01)	IS 3025 Part 34
16	Oil & Grease	mg/L	< 1.0	IS 3025 Part 36
17	Particulate Matter of suspended solids	mg/100ml	< 500	APHA 21 st Edition 180.4 Section
18	Percent Solids	%	37	IS 3025 Part 45
19	Perchlorate (as Cl)	mg/L	NDL (DL = 500000)	USEPA

843, 2nd Street, Harvey Nagar, Andheri West, Mumbai - 400050. Tel: 022-42951100
Email: info@envirocareindia.com | Web: www.envirocareindia.com

NOTE:
1. This report is valid only for the sample analyzed.
2. The laboratory is not responsible for the accuracy of the results if the sample is not properly preserved or if the sample is not analyzed within the specified time.
3. The laboratory is not responsible for the accuracy of the results if the sample is not analyzed within the specified time.
4. The laboratory is not responsible for the accuracy of the results if the sample is not analyzed within the specified time.





TEST REPORT

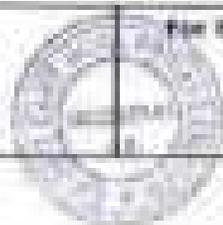
Approved by: NABL (Chemical & Biological)

Report No: EC/WH/2023/07107			
23. pH Value @ 25°C	-	7.8	IS 3025 Part 17
24. Phenolic Compound (as COHCHO)	mg/L	< 0.001	IS 3025 Part 43
25. Phosphate (as PO ₄)	mg/L	0.01	APHA/ASAP [®] Standard Method P-10
26. Residual Chlorine	mg/L	> 0.1	IS 3025 Part 26
24. Free Residual Chlorine Concentration	mg/L	11.8	IS 15524
25. Calcium (as Ca)	mg/L	803.24 (> 0.01)	IS 3025 Part 02
26. Sulphate (as SO ₄ ²⁻)	mg/L	2018	IS 3025 Part 24
27. Nitrate (as NO ₃ ⁻)	mg/L	< 0.04	APHA/ASAP [®] Standard Method P-10
28. Temperature	°C	28	IS 3025 Part 08
29. Total Chlorides (as Cl)	mg/L	305.24 (> 0.01)	IS 3025 Part 02
30. Total Dissolved Solids (TDS) @ 180°C	mg/L	11306	IS 3025 Part 10
31. Total Hardness (Temporary H)	mg/L	11.8	APHA/ASAP [®] Method C
32. Total Suspended Solids (TSS) @ 100°C	mg/L	68	IS 3025 Part 12
33. Zinc (Zn)	mg/L	1005.24 (> 0.01)	IS 3025 Part 09

--- End of Report ---

Verified By: *[Signature]*

Remarks : BDL – Below Detection Limit;
DL – Detection Limit



FOR ENVIRO CARE INDIA PRIVATE LIMITED
(Laboratory Division)

[Signature]
Authorized Signatory

Notes:

1. This report is valid only for the test items.
2. The Client is responsible for providing the test.
3. Report for any test item which is not mentioned above is not valid for the same test item unless the lab has issued a separate report.
4. Samples should be submitted in the lab container for the test and should be stored in the lab from the date of receipt.
5. Lead testing should be done in accordance with the relevant standard.
6. The report is valid only for the test items mentioned in the report.





TEST REPORT

Analytics: NABL | Chemical & Biological

Report No:	EC/WR/202304128	Report Date:	04.10.2023		
Customer Name & Address:	M/s. Enviro Care Terminal Pvt. Ltd Pachivakkam Village Water Plot, Poonetaru Thiruvallur District 601 120				
Customer Reference:	PLD CHNO/COAL/02/20230012004 12.01.2023	Sample Reference No.:	EC/WR/202304128		
Sample From:	RO	Sample Received On:	01.10.2023		
Sample Collected Date:	01.10.2023	Test Commenced On:	01.10.2023		
Qty. of Sample Received:	7L	Test Completed On:	03.10.2023		
Sample Description:	Water	Sampling Method:	IS 3025 Part 01		
Sample Note:	Effluent Treated Water (Settling Pond)				
S.No.	PARAMETER	UNITS	RESULTS	TEST METHOD	Max. Permissible Limit of INPCO for Treated Effluent
1.	Ammonia Nitrogen (N)	mg/L	4.3	IS 3025 Part 34	50
2.	Acidity (as Ca)	mg/L	ND (DL = 0.01)	IS 3025 Part 37	0.2
3.	Bio-chemical Oxygen Demand (BOD) @ 20°C in 5 Days	mg/L	17	IS 3025 Part 36	30
4.	Hardness (as Ca)	mg/L	< 0.2	IS 3025 Part 01	0.5
5.	Chloride (as Cl)	mg/L	ND (DL = 0.01)	IS 3025 Part 41	0.5
6.	Chemical Oxygen Demand (COD)	mg/L	88	IS 3025 Part 38	250
7.	Chlorine (Cl)	mg/L	0.15	IS 3025 Part 35	1000
8.	Copper (as Cu)	mg/L	ND (DL = 0.05)	IS 3025 Part 42	0.5
9.	Cyanide (CN)	mg/L	< 0.02	IS 3025 Part 31	0.2
10.	Fluoride (as F)	mg/L	0.12	IS 3025 Part 40	0.5
11.	Free Ammonia (as NH ₃)	mg/L	< 1.0	N/A/2023/0003/MS/0	0.5
12.	Hazardous Chromium (as Cr ⁶⁺)	mg/L	< 0.01	IS 3025 Part 03	0.1
13.	Iodide (I)	mg/L	ND (DL = 0.01)	IS 3025 Part 47	0.1
14.	Mercurous (Hg)	mg/L	ND (DL = 0.001)	IS 3025 Part 48	0.01
15.	Nitrate (N)	mg/L	ND (DL = 0.01)	IS 3025 Part 04	0.5
16.	Oil & Grease	mg/L	< 0.3	IS 3025 Part 39	0.5

Enviro Care, 2nd Street, Harvey Nagar, Aravind, Madurai - 625 015. Tel: 0452 4560100
Email: info@envirocareindia.com | Web: www.envirocareindia.com

NOTE:

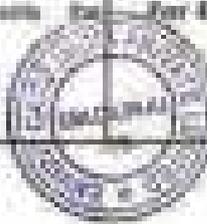
- The results are valid only for the stated date.
- For comparison and control, we recommend the use of IS 3025.
- Quality of water is dependent on sampling method, location, time of day and it is recommended to collect samples at least 20m away from the discharge point and to collect samples from the same point.
- For further information, please contact our office.
- The results are valid only for the stated date and time.





TEST REPORT

(Accredited by NABL | Chemical & Biological |)

Report No. :	EC-MS-2023/00107	Report Date :	04.10.2023
Customer Name & Address :	M/s. Enviro Coal Terminal Pvt. Ltd Pudupattinam Village Viduthi Post, Perambalur Tamil Nadu - 626602		
Customer Reference :	PO: ENVIRONMENTAL/MS/2023/00107 Date: 26.08.2023	Sample Reference No. :	EC-MS-2023/00107
Sample Description :	House	Monitoring Date :	29.09.2023
Monitored By :	EC	Date Received On :	30.09.2023
S.No.	Location	Day Time	
		Minimum	Maximum
1.	near 15th Gate	80.8	87.8
Unit		dB (A)	
THPCO Max. Permissible Limit for Day Time (Industrial Area)		75	
Reference Method		IS 5169	
--- End of Report ---			
Verified By: <i>S. Sathya</i> Remarks: In the above mentioned location noise level is within the permissible limit for ENVIRO CARE INDIA PRIVATE LIMITED (Laboratory Division). <div style="display: flex; justify-content: space-around;">  <div style="text-align: center;">  Authorized Signatory </div> </div>			

#43, 2nd Street, Harvey Nagar, Arcwared, Madurai - 625016 | Tel: 0452 4355103
Email: lab@envirocareindia.com | Web: www.envirocareindia.com

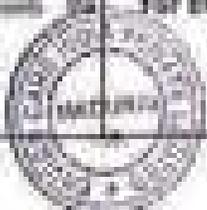
- Note:**
1. The results stated here are only for the tested sample.
 2. Any discrepancy and complaint should be raised within 48hrs.
 3. Report generated by computerized system, subject to full audit in the paper format without the compromise of the accuracy.
 4. Samples submitted by customer, Enviro Care India will not be returned for more than 15 days from date of issue of test report.
 5. Total liability of our laboratory is limited to the amount submitted.
 6. Any queries arising out of the report is subjected to Madurai, Arcwared, Tamil Nadu.





TEST REPORT

Accredited by NABL (Chemical & Biological)

Report No.	EC-AM-202309028	Report Date	04.10.2023
Customer Name & Address	M/s. Enviro Care Terminal Pvt Ltd Pattimukhary Village Vidyanagar, Tolmat Taluk Thiruvellar District-620 120		
Customer Reference	PC COMMODAU/25-24/950010579 Date 29.09.2023	Partner Reference No.	EC-AM-202309028
Sample Description	Soil	Monitoring Date	29.09.2023
Monitored By	EC	Date Received On	30.09.2023
Sl. No.	Location	Night Time	
		Minimum	Maximum
1	Area - Main Gate	62.3	64.1
Limit		48 (4)	
TNPCB Max. Permissible Limit for Night Time (Industrial Area)		75	
Reference Method		IS 5508	
--- End of Report ---			
Verified By: <i>S. d.</i>		For ENVIRO CARE INDIA PRIVATE LIMITED (Laboratory Division)	
Remember to file along pertinent documents with the requirements of TNPCB standards		  Authorized Signatory	

440, 2nd Street, Harvey Nagar, Arinjara, Madurai - 625018 | Tel: 0452 4366463
Email: info@envirocareindia.com | Web: www.envirocareindia.com

- Notes:**
1. The report is valid only if the test is valid.
 2. Any alteration will render the report invalid.
 3. Samples that will be analysed separately, sample to be and in the water format without the presence of the laboratory.
 4. Samples returned by Customer, the test items will not be retained for more than 72 days from date of issue of test report.
 5. The results of any laboratory is subject to the original amount.
 6. Any document issued out of this report is prepared in Microsoft Word/Excel/PowerPoint/MS





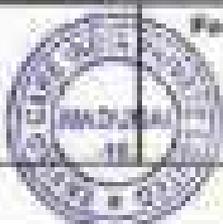
TEST REPORT

Accredited by NABL (Chemical & Biological)

Report No.:	ECL-IAAG-2023/101188	Report Date:	28.10.2023
Customer Name & Address:	M/s. Enviro Coal Terminal Pvt. Ltd Puduchattanam Village, Chattampi, Ponnambal, Thiruvananthapuram-695 028		
Customer Reference:	PO: ENVRO/COAL/TER/24000010874 Dated: 26.08.2023	Sample Reference No.:	ECL-IAAG-2023/101188
Sample Drawn By:	ECI	Sample Received On:	26.10.2023
Sample Collected Date:	26.10.2023	Test Commenced On:	26.10.2023
City of Sample Received:	Filter Paper & 25ml Solution	Test Completed On:	30.10.2023
Sample Description:	Ambient Air	Sampling Method:	IS 5162-P14
Sample Mark:	Near Main Gate		

S No	PARAMETERS	UNITS	RESULTS	TEST METHOD	Permissible limits of CPCB
1.	Arsenic (as As)	µg/m ³	< 1.0	IS 5162 Method 04/05	400
2.	Cadmium (as Cd)	µg/m ³	< 0.1	IS 5162 Part 02	0.3
3.	Mercury (as Hg)	µg/m ³	< 1.0	IS 5162 Part 11	3.0
4.	Manganese (as Mn)	µg/m ³	< 1.0	IS 5162 Part 12	1.0
5.	Carbon Monoxide (as CO)	µg/m ³	< 1.0	IS 5162 Part 03	3.0
6.	Lead (as Pb)	µg/m ³	< 0.1	IS 5162 Part 23	1.0
7.	Nickel (as Ni)	µg/m ³	< 0.1	IS 5162 Part 22	20
8.	Nitrogen dioxide (as NO ₂)	µg/m ³	24.1	IS 5162 Part 06	80
9.	Ozone (as O ₃)	µg/m ³	< 8.8	IS 5162 Part 09	180
10.	Particulate Matter (PM ₁₀)	µg/m ³	22.7	IS 5162 Part 24	80
11.	Respirable Particulate Matter (PM _{2.5})	µg/m ³	8.2	IS 5162 Part 25	100
12.	Sulphur Dioxide (as SO ₂)	µg/m ³	7.8	IS 5162 Part 02	80

Options: In the above mentioned location meets the requirements of CPCB standards with respect to the parameters listed.
 <--- End of Report --->

Verified By:   For ENVIRO CARE INDIA PRIVATE LIMITED
 (Laboratory Division)
 Authorized Signatory: 

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 Email: info@envirocareindia.com | Web: www.envirocareindia.com

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TEST REPORT

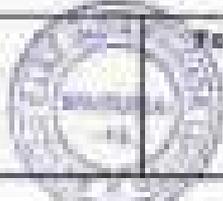
Accredited by NABL (Chemical & Biological)

Report No.:	ECI-AG-2023/10104	Report Date:	30.10.2023
Customer Name & Address:	M/s. Enviro Coal Terminal Pvt. Ltd Durgachowkram Village, Vishal-Pur, Purnia District, Theraha District-645 130.		
Customer Reference:	PO: ENVRO/CDAL/23-2406/0010974 Date: 25.10.2023	Sample Reference No.:	ECI-AG-2023/10104
Sample Drawn By:	ECI	Sample Received On:	26.10.2023
Receipt Collected Date:	25.10.2023	Test Commenced On:	26.10.2023
Qty of Sample Received:	Filter Paper & 20ml Solution	Test Completed On:	30.10.2023
Sample Description:	Ambient Air	Sampling Method:	IS 3162 P-4
Sample Mark:	Near Weigh Bridge (STLS)		

S. No.	PARAMETERS	UNITS	RESULTS	TEST METHOD	PERMISSIBLE LIMITS OF CPCB
1.	Aerosols (as TSP)	µg/m ³	< 1.0	INDIA Method 0215	400
2.	Aerosols (as As)	µg/m ³	< 0.1	IS 3162 Part 22	0.3
3.	Aerosols (as Pb)	µg/m ³	< 1.0	IS 3162 Part 11	1.5
4.	Aerosols (as Fe)	µg/m ³	< 1.0	IS 3162 Part 13	1.5
5.	Carbon Monoxide (as CO)	µg/m ³	< 1.0	IS 3162 Part 10	2.0
6.	Lead (as Pb)	µg/m ³	< 0.1	IS 3162 Part 22	1.5
7.	Nickel (as Ni)	µg/m ³	< 0.1	IS 3162 Part 27	05
8.	Nitrogen Dioxide (as NO ₂)	µg/m ³	27.4	IS 3162 Part 06	05
9.	Ozone (as O ₃)	µg/m ³	< 0.8	IS 3162 Part 03	100
10.	Particulate Matter (PM ₁₀)	µg/m ³	34.7	IS 3162 Part 24	60
11.	Respirable Particulate Matter (PM _{2.5})	µg/m ³	48.8	IS 3162 Part 23	100
12.	Sulphur Dioxide (as SO ₂)	µg/m ³	8.1	IS 3162 Part 02	05

Opinion: In the above mentioned location meets the requirements of CPCB standards with respect to the parameters listed.
 ← End of Report →

Verified By: *S. Ch*



For ENVIRO CARE INDIA PRIVATE LIMITED
(Laboratory Division)
[Signature]
Authorized Signatory

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TEST REPORT

Accredited by NABL (Chemical & Biological)

Report No.:	EC-IAD 2023/10716	Report Date:	30.10.2023
Customer Name & Address:	M/s. Enviro Coal Terminal Pvt. Ltd. Puchanwakhan Village, Vaha Road, Pomerfala, Thiruvananthapuram Dist-695 026		
Customer Reference:	PO: ENVROCOAL/TS-244900111674 (Date: 24.10.2023)	Sample Reference No.:	EC-IAD 2023/10716
Sample Given By:	ECI	Sample Received On:	26.10.2023
Sample Collected Date:	26.10.2023	Test Commenced On:	26.10.2023
Qty of Sample Received:	Five Paper & 25ml Solution	Test Completed On:	30.10.2023
Sample Description:	Airborne dust	Sampling Method:	IS 5162 Pt 14
Sample Mark:	Near Chooa		

S.No	PARAMETERS	UNITS	RESULT	TEST METHOD	Permissible limits of OPCS
1.	Ammonia (as NH ₃)	µg/m ³	<1.0	MOH Method 6016	400
2.	Arzene (as As)	µg/m ³	<0.1	IS 5162 Part 22	5.0
3.	Mercuric (Gm)	µg/m ³	<1.0	IS 5162 Part 11	3.0
4.	Benzo-a-Pyrene (BaP)	µg/m ³	<1.0	IS 5162 Part 12	1.0
5.	Carbon Monoxide (as CO)	mg/m ³	<1.2	IS 5162 Part 10	2.0
6.	Lead (as Pb)	µg/m ³	<0.1	IS 5162 Part 22	1.0
7.	Nickel (as Ni)	µg/m ³	<0.1	IS 5162 Part 22	20
8.	Nitrogen dioxide (as NO ₂)	µg/m ³	19.1	IS 5162 Part 06	80
9.	Ozone (as O ₃)	µg/m ³	<9.8	IS 5162 Part 06	100
10.	Particulate Matter (PM ₁₀)	µg/m ³	19.0	IS 5162 Part 34	80
11.	Respirable Particulate Matter (PM ₁₀)	µg/m ³	40.1	IS 5162 Part 20	100
12.	Sulphur Dioxide (as SO ₂)	µg/m ³	5.3	IS 5162 Part 02	80

Options: In the above mentioned location, meets the requirements of OPCS standards with respect to the parameters tested.
 <--- End of Report --->

Verified By: *Sidi*


For ENVIRO CARE INDIA PRIVATE LIMITED
 (Laboratory Division)

 Authorized Signatory

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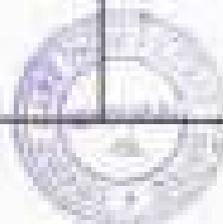
Accredited by NABL | Chemical & Biological |

Report No.	ECI-IND-2023/12088	Report Date :	03.10.2023
Customer Name & Address	M/s. Smeeta Coal Terminal Pvt. Ltd. Puduchatturam village Valka Post, Ponnichaluk Thiruvellar District-600 128		
Customer Reference:	PO CTRD-COAL-23-24/000010974 Ltrd-20-08-2023	Sample Reference No. :	ECI-IND-2023/12088
Sample Description :	Soil	Monitoring Date :	26.10.2023
Measured By :	GD	Date Received On :	27.10.2023

S.No.	Locations	Day Time	
		Minimum	Maximum
1.	near CTF	04.5	10.8
Unit		dB (A)	
TMOCB Max. Permissible Limit for Day Time (Industrial Area)		75	
Reference Method		IS:3743	

Opinion: In the above mentioned locations meets the requirements of TMOCB standards.
--- End of Report ---

Verified By: 	For ENVIRO CARE INDIA PRIVATE LIMITED (Customer's Division)  Authorized Signatory
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TEST REPORT

Accredited by NABL (Chemical & Biological)

Report No:	ECI-IND-000710000	Report Date:	26.10.2023
Customer Name & Address:	M/s. Enviro Care Terminal Pvt. Ltd Puduchiyathan Village, Cuddalore, Pudukottai Thiruvellar District 605 020		
Customer Reference:	PO: ENV/COO/CL/23/140/000710014 Date: 26.10.2023	Sample Reference No.:	ECI-IND-000710000
Sample Description:	Noise	Monitoring Date:	20.10.2023
Monitored By:	ECI	Date Received On:	07.10.2023

S.No	Location	Night Time	
		Minimum	Maximum
1	near GTT	55.4	61.4
Unit		dB (A)	
TNPCB Max. Permissible Limit for Night Time (Industrial Area)		70	
Reference Method		IS 9500	

Conclusion: In the above mentioned locations results are requirements of TNPCB standards.
--- End of Report ---

Verified By: *Solu*

For ENVIRO CARE INDIA PRIVATE LIMITED
(Laboratory Station)
Authorized Signatory



[Signature]





TEST REPORT

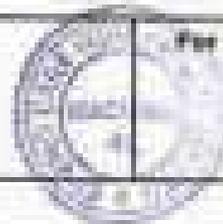
Accredited by NABL (Chemical & Biological)

Report No.	ECI-SM-2023/H188	Report Date	26.10.2023
Customer Name & Address	M/s. Ennore Coal Terminal Pvt. Ltd PuducherryMoom Village, Yatala Ppal, Pooner Taluk, Thiruvallur District-600 120		
Customer Reference	MOI-ENCO/COAL/23-24/098300018 Date: 26.09.2023	Sample Reference No.	ECI-SM-2023/H188
Sample Drawn By	ECI	Sample Received On	27.10.2023
Sample Collected Date	26.10.2023	Test Commenced On	27.10.2023
Qty of Sample Received	Therom & 50 ml Sam	Test Completed On	28.10.2023
Sample Description	Stack	Sampling Method	IS 11288 Pt1
Sample Mass	20.300 gVA - (Gross/Net)		

S.No	PARAMETERS	UNITS	RESULTS	TEST METHOD	Max. Permissible TAPCB limits for General Emission Standards
1	Ambient Temperature	°C	31	IS 11288 Part 03	NA
2	Carbon dioxide (as CO ₂)	% byV	13.3	IS 10270	NA
3	Carbon Monoxide (as CO)	% byV	0.4	IS 10270	1.0
4	Flow rate	lit/min	812	IS 11288 Part 03	NA
5	Flue Gas velocity	m/sec	8.2	IS 11288 Part 03	NA
6	Concn. of Nitrogen (as N ₂)	mg/Nm ³	27.4	IS 11288 Part 07	NA
7	Oxygen (as O ₂)	% byV	16.3	IS 10270	NA
8	Particulate Matter (PM)	mg/Nm ³	17.8	IS 11288 Part 07	100
9	Particulate weight from 0 Level	g	1.0	---	NA
10	Stack Diameter at port hole	m	0.20	---	NA
11	Stack Height from 0 Level	m	8.0	---	NA
12	Stack Temperature	°C	197	IS 11288 Part 03	NA
13	Sulphur Dioxide (as SO ₂)	mg/Nm ³	11.6	IS 11288 Part 02	NA

Options: In the above mentioned stack meets the requirements of TAPCB standards with respect to the parameters listed.
NA - Not Applicable

← End of Report →

Verified By:   **FW ENVIRO CARE INDIA PRIVATE LIMITED**
(Laboratory Division)

Authorized Signatory

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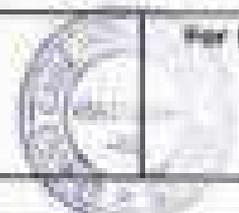
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Report No.:	ECI-EM-2023-101001	Report Date:	08-11-2023
Customer Name & Address:	M/s. Epsilon Cool Terminal Pvt. Ltd Pochuthravanku Village, Vandal Post, Palakkad Dist, Thrissur District-686 120		
Customer Reference:	PO-EM/NO/CA/2/3-2023/101001 Date:20.08.2023	Sample Reference No.:	ECI-EM-2023-101001
Sample Drawn By:	ELI	Sample Received On:	27-10-2023
Sample Collected Date:	08-10-2023	Test Commenced On:	27-10-2023
Qty of Sample Received:	Thirteen (13) m/s	Test Completed On:	08-11-2023
Sample Description:	Stack	Sampling Method:	IS-11255:01
Sample Mark:	03-440 kVA (Electrical Room) - Special Case		

S.No.	PARAMETERS	UNITS	RESULTS	TEST METHOD	Max. Permissible TSPCB limits for General Emission Standards
1.	Ambient Temperature	°C	32	IS-11255:Part 03	NA
2.	Carbon dioxide (as CO ₂)	% (v/v)	0.0	IS-13270	NA
3.	Carbon Monoxide (as CO)	% (v/v)	0.0	IS-13271	1.0
4.	Flow rate	m ³ /hr	400	IS-11255:Part 03	NA
5.	Flue Gas velocity	m/sec	8.8	IS-11255:Part 03	NA
6.	Chloride of Nitrogen (as NO _x)	mg/m ³	14.0	IS-11255:Part 01	NA
7.	Oxygen (as O ₂)	% (v/v)	18.0	IS-13270	NA
8.	Particulate Matter (PM)	mg/m ³	60.1	IS-11255:Part 01	100
9.	Stack hole height from G Level	m	0.0	—	NA
10.	Stack Diameter at post hole	m	0.15	—	NA
11.	Stack Height from G Level	m	7.0	—	NA
12.	Stack Temperature	°C	100	IS-11255:Part 03	NA
13.	Sulphur Dioxide (as SO ₂)	mg/m ³	11.1	IS-11255:Part 03	NA

Observation: In the above mentioned stack meets the requirements of TSPCB standards with respect to the parameters listed
NA - Not Applicable

— End of Report —

Verified By: 		For ENVIRO CARE INDIA PRIVATE LIMITED (Laboratory Division)  Authorized Signatory
--	---	---

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TEST REPORT

Accredited by NABL (Chemical & Biological)

Report No.:	ECI-EM-2023/10157	Report Date:	30/10/2023
Customer Name & Address:	Mrs. Evelyn Civil Terminal Pvt. Ltd Puduvattukon Village, Vayal-Patt, Thiruvananthapuram Thiruvananthapuram District-695 028		
Customer Reference:	PO-EMVOC-DAL-33 34028103100014 Date:29/10/2023	Sample Reference No.:	ECI-EM-2023/10157
Sample Drawn By:	ECI	Sample Received On:	27/10/2023
Sample Collection Date:	28/10/2023	Test Commenced On:	27/10/2023
Qty of Sample Received:	Flasks & 50 ml Bole	Test Completed On:	30/10/2023
Sample Description:	Stack	Sampling Method:	IS 11255:01
Sample Name:	CG-400 PVA Club House - 1 (Stack/Chimney)		

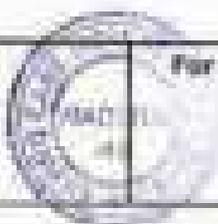
S.No.	PARAMETERS	UNITS	RESULTS	TEST METHOD	Max. Permissible TNPCB norms for General Emission Standards
1.	Ambient Temperature	°C	32	IS 11255:Part 03	NA
2.	Carbon dioxide (as CO ₂)	% (v/v)	0.0	IS 11270	NA
3.	Carbon Monoxide (as CO)	% (v/v)	0.0	IS 11270	1.0
4.	Flue rate	Nm ³ /hr	480	IS 11255:Part 02	NA
5.	Flue Gas velocity	m/sec	8.7	IS 11255:Part 03	NA
6.	Oxides of Nitrogen (as NO _x)	mg/m ³	30.0	IS 11255:Part 07	NA
7.	Oxygen (as O ₂)	% (v/v)	18.0	IS 11270	NA
8.	Particulate Matter (PM)	mg/m ³	110.0	IS 11255:Part 01	100
9.	Stack hole height from G Level	m	0.0	—	NA
10.	Stack Diameter at port hole	m	0.16	—	NA
11.	Stack height from G Level	m	7.0	—	NA
12.	Stack Temperature	°C	947	IS 11255:Part 05	NA
13.	Sulphur Oxide (as SO ₂)	mg/m ³	17.4	IS 11255:Part 02	NA

Observation: In the above mentioned stack meets the requirements of TNPCB standards with respect to the parameters listed
NA = Not Applicable

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

Verified By:

Saha



For ENVIRO CARE INDIA PRIVATE LIMITED
(Laboratory Division)

Authorized Signatory

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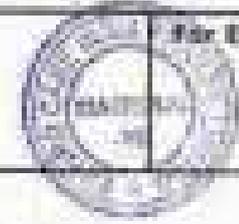
Accredited by NABL (Chemical & Biological)

Report No.:	EC-EM-2023/09154	Report Date:	06/10/2023
Customer Name & Address:	M/s. Kowari Coal Terminal Pvt. Ltd. Puduchattakam Village, Vilva Post, Ponnur Taluk, Thiruvallur District-600 120		
Customer Reference:	PO ENVIRO-04/23-24090310074 Date:20/09/2023	Sample Reference No.:	EC-EM-2023/09154
Sample Drawn By:	CDI	Sample Received On:	27/09/2023
Sample Collected Date:	05/10/2023	Test Commenced On:	27/09/2023
Qty of Sample Received:	Flue gas 50-ltr bag	Test Completed On:	29/10/2023
Sample Description:	Flue gas	Sampling Method:	IS 11255-P1
Sample Size:	012 002 P1A (Flue Gas) - 21 (Minimum Drawn)		

S.No.	PARAMETERS	UNITS	RESULTS	TEST METHOD	Max. Permissible Limits/IS Norms for General Emission Standards
1	Ambient Temperature	°C	32	IS 11255-Part 02	NA
2	Carbon dioxide (as CO ₂)	% (v/v)	13.3	IS 13270	NA
3	Carbon Monoxide (as CO)	% (v/v)	0.4	IS 13270	1.0
4	Flow rate	litre/hr	427	IS 11255-Part 02	NA
5	Flue Gas velocity	m/sec	9.8	IS 11255-Part 02	NA
6	Concns of Nitrogen (as NO _x)	mg/m ³	40.5	IS 11255-Part 02	NA
7	Oxygen (as O ₂)	% (v/v)	16.2	IS 13270	NA
8	Particulate Matter (PM)	mg/m ³	112.9	IS 11255-Part 01	100
9	Stack height from G Level	m	50.0	---	NA
10	Stack Diameter at exit	m	8.15	---	NA
11	Stack Height from G Level	m	12.0	---	NA
12	Stack Temperature	°C	101	IS 11255-Part 02	NA
13	Sulfur Dioxide (as SO ₂)	mg/m ³	88.0	IS 11255-Part 02	NA

Options: In the above mentioned stack meets the requirements of TSPCB standards with respect to the parameters listed
NA - Not Applicable

*** End of Report ***

Verified By: 		For: ENVIRO CARE INDIA PRIVATE LIMITED (Analytical Division)  Authorized Signatory
--	---	--

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TEST REPORT

Accredited by NABL (Chemical & Biological)

Report No.:	EC-WA-2023/10019	Report Date:	06.10.2023
Customer Name & Address:	Ms. Enviro Care Terminal Pvt. Ltd Panchsukhian Village Vellan-Pur, PanchTala Thiruvananthapuram-695 120		
Customer Reference:	PO- CANCOCORP/03 (AM000010004 Date:26.08.2023)	Sample Reference No.:	EC-WA-2023/0018
Sample Drawn By:	ECI	Sample Received On:	27.09.2023
Sample Collected Date:	26.09.2023	Test Commenced On:	27.09.2023
Qty. of Sample Received:	2 L.	Test Completed On:	06.10.2023
Sample Description:	Water	Sampling Method:	IS 3025 Part 01
Sample Mark:	Ground Water at Dock Yard, Panchsukhian, Vellan Pur, TALA		

S. No.	PARAMETERS	UNIT	RESULT	TEST METHOD
1.	Appearance	—	Clear	IS 3025
2.	Acidity (as HCl)	mg/L	150L (CL = 0.01)	IS 3025 Part 07
3.	Alkalinity (as Ca)	mg/L	400L (CL = 0.001)	IS 3025 Part 01
4.	Calcium (as Ca)	mg/L	321	IS 3025 Part 08
5.	Carbonate Hardness (as CaCO ₃)	mg/L	371	IS 3025 Part 01
6.	Dissolved O ₂	mg/L	612	IS 3025 Part 03
7.	Color	Platin	1 P.C.	IS 3025 Part 04
8.	Electrical Conductivity (EC @ 25°C)	µmhos/cm	398	IS 3025 Part 14
9.	Iron (as Fe)	mg/L	0.05	IS 3025 Part 03
10.	Lead (as Pb)	mg/L	NR (CL = 0.05)	IS 3025 Part 07
11.	Magnesium (as Mg)	mg/L	32	IS 3025 Part 08
12.	Mercury (as Hg)	mg/L	NR (CL = 0.001)	IS 3025 Part 06
13.	Non-Carbonate Hardness (as CaCO ₃)	mg/L	300	IS 3025 Part 01
14.	Odor	—	Agreeable	IS 3025 Part 05
15.	pH Value @ 25°C	—	7.8	IS 3025 Part 11
16.	Phosphorus (as P)	mg/L	14	IS 3025 Part 02
17.	Residual Chlorine (as Cl ₂)	mg/L	0.0	IS 3025 Part 09

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 - Report is valid for 90 days from the date of issue and to be used for the same period without the permission of the laboratory.
 - Unless otherwise specified, the test items will not be returned for more than 10 days from date of issue of the report.
 - The expiry of our assistance is limited to the 15000 amount.
 - The details entry and of the report is subjected to Internal Audit only.





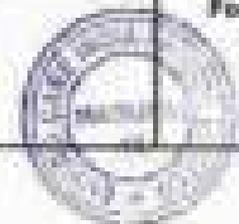
TEST REPORT

Accredited by NABL (Chemical & Biological)

Report No: ECI/VA/2023/18210				
18.	Residual Chlorine	mg/L	< 0.1	IS 3025 Part 26
19.	Residual Free Chlorine (RFC)	mg/L	< 0.1	IS 3025 Part 26
20.	Sulphate (as SO ₄ ²⁻)	mg/L	219	IS 3025 Part 24
21.	Total Alkalinity (as CaCO ₃)	mg/L	371	IS 3025 Part 23
22.	Total Dissolved Solids (TDS) @ 100°C	mg/L	2014	IS 3025 Part 16
23.	Total Hardness (CaCO ₃)	mg/L	391	IS 3025 Part 21
24.	Total Suspended Solids (TSS) @ 100°C	mg/L	< 1.0	IS 3025 Part 17
25.	Turbidity	NTU	< 0.5	IS 3025 Part 18

Opinion : BCL - Below Detectable Limit,
DL - Detectable Limit

← End of Report →

Verified By: 		For ENVIRO CARE INDIA PRIVATE LIMITED (Laboratory Division)  Authorized Signatory
--	--	---

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- Notes :**
- The report issued only to the client name.
 - Any discrepancy not detected and mentioned in the report.
 - Report issued only for reference purposes cannot be used in the court format without the permission of the laboratory.
 - Images mentioned by customer, they had been used, not be allowed to reuse for 30 days from date of receipt of test report.
 - The validity of our certificate is limited to the scope of work.
 - Any dispute arising out of the report is subject to Madurai Jurisdiction Only.





TEST REPORT

Accredited by NABL (Chemical & Biological)

Report No.:	EC/PA-2023/16211	Report Date:	16.10.2023
Customer Name & Address:	M/s. Enviro Coal Terminal Pvt. Ltd. Puduhuvakkam Village Vandalur Post, Ponnaiyala Thiruvallur District-601 020		
Customer Reference:	PO. CHINDICOLEM 240MILLITONS Date:26.08.2023	Sample Reference No.:	EC/PA-2023/16211
Sample Drawn By.:	ECI	Sample Received On.:	27.10.2023
Sample Collected Date.:	08.10.2023	Test Commenced On.:	27.10.2023
City of Sample Received.:	TL	Test Completed On.:	30.10.2023
Sample Description.:	Water	Sampling Method.:	IS 3025 Part 31
Sample Mark.:	T-Plant - Raw Water (CMR P)		

S.No.	PARAMETERS	UNIT	RESULT	TEST METHOD
1.	Ammonical Nitrogen (N)	mg/L	18.7	IS 3025 Part 34
2.	Arsenic (as As)	mg/L	NDL (DL = 0.01)	IS 3025 Part 37
3.	Bio chemical oxygen demand (BOD @ 20°C for 5 days)	mg/L	121	IS 3025 Part 44
4.	Boron (as B)	mg/L	+ 0.2	IS 3025 Part 37
5.	Calcium (as Ca)	mg/L	NDL (DL = 0.011)	IS 3025 Part 41
6.	Chemical Oxygen Demand (COD)	mg/L	818	IS 3025 Part 38
7.	Chloride (as Cl)	mg/L	3547	IS 3025 Part 32
8.	Copper (as Cu)	mg/L	NDL (DL = 0.01)	IS 3025 Part 42
9.	Cyanide (CN)	mg/L	+ 0.02	IS 3025 Part 37
10.	Fluoride (as F)	mg/L	0.47	IS 3025 Part 35
11.	Total Iron (as Fe)	mg/L	0.8	APHA 8000-Fe-C
12.	Hexavalent Chromium (as Cr ⁶⁺)	mg/L	+ 0.01	IS 3025 Part 33
13.	Lead (as Pb)	mg/L	NDL (DL = 0.01)	IS 3025 Part 47
14.	Manganese (Mn)	mg/L	NDL (DL = 0.011)	IS 3025 Part 46
15.	Nickel (as Ni)	mg/L	NDL (DL = 0.01)	IS 3025 Part 54
16.	Oil & Grease	mg/L	+ 1.8	IS 3025 Part 39
17.	Particle (Size of suspended solids)	mg/L	+ 850	APHA 20' Edition 2000 A Section
18.	Percent Solvent	%	28	IS 3025 Part 48
19.	Residual (Total)	mg/L	NDL (DL=0.000025)	USEPA

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Note: 1. The report valid only to the test items.

2. No correction will be made if any mistake has occurred.

3. Report shall not be reproduced or partially copied or full copy in the same format without the permission of the laboratory.

4. Unless informed by customer, the test result will not be returned for more than 15 days from date of issue of test report.

5. Total liability of our laboratory is limited to the amount charged.

6. Any dispute arising out of the report is referred to the nearest Arbitration Court.





TEST REPORT

Accredited by NABL (Chemical & Biological)

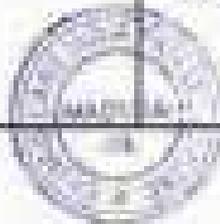
Report No: EC/WR/2023/10011				
21	Phosphate Compounds (as P_2O_5)	mg/L	< 0.001	IS 3025 Part 10
22	pH Value @ 25°C	—	8.2	IS 3025 Part 11
23	Phosphate (as PO_4)	mg/L	0.88	APHA22™ Color 4500 P-10
24	Residual Chlorine	mg/L	> 0.1	IS 3025 Part 20
24	Residual Sodium Carbonate	mg/L	13.1	IS 11024
25	Iron (as Fe)	mg/L	NDL (DL = 0.01)	IS 3025 Part 16
26	Sulphate (as SO_4^{2-})	mg/L	1741	IS 3025 Part 24
27	Sulphate (as SO_4)	mg/L	> 0.08	APHA22™ Color 4500 S-10
28	Temperature	°C	28	IS 3025 Part 08
29	Total Chlorine (as Cl)	mg/L	NDL (DL = 0.01)	IS 3025 Part 02
30	Total Dissolved Solids (TDS) @ 100°C	mg/L	1804	IS 3025 Part 18
31	Total Kjeldahl Nitrogen (N)	mg/L	65.8	APHA22™ 4000 Norg C
32	Total Suspended Solids (TSS) @ 105°C	mg/L	88	IS 3025 Part 17
33	Chlorine 20)	mg/L	NDL (DL = 0.01)	IS 3025 Part 40

NDL - Not Detectable Limit,
D.L - Detectable Limit

— End of Report —

Verified By :

Sethi



For ENVIRO CARE INDIA PRIVATE LIMITED
(Laboratory Director)

[Signature]
Authorized Signatory

843, 2nd Street, Harvey Nagar, Anandrad, Madurai - 625016 Tel: 0452-4308103
Email: info@envirocareindia.com | Web: www.envirocareindia.com

- Note:**
- The report is valid only for the parameters.
 - Any alteration in standard shall result in voiding the report.
 - Report shall not be reproduced anywhere without the prior written permission of the laboratory.
 - Unless informed by customer, the test items will not be repeated for more than 15 days from date of issue of test report.
 - Turnaround of our services is limited to the stated amount.
 - Any dispute arising out of this report is subject to National Arbitration Org.





TEST REPORT

Accredited by NABL | Chemical & Biological

Report No.	EC-IWA-2023/10012	Report Date	31.10.2023
Customer Name & Address	M/s. Essore Coal Terminal Pvt. Ltd Puduchiyamman Village Yallar Pook, Ponnampetala Thiruvananthapuram-695 120		
Customer Reference :	PO: 1986/ST/TA/03/24/095010014 Date: 28.10.2023	Sample Reference No.:	EC-IWA-2023/10012
Sample Drawn By:	ECI	Sample Received On:	27.10.2023
Sample Collected Date:	28.10.2023	Test Commenced On:	27.10.2023
Qty of Sample Received:	2 L	Test Completed On:	30.10.2023
Sample Description:	Water	Sampling Method:	IS: 3025 Part 03
Sample Mark:	Effluent Treated Water (Settling Pond)		

S.No	PARAMETERS	UNITS	RESULTS	TEST METHOD	Max. Permissible Limit of TSPCB for Treated Effluent
1.	Ammonical Nitrogen (N)	mg/L	3.7	IS: 3025 Part 34	50
2.	Arsenic (as As)	mg/L	NDL (DL = 0.01)	IS: 3025 Part 37	0.1
3.	Biochemical Oxygen Demand (BOD @ 20°C for 5 days)	mg/L	34	IS: 3025 Part 34	30
4.	Boron (as B)	mg/L	< 0.2	IS: 3025 Part 37	2.0
5.	Cadmium (as Cd)	mg/L	NDL (DL = 0.05)	IS: 3025 Part 41	0.1
6.	Chemical Oxygen Demand (COD)	mg/L	119	IS: 3025 Part 36	250
7.	Chlorides (Cl)	mg/L	303	IS: 3025 Part 32	1000
8.	Copper (as Cu)	mg/L	NDL (DL = 0.01)	IS: 3025 Part 42	3.0
9.	Cyanides (CN)	mg/L	< 0.08	IS: 3025 Part 27	0.3
10.	Fluoride (as F)	mg/L	0.12	IS: 3025 Part 30	2.0
11.	Total Arsenic (as As)	mg/L	< 1.0	APHA227/1000 Hg, C	0.0
12.	Total Lead Chromium (as Pb+Cr)	mg/L	< 0.01	IS: 3025 Part 52	0.1
13.	Lead (as Pb)	mg/L	NDL (DL = 0.01)	IS: 3025 Part 47	0.1
14.	Manganese (Mn)	mg/L	NDL (DL = 0.05)	IS: 3025 Part 48	0.05
15.	Nickel (as Ni)	mg/L	NDL (DL = 0.01)	IS: 3025 Part 38	1.0
16.	Oil & Grease	mg/L	< 1.0	IS: 3025 Part 39	10

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NOTE: 1. The report is valid only if the following conditions are met:

- The Collector (at client) did not tamper the report.
- Report must not be reproduced or printed without the permission of the laboratory.
- Results mentioned in customer's PO and report will not be released before the 24 days from date of receipt of test report.
- Alteration of test results is treated as the highest offence.
- Any dispute arising out of the report is referred to Technical Committee only.





TEST REPORT

Accredited by NABL | Chemical & Biological

Report No : ECI/IA/2024/0012					
17	Particle Size of suspended solids	mm	< 0.075	APHA 22°C Edition 2005 A Section	(that pass 600 Micron 1.0 liter)
18	Percent Soluble	%	22	IS 3025 Part 46	—
19	Residual Chlorine	mg/L	Free, 2.0-0.2 (excess)	IS 3025	600PA
20	pH Value @ 25°C	-	7.3	IS 3025 Part 11	6.5-8
21	Free Residual Chlorine (as Cl ₂)	mg/L	< 0.05	IS 3025 Part 43	1.0
22	Free Residual Chlorine (as FC ₂)	mg/L	< 0.1	APHA 22°C Edition 4500 P-1	1.0
23	Residual Chlorine	mg/L	< 0.1	IS 3025 Part 39	1.0
24	Residual Sodium Carbonate	mg/L	1.3	IS 11904	—
25	Iron (as Fe)	mg/L	NDL (DL = 0.3)	IS 3025 Part 55	0.05
26	Sulfate (as SO ₄ ²⁻)	mg/L	181	IS 3025 Part 24	100
27	Ammoniacal Nitrogen	mg/L	< 0.04	APHA 22°C Edition 4500 P-1.7	1.0
28	Temperature	°C	28	IS 3025 Part 36	40
29	Total Chlorine (as Cl ₂)	mg/L	NDL (DL = 0.2)	IS 3025 Part 52	1.0
30	Total Dissolved Solids (TDS) @ 100°C	mg/L	1000	IS 3025 Part 16	2100
31	Total Hardness (Temporary H)	mg/L	14.7	APHA 22°C Edition 4500 mg/L	100
32	Total Suspended Solids (TSS) @ 100°C	mg/L	28	IS 3025 Part 17	100
33	Chlorine D ₁₅	mg/L	NDL (DL = 0.01)	IS 3025 Part 40	1.0

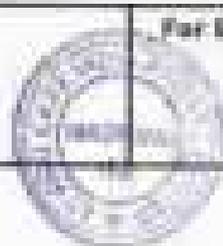
Opinion: The above sample meets the requirements of TNPDR norms with respect to the parameters tested.

NDL - Not Detectable Limit, DL - Detectable Limit

NA - Not Applicable

--- End of Report ---

Verified By: 

 For ENVIRO CARE INDIA PRIVATE LIMITED
(Laboratory Division)

Authorized Signatory

143, 2nd Street, Nallas Nagar, Anandnagar, Madurai - 625016 Tel: 0452-2551153

Email: info@envirocareindia.com | Web: www.envirocareindia.com

Note: 1. The results were only in this report.

2. Any Correction not allowed after invoice is raised.

3. Report is valid to be re-used for reference purpose only and is not valid for the same format without the permission of the laboratory.

4. Unless informed by customer, the test items will not be repeated for more than 15 days from date of issue of test report.

5. Total liability of our laboratory is limited to the invoice amount.

6. Any dispute arising out of this report is to be referred to Madurai Jurisdiction only.





TEST REPORT

Accredited by NABL (Chemical & Biological)

Report No.:	ECL-IAG-2023/11198		Report Date:	29.11.2023	
Customer Name & Address:	M/s. Eastern Coal Terminal Pvt. Ltd Purnachandrabh Villa, Kanki-Pura, Palmanjura, Thiruvananthapuram-695 128.				
Customer Reference 1:	PG-ENR45000ALU5-24000010074 Date: 28.08.2023	Sample Reference No.:	ECL-IAG-2023/11198		
Sample Given By:	MO	Sample Received On:	29.11.2023		
Sample Collected Date:	29.11.2023	Test Commenced On:	29.11.2023		
Qty of Sample Received:	Four Paper & 20ml bottles	Test Completed On:	29.11.2023		
Sample Description:	Ambient Air	Sampling Method:	IS 1182 Part 14		
Sample Mark:	Near Wing Project (STUB)				
S.No.	PARAMETERS	UNITS	RESULTS	TEST METHOD	Permissible limits of CPCB
1.	Acetone (as TMs)	ug/m ³	< 1.0	IS 1182 Method 0916	400
2.	Acetic (as Ac)	ug/m ³	< 0.1	IS 1182 Part 22	0.9
3.	Benzene (C ₆ H ₆)	ug/m ³	< 1.0	IS 1182 Part 11	0.9
4.	Benzene-Pyrene (BAP)	ug/m ³	< 1.0	IS 1182 Part 12	1.0
5.	Carbon Monoxide (as CO)	ug/m ³	< 1.2	IS 1182 Part 10	2.0
6.	Lead (as Pb)	ug/m ³	< 0.1	IS 1182 Part 23	1.0
7.	Nickel (as Ni)	ug/m ³	< 0.1	IS 1182 Part 23	0.1
8.	Nitrogen dioxide (as NO ₂)	ug/m ³	30.5	IS 1182 Part 08	0.1
9.	Ozone (as O ₃)	ug/m ³	< 0.0	IS 1182 Part 08	100
10.	Particulate Matter (PM ₁₀)	ug/m ³	28.2	IS 1182 Part 24	0.1
11.	Respirable Particulate Matter (PM _{2.5})	ug/m ³	0.8	IS 1182 Part 25	100
12.	Sulphur Dioxide (as SO ₂)	ug/m ³	0.4	IS 1182 Part 02	0.1
Options: In the above mentioned location meets the requirements of CPCB standards with respect to the parameters tested.					
--- End of Report ---					
Verified By: 				<p style="text-align: center;">ENVIRO CARE INDIA PRIVATE LIMITED (Laboratory Director)</p> <p style="text-align: center;"> Authorized Signatory</p>	

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Note: 1. The results shown are in our best interest.

2. Any correction requested shall invalidate this report.

3. Report shall not be considered as evidence unless it is used in the Enviro Care India without the participation of the laboratory.

4. Unless informed by customer, the test items will not be retained for more than 10 days from date of issue of this report.

5. Test results of our laboratory is limited to the specific request.

6. Any dispute arising out of this report is referred to National Metrology Day.





TEST REPORT

Accredited by NABL (Chemical & Biological)

Report No.:	ECI-AND-2023/11161	Report Date:	28.11.2023
Customer Name & Address:	Mrs. Suresh Coal Terminal Pvt. Ltd. Puduchattaram, Wazir, Cochar Post, Pudukottam, Thiruvellar District-605 110		
Customer Reference:	CO CHARCOAL QUALITY MONITORING Order No. 08 2023	Sample Reference No.:	ECI-AND-2023/11161
Sample Drawn By:	ECI	Sample Received On:	25.11.2023
Sample Collected Date:	24.11.2023	Test Commenced On:	25.11.2023
City of Sample Received:	Chennai	Test Completed On:	28.11.2023
Sample Description:	Airport Air	Sampling Method:	IS 5182 Part 14
Sample Mark:	None Mark Item		

S.No	PARAMETERS	UNITS	RESULTS	TEST METHOD	Permissible limits of CPCB
1	Arsenic (as As)	µg/m ³	< 1.0	IS 5182 Method 0015	100
2	Arsenic (as As)	µg/m ³	< 0.5	IS 5182 Part 20	0.5
3	Beryllium (Be)	µg/m ³	< 1.0	IS 5182 Part 11	0.5
4	Benzene-a-Pyrene (BaP)	µg/m ³	< 1.0	IS 5182 Part 12	1.0
5	Carbon Monoxide (as CO)	µg/m ³	< 1.2	IS 5182 Part 08	2.0
6	Cadmium (as Cd)	µg/m ³	< 0.1	IS 5182 Part 20	1.0
7	Cadmium (as Cd)	µg/m ³	< 0.1	IS 5182 Part 22	20
8	Chlorine Dioxide (as ClO ₂)	µg/m ³	21.0	IS 5182 Part 06	50
9	Chlorine (as Cl ₂)	µg/m ³	< 0.8	IS 5182 Part 06	100
10	Particulate Matter (PM ₁₀)	µg/m ³	88.3	IS 5182 Part 04	60
11	Resuspendible Particulate Matter (PM ₁₀)	µg/m ³	80.0	IS 5182 Part 05	100
12	Sulphur Dioxide (as SO ₂)	µg/m ³	6.7	IS 5182 Part 04	60

Opinion: In the above mentioned location does not meet the requirements of CPCB standards with respect to the parameters listed.

Dr. S. SURESH



ENVIRO CARE INDIA PRIVATE LIMITED
(Laboratory Division)

S. Suresh
Authorized Signatory

Verified By: *[Signature]*

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Email: info@envirocareindia.com | Web: www.envirocareindia.com

- Note:**
- The results relate only to the item tested.
 - Any Commissioned test should read instructions provided.
 - Report shall not be reproduced elsewhere except in full and in the same format without the permission of the laboratory.
 - Labels provided by customer, the test items will not be returned for reuse. The 10 days from date of issue of report.
 - Lead validity of our laboratory is limited to the current session.
 - Any dispute arising out of the report is submitted to the local jurisdiction only.





TEST REPORT

Accredited by NABL (Chemical & Biological)

Report No:	EC-AAA-20231115B	Report Date:	25.11.2023
Customer Name & Address:	M/s. Enviro Coal Terminal Pvt. Ltd Puduchukulam Village, Vishu Post, Tirumala, Thiruvallur District-602 028.		
Customer Reference:	CO TERMINAL/03/2023/0074 Date: 25.09.2023	Sample Reference No:	EC-AAA-20231115B
Sample Given By:	ECI	Sample Received On:	25.11.2023
Sample Collected Date:	24.11.2023	Test Commenced On:	25.11.2023
Day of Sample Received:	Four Days & 20th October	Test Completed On:	25.11.2023
Sample Description:	Ambient Air	Sampling Method:	IS 5182 Part 14
Sample Mark:	New Station		

S No	PARAMETERS	UNITS	RESULTS	TEST METHOD	Permissible limits of CPCB
1	Ambient (as TSP)	µg/m ³	< 1.0	IS 5182 Method 0015	400
2	Ambient (as AQ)	µg/m ³	< 0.1	IS 5182 Part 21	4.0
3	Respirable (C _{PM10})	µg/m ³	< 1.0	IS 5182 Part 11	5.0
4	Respirable (D _{PM10})	µg/m ³	< 1.4	IS 5182 Part 12	1.8
5	Carbon Monoxide (as CO)	µg/m ³	< 1.2	IS 5182 Part 15	2.8
6	Lead (as Pb)	µg/m ³	< 0.1	IS 5182 Part 22	1.8
7	Nickel (as Ni)	µg/m ³	< 0.1	IS 5182 Part 23	20
8	Nitrogen dioxide (as NO ₂)	µg/m ³	17.3	IS 5182 Part 08	80
9	Ozone (as O ₃)	µg/m ³	< 0.4	IS 5182 Part 09	180
10	Particulate Matter (PM ₁₀)	µg/m ³	22.2	IS 5182 Part 04	80
11	Respirable Particulate Matter (PM _{2.5})	µg/m ³	15.9	IS 5182 Part 10	100
12	Sulphur Dioxide (as SO ₂)	µg/m ³	0.1	IS 5182 Part 07	80

Operator: In the above mentioned location does not meet the requirements of CPCB standards with respect to the parameters listed.

--- End of Report ---

Verified By:  **ENVIRO CARE INDIA PRIVATE LIMITED**
Laboratory Director

Authorized Signatory



803, 2nd Street, Harvey Nagar, Anasarak, Madurai - 625016 Tel: 0452 4355103

Email: lab@envirocareindia.com | Web: www.envirocareindia.com

Note: 1. The results valid only in the form issued.

2. Any Correction and alteration should be made on the report.

3. Report should not be reproduced anywhere except in full and in the same format without the permission of the laboratory.

4. Unless otherwise specified, all test items will not be accepted for more than 15 days from date of issue of test report.

5. Total liability of our laboratory is limited to the invoice amount.

6. Any dispute arising out of this report is referred to National Consumer Drg.





TEST REPORT

Accredited by NABL (Chemical & Biological)

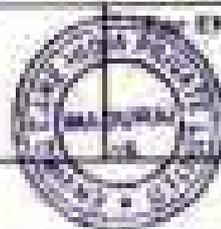
Report No.:	131A02-2023-1118	Report Date:	26.11.2023
Customer Name & Address:	M/s. Laxmi Coal Terminal Pvt. Ltd. Palla, Boudhal, Village, Vijayapur, Kamakhya, Thiruvananthapuram-700 128		
Customer Reference:	NO. 131A02/2023-1118	Sample Reference No.:	131A02-2023-1118
Sample Taken By:	ED	Sample Received On:	26.11.2023
Sample Collected Date:	24.11.2023	Test Commenced On:	26.11.2023
City of Sample Received:	Vijayapur & Boudhal	Test Completed On:	26.11.2023
Sample Description:	Airport Air	Sampling Method:	IS 5182 Part 11
Sample Mark:	None Not Marked		

S.No	PARAMETERS	UNITS	RESULTS	TEST METHOD	Permissible limits of CPCB
1	Aerosols (as TSP)	µg/m ³	< 1.0	IS 5182 Part 20	400
2	Aerosols (as PM ₁₀)	µg/m ³	< 0.1	IS 5182 Part 20	500
3	Aerosols (as PM _{2.5})	µg/m ³	< 1.0	IS 5182 Part 11	500
4	Aerosols (as SO ₂)	µg/m ³	< 1.0	IS 5182 Part 12	1.0
5	Carbon Monoxide (as CO)	µg/m ³	< 1.0	IS 5182 Part 13	2.0
6	Lead (as Pb)	µg/m ³	< 0.1	IS 5182 Part 21	1.0
7	Nickel (as Ni)	µg/m ³	< 0.1	IS 5182 Part 22	20
8	Mercury (as Hg) (as Hg ₂)	µg/m ³	20.4	IS 5182 Part 26	50
9	Cadmium (as Cd)	µg/m ³	< 0.8	IS 5182 Part 25	100
10	Particulate Matter (PM ₁₀)	µg/m ³	28.3	IS 5182 Part 24	100
11	Respirable Particulate Matter (PM _{2.5})	µg/m ³	26.6	IS 5182 Part 23	100
12	Sulphur Dioxide (as SO ₂)	µg/m ³	6.9	IS 5182 Part 20	100

Observation: In the above mentioned location does not meet the requirements of CPCB standards with respect to the parameters listed.

End of Report

Verified By:



ENVIRO CARE INDIA PRIVATE LIMITED
(Laboratory Division)

Authorized Signatory

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Email: lab@envirocareindia.com | Web: www.envirocareindia.com

Note: 1. The results relate only to the item tested.

2. Any Certificate not attached shall invalidate the report.

3. Report shall not be re-analyzed anywhere except in lab and in the same format without the permission of the laboratory.

4. Unless otherwise specified, the test items will not be analyzed for more than 10 days from date of issue of test report.

5. ISO facility of our laboratory is limited to the above amount.

6. Any dispute arising out of this report is subjected to Madurai Jurisdiction Only.





TEST REPORT

Accredited by NABL (Chemical & Biological)

Report No.:	JCC/AM/2023/1198	Report Date:	28-11-2023
Customer Name & Address:	M/s. Shree Car Terminal Pvt. Ltd Purushotham Nagar Vijayapur, Hampi Rd Thiruvananthapuram, India		
Customer Reference:	PO-ENVIRO/CAL/23/1198/01/01/19 Date: 28.11.2023	Sample Reference No.:	JCC/AM/2023/1198
Sample Description:	Water	Monitoring Date:	24-11-2023
Monitored By:	PO	Date Received On:	28-11-2023

S. No.	Locations	Day Time	
		Minimum	Maximum
1	Near CTD	82.8	83.7
Unit		dB (A)	
TMOQS Max. Permissible Limit for Day Time (Industrial Area)		75	
Reference Method		IS: 3999	

Options: In the above mentioned locations meet the requirements of TMOQS norms

--- End of Report ---

Verified By



FOR ENVIRO CARE INDIA PRIVATE LIMITED
(Laboratory Division)

Authorized Signatory

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Email: info@envirocareindia.com | Web: www.envirocareindia.com

Note: 1. The results relate only to the test listed

2. Any conditions not stated shall prevail the report

3. Report shall not be reissued/ corrected/ added to it, and in the event found without the permission of the laboratory

4. Charges referred by customer, the test items will not be returned for more than 15 days from date of issue of test report

5. Total liability of our laboratory is limited to the invoice amount

6. Any breach arising out of this report is subjected to Mutual Jurisdiction Only





TEST REPORT

Accredited by NABL (Chemical & Biological)

Report No.:	EC/188/2023/11487	Report Date:	29.11.2023
Customer Name & Address:	M/s. Enviro Care Thermal Pvt. Ltd Punthiyakudi Village Highway, Ponnaiyur Taluk Thiruvallur District 600 102		
Customer Reference:	PT. 1, NINCHANALU, PAMBEVILAI Dist: TN, Dt: 2023	Sample Reference No.:	EC/188/2023/11487
Sample Description:	Water	Monitoring Date:	29.11.2023
Method used:	DO	Date Reported On:	29.11.2023
S. No.	Location	Night Time	
		Minimum	Maximum
1	Point-07B	18.8	20.7
DO		18 (A)	
THPQS Max. Permissible Limit for Night Time (Subsided Area)		15	
Reference Method		IS 3043	
<p>Signature: _____ is the above mentioned results from the requirements of THPQS standards.</p> <p style="text-align: center;">--- End of Report ---</p>			
verified by		 For ENVIRO CARE INDIA PRIVATE LIMITED Laboratory Operator  Authorized Signatory	

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- Notes:**
- The results apply only to the test tested.
 - Any correspondence should direct to the report.
 - Report shall not be reproduced anywhere except in full and in the same format without the permission of the laboratory.
 - Consent obtained by customer, the test items will not be returned for more than 10 days from date of issue of test report.
 - Test report of test reworking is issued to the correct product.
 - Any dispute arising out of the report is subjected to Madurai jurisdiction only.





TEST REPORT

Accredited by NABL (Chemical & Biological)

Report No.:	EC/004/2023/11288	Report Date:	06/11/2023
Customer Name & Address	M/s. Brijraj Coal Terminal Pvt. Ltd Purhatkhasan Village, Wardha Road, Pimpri Taluka, Thane District-400120		
Customer Reference:	PO E NM/00042/23-Subcontractors Date:04.08.2023	Sample Reference No.:	EC/004/2023/11288
Sample Order No.:	012	Sample Received On:	07/11/2023
Sample Collected Date:	05/11/2023	Test Commenced On:	07/11/2023
Qty of Sample Received:	1 Sample & 04 ml Sam	Test Completed On:	08/11/2023
Sample Description:	Stack	Sampling Method:	IS 11295 Part 1
Sample Mark:	02, 03, 04, 05 (04m Upstack) : 2, 3, 4, 5, 6, 7, 8, 9, 10		

S.No	PARAMETERS	UNITS	RESULTS	TEST METHOD	Max. Permissible TSPCB limits for General Emission Standards
1	Ambient Temperature	°C	30	IS 11295 Part 02	NA
2	Carbon dioxide (as CO ₂)	% (v/v)	0.3	IS 11277	NA
3	Carbon Monoxide (as CO)	% (v/v)	0.2	IS 11279	1.0
4	Flow rate	litre/hr	654	IS 11295 Part 03	NA
5	Flow line velocity	m/sec	18.9	IS 11295 Part 03	NA
6	Concns of Nitrogen (as NO _x)	mg/m ³	52.3	IS 11295 Part 07	NA
7	Oxygen (as O ₂)	% (v/v)	17.9	IS 11278	NA
8	Particulate Matter (PM ₁₀)	mg/m ³	190.2	IS 11295 Part 01	150
9	Stack hole Height from G Level	m	10.0	—	NA
10	Stack Diameter at port hole	m	0.75	—	NA
11	Stack Height from G Level	m	12.0	—	NA
12	Stack Temperature	°C	173	IS 11295 Part 03	NA
13	Sulphur Dioxide (as SO ₂)	mg/m ³	21.5	IS 11295 Part 02	NA

Operator: In the above mentioned Parameter, marks the requirements of TSPCB standards.
NA = Not Applicable

— End of Report —

Verified By:



ENVIRO CARE INDIA PRIVATE LIMITED
(Laboratory Division)

(Signature)
Authorized Signatory

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Email: lab@envirocareindia.com | Web: www.envirocareindia.com

Note: 1. The results relate only to the item tested.

2. Any discrepancy has already been resolved in this report.

3. Report shall not be reproduced, republished, copied or sold and in the public domain without the permission of the laboratory.

4. Quotas claimed by customer, the test items will not be restricted to more than 15 days from date of issue of test report.

5. TSPCB having direct laboratory is linked to the results issued.

6. Any dispute arising out of this report is subjected to the local jurisdiction only.





TEST REPORT

Accredited by NABL (Chemical & Biological)

Report No.:	CC-084-2023/11001	Report Date:	08-11-2023
Customer Name & Address:	M/s. Enviro Coal Terminal Pvt. Ltd. Puducherry/Andhra Village, Jadav Road - Ponnur Taluk, Thiruvallur District-605120		
Customer Reference:	PO 12861212345678-200250210076 Date:25.08.2023	Sample Reference No.:	CC-084-2023/11001
Sample Given By:	CC	Sample Received On:	27-11-2023
Sample Collected Date:	08-11-2023	Test Commenced On:	27-11-2023
City of Sample Received:	Thiruvallur & 100 m South	Test Completed On:	30-11-2023
Sample Description:	Stack	Sampling Method:	IS 11755 Part 1
Sample Mark:	PO 12861212345678 - Sample/Drawer		

S No	PARAMETERS	UNITS	RESULTS	TEST METHOD	Max. Permissible TSPCM levels for Central Pollution Standards
1	Ambient Temperature	°C	33	IS 11755 Part 03	NA
2	Carbon dioxide (as CO ₂)	% (v/v)	0.4	IS 12076	NA
3	Carbon Monoxide (as CO)	% (v/v)	0.0	IS 12076	1.0
4	Flow rate	m ³ /hr	8.76	IS 11755 Part 03	NA
5	Flue gas velocity	m/sec	19.4	IS 11755 Part 03	NA
6	Concentration of Hydrogen (as H ₂)	mg/m ³	0.1	IS 11755 Part 07	NA
7	Oxygen (as O ₂)	% (v/v)	14.8	IS 12076	NA
8	Particulate Matter (PM)	mg/m ³	78.2	IS 11255 Part 01	150
9	Port hole height from G Level	m	9.8	---	NA
10	Stack Diameter at port hole	m	0.00	---	NA
11	Stack Height from G Level	m	9.8	---	NA
12	Stack Temperature	°C	125	IS 11755 Part 03	NA
13	Sulphur Dioxide (as SO ₂)	mg/m ³	0.1	IS 11755 Part 02	NA

Comments: In the above mentioned stack from the requirements of TSPCM standards will referred to the air quality level
NA - Not Feasible

--- End of Report ---

ENVIRO CARE INDIA PRIVATE LIMITED
(Laboratory Division)

(Signature)
Authorized Signatory

Verified by: *(Signature)*



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- Note:**
- The results given are on the basis of test.
 - Any Correction has entered shall invalidate the report.
 - Report shall not be reworked anywhere except in lab and at the same level without the permission of the laboratory.
 - Unless returned by customer, the test items will not be returned for more than 15 days from date of issue of test report.
 - Test facility of our laboratory is limited to the ground level.
 - Any dispute arising out of the report is subjected to Mutual Jurisdiction Only.





TEST REPORT

Accredited by NABL (Chemical & Biological)

Report No:	ECO-SM-2023-11000	Report Date:	28/11/2023		
Customer Name & Address:	M/s. Enviro Care Thermal Pvt. Ltd Pulsar, Akshay Vihar, Vijay Vihar, Patna-800 004, Bihar, India-800 004				
Customer Reference:	PO 02803004 028 04-08-2023 Date: 08.08.2023	Sample Reference No.:	ECO-SM-2023-11000		
Sample Drawn By:	ECG	Sample Received On:	27/11/2023		
Sample Collected Date:	24/11/2023	Test Commenced On:	27/11/2023		
City of Sample Received:	Patna-800 004	Test Completed On:	28/11/2023		
Sample Description:	Stack	Sampling Method:	IS 11255 Part 3		
Sample Mark:	ECO-401 PVA (General Stack) - General Check				
S.No.	PARAMETERS	UNITS	RESULTS	TEST METHOD	Max. Permissible THPOB Limits for General Emission Standards
1	Ambient Temperature	°C	27	IS 11255 Part 03	NA
2	Carbon Dioxide (as CO ₂)	% (v/v)	0.4	IS 11255	NA
3	Carbon Monoxide (as CO)	% (v/v)	0.2	IS 11255	1.0
4	Flue rate	kg/hr	446	IS 11255 Part 03	NA
5	Flue Gas Velocity	m/sec	8.8	IS 11255 Part 03	NA
6	Concentration of Nitrogen (as NO _x)	mg/m ³	55.8	IS 11255 Part 03	NA
7	Oxygen (as O ₂)	% (v/v)	18.2	IS 11255	NA
8	Particulate Matter (PM ₁₀)	mg/m ³	83.4	IS 11255 Part 03	150
9	Flue Gas Height from G Level	m	5.0	---	NA
10	Stack Diameter at exit level	m	0.75	---	NA
11	Stack Height from G Level	m	7.0	---	NA
12	Stack Temperature	°C	116	IS 11255 Part 03	NA
13	Sulphur Dioxide (as SO ₂)	mg/m ³	0.2	IS 11255 Part 03	NA
<p>Disclaimer: In the above mentioned stack meets the requirements of THPOB standards with respect to the parameters listed here - Not Applicable</p>					
<p>--- End of Report ---</p>					
<p>FOR ENVIRO CARE INDIA PRIVATE LIMITED (Laboratory Division)</p> <p><i>(Signature)</i> Authorized Signatory</p>					
<p>Verified By: <i>(Signature)</i></p>					

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Notes: 1. The results given only in this form listed.

2. Any discrepancy not allowed shall invalidate this report.

3. Report shall not be re-issued/ amended except in SR and in the same format without the permission of the laboratory.

4. Unless informed by customer, the test results will not be returned for more than 30 days from date of issue of test report.

5. Total liability of our laboratory is limited to the invoice amount.

6. Any dispute arising out of this report is subjected to Mutual Concurrence Only.





TEST REPORT

Accredited by NABL | Chemical & Biological |

Report No.:	EO-549/2023/1290	Report Date:	26/11/2023
Customer Name & Address:	M/s. Enviro Coal Terminal Pvt. Ltd Puthulivattam Village, Vellore Road, Perambalur, Thiruvallur District-605 120.		
Customer Reference:	PO 4180004/23-2400000004 (Date: 25.09.2023)	Sample Reference No.:	EO-549/2023/1290
Sample Taken By:	SC	Sample Received On:	27/11/2023
Sample Collected Date:	25/11/2023	Test Commenced On:	27/11/2023
Qty of Sample Received:	Thirteen (13) m³ Sack	Test Completed On:	28/11/2023
Sample Description:	Sack	Sampling Method:	IS: 11255 Part 1
Sample Mark:	CO 480 IVA (Sub Sample) (- 08mm(25mm))		

S.No.	PARAMETERS	UNITS	RESULTS	TEST METHOD	Max. Permissible TSPCB norms for General Emission Standards
1	Ambient Temperature	°C	32	IS 11255 Part 03	NA
2	Carbon dioxide (as CO ₂)	% by vol	8.4	IS 12716	NA
3	Carbon Monoxide (as CO)	% by vol	0.5	IS 12716	1.0
4	Flow rate	m ³ /hr	478	IS 11255 Part 03	NA
5	Flue Gas velocity	m/sec	12.7	IS 11255 Part 03	NA
6	Oxide of Nitrogen (as NO _x)	mg/Nm ³	52.2	IS 11255 Part 07	NA
7	Oxygen (as O ₂)	% by vol	17.5	IS 12716	NA
8	Particulate Matter (PM)	mg/Nm ³	129.6	IS 11255 Part 01	150
9	Port hole Height from G Level	m	3.3	---	NA
10	Stack Diameter of port hole	m	0.15	---	NA
11	Stack Height from G Level	m	2.3	---	NA
12	Stack Temperature	°C	136	IS 11255 Part 03	NA
13	Sulphur Dioxide (as SO ₂)	mg/Nm ³	16.2	IS 11255 Part 02	NA

Operator: In the above mentioned stack items the requirements of TSPCB standards with respect to the parameters tested
NA – Not Applicable

--- End of Report ---

Verified By: 		For ENVIRO CARE INDIA PRIVATE LIMITED (Laboratory Division)
		 Authorized Signatory

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Note: 1. The results apply only to the test tested.

2. Any Commission not stated shall constitute the agent.

3. Report shall not be reproduced or printed, copied, or used in any other form without the permission of the Laboratory.

4. Errors inherent in sampling, the test items will not be covered by this report. To assess both sides of issues of test report.

5. Good quality of test reagents is essential to the accurate process.

6. Any dispute arising out of this report is subjected to Madurai Jurisdiction Only.





TEST REPORT

Accredited by NABL (Chemical & Biological)

Report No.:	EC-IWA-2025/1081	Report Date:	30/11/2025	
Customer Name & Address:	M/s. Eenvore Coal Terminal Pvt. Ltd Puduphikalam Village Kadla Road, Ponnasala Thiruvallur District-600 120			
Customer Reference:	PO: 18800004073-04/08/2025 Date:26.08.2025	Sample Reference No.:	EC-IWA-2025/1081	
Sample Drawn By:	ECI	Sample Received On:	27/11/2025	
Sample Collected Date:	25/11/2025	Test Commenced On:	27/11/2025	
Qty of Sample Received:	2L	Test Completed On:	30/11/2025	
Sample Description:	Water	Sampling Method:	IS 3025 Part 01	
Sample Mark:	CR/Lake /Run Water (Catch Pt)			
S.No	PARAMETERS	UNITS	RESULTS	TEST METHOD
1	Ammoniacal Nitrogen (N)	mg/L	15.4	IS 3025 Part 24
2	Arsenic (as As)	mg/L	NDL (DL = 0.01)	IS 3025 Part 37
3	Oil chemical oxygen demand (COD @ 27°C for 3 days)	mg/L	193	IS 3025 Part 44
4	Stront (as Sr)	mg/L	< 0.2	IS 3025 Part 57
5	Cadmium (as Cd)	mg/L	NDL (DL = 0.001)	IS 3025 Part 41
6	Chemical Oxygen Demand (COD)	mg/L	188	IS 3025 Part 58
7	Chlorides (as Cl)	mg/L	3800	IS 3025 Part 32
8	Copper (as Cu)	mg/L	NDL (DL = 0.01)	IS 3025 Part 42
9	Cyanide (as CN)	mg/L	< 0.02	IS 3025 Part 27
10	Fluoride (as F)	mg/L	0.58	IS 3025 Part 60
11	Free Ammonia (as NH ₃)	mg/L	4.7	APHA 2017 edn 454, C
12	Hexavalent Chromium (as Cr ⁶⁺)	mg/L	< 0.01	IS 3025 Part 54
13	Lead (as Pb)	mg/L	NDL (DL = 0.01)	IS 3025 Part 47
14	Manganese (mg)	mg/L	NDL (DL = 0.01)	IS 3025 Part 48
15	Nickel (as Ni)	mg/L	NDL (DL = 0.01)	IS 3025 Part 50
16	Oil & Grease	mg/L	< 1.0	IS 3025 Part 39
17	Particle Size of suspended solids	µm(µm)	< 500	APHA 2017 edn 200 A Section
18	Percent Solvent	%	01	IS 3025 Part 45
19	Residue (Total)	mg/L	NDL (DL=0.000010)	US EPA

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Notes: 1. The results valid only if the sign is filled.

2. Any correction and amended shall mention the report.

3. Report shall not be reproduced, republished, copied or full and in the same format without the permission of the laboratory.

4. Where informed by customer, the test items will not be returned to client. We copy the results of result of test report.

5. Total liability of our laboratory is limited to the amount of amount.

6. Any dispute arising out of this report is subjected to Madurai jurisdiction only.





TEST REPORT

Accredited by NABL (Chemical & Biological)

Sample No. / Description			
01	Ammonia Nitrogen (as Nitrogen)	mg/L	11.001
02	Ammonia (as NH ₃)	mg/L	8.0
03	Ammonia (as NH ₄ ⁺)	mg/L	0.76
04	Ammonia Nitrate	mg/L	4.0
05	Ammonia Nitrite	mg/L	14.2
06	Ammonia (as N)	mg/L	828.00 ± 0.01
07	Ammonia (as N) - I	mg/L	10.75
08	Ammonia (as N) - II	mg/L	1.034
09	Ammonia (as N)	°C	26
10	Total Ammonia (as N)	mg/L	828.00 ± 0.00
11	Total Ammonia Nitrate (as N)	mg/L	100.04
12	Total Ammonia Nitrite (as N)	mg/L	82.1
13	Total Ammonia Nitrogen (as N)	mg/L	100
14	Ammonia (as N)	mg/L	828.00 ± 0.01

Remarks : NH₃ - Nitrite (Ammonia Nitrite)
N-L - Denitrified Nitrite

*** End of Report ***

Verified by:



ENVIRO CARE INDIA PRIVATE LIMITED
(Laboratory Division)
Authorized Signatory:

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Notes: 1. The results shown are for the sample tested.

2. Any Correction for dilution shall accompany this report.

3. Report shall not be reprinted and any errors noticed in the report shall be corrected without the permission of the laboratory.

4. Labels returned by customer, after test, should not be re-used for more than 10 days from date of receipt of test report.

5. Total liability of our laboratory is limited to the original amount.

6. Any dispute arising out of this report is subject to Madurai jurisdiction only.





TEST REPORT

Accredited by NABL (Chemical & Biological)

Report No.:	EC/MA/2023/1029	Report Date:	30/11/2023
Customer Name & Address:	M/s. Enviro Coat Terminal Pvt. Ltd Muthukrishnan Village, Vandalur Post, Perambalur, Tamil Nadu - 626600 INDIA		
Customer Reference No.:	PO: 21867CC0L33340000180419 Date: 29.08.2023	Sample Reference No.:	EC/MA/2023/1029
Sample Taken By:	CCJ	Sample Received On:	27/11/2023
Sample Collected Date:	26/11/2023	Test Commenced On:	27/11/2023
Qty of Sample Received:	2L	Test Completed On:	30/11/2023
Sample Description:	Water	Sampling Method:	IS 3025 Part 31
Sample Mark:	C/Plant Treated Water (Drinking Purch)		

S.No	PARAMETERS	UNITS	RESULTS	TEST METHOD	Max. Permissible Limits of TSPCR for Treated Effluent
1	Ammonical Nitrogen (as N)	mg/L	0.8	IS 3025 Part 34	50
2	Alkalinity (as Ca)	mg/L	825 (DL = 0.07)	IS 3025 Part 37	0.2
3	Bio-chemical Oxygen Demand (BOD @ 20°C for 5 days)	mg/L	18	IS 3025 Part 40	30
4	Boron (as B)	mg/L	< 0.2	IS 3025 Part 51	0.1
5	Calcium (as Ca)	mg/L	825 (DL = 0.07)	IS 3025 Part 41	0.1
6	Chemical Oxygen Demand (COD)	mg/L	120	IS 3025 Part 38	250
7	Chloride (as Cl)	mg/L	564	IS 3025 Part 32	1000
8	Copper (as Cu)	mg/L	825 (DL = 0.01)	IS 3025 Part 42	1.0
9	Cyanide (as CN)	mg/L	< 0.02	IS 3025 Part 27	0.3
10	Fluoride (as F)	mg/L	0.18	IS 3025 Part 50	1.0
11	Free Ammonia (as NH ₃)	mg/L	< 1.0	APHA21 st 8000 NH ₃ C	5.0
12	Hexavalent Chromium (as Cr ⁶⁺)	mg/L	< 0.01	IS 3025 Part 52	0.1
13	Lead (as Pb)	mg/L	825 (DL = 0.01)	IS 3025 Part 47	0.1
14	Mercury (as Hg)	mg/L	825 (DL = 0.01)	IS 3025 Part 48	0.01
15	Nickel (as Ni)	mg/L	825 (DL = 0.01)	IS 3025 Part 54	0.1
16	Oil & Grease	mg/L	< 1.0	IS 3025 Part 56	10

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- Note:**
- The results given only to the test tested.
 - The Customer will ensure that samples are fresh.
 - Report shall not be considered as correct until all data is the same format without any correction of the laboratory.
 - Labels furnished by customer, the test shall not be returned for reuse. The 15 days validity of report shall apply.
 - The validity of test laboratory is limited to the scope shown.
 - The Client being out of the scope is subjected to national jurisdiction only.





TEST REPORT

Accredited by NABL (Chemical & Biological)

Report No: EC/MS/2021/082				
Sl. No	Parameter Name / Parameter Code	Unit	Value	IS 3025 Part No / Method / IS Norm
18	Carbon Content	%	21	IS 3025 Part 46
19	Chlorine Total	mg/L	MS-25 - 0.0000%	US EPA
20	Chloride (as Cl ⁻)	-	78	IS 3025 Part 11
21	Fluoride (as F ⁻)	mg/L	< 0.001	IS 3025 Part 63
22	Free Chlorine (as FC)	mg/L	< 0.1	APHA 2131 Chlorine DPD
23	Residual Chlorine	mg/L	< 0.1	IS 3025 Part 26
24	Residual Sodium Carbonate	mg/L	1.7	IS 11034
25	Iron (as Fe)	mg/L	MS-25 - 0.01%	IS 3025 Part 56
26	Sulphate (as SO ₄ ²⁻)	mg/L	102	IS 3025 Part 24
27	Sulphate as H ₂ S	mg/L	< 0.001	APHA 2107 Color 4500 S ²⁻
28	Temperature	°C	26	IS 3025 Part 06
29	Total Chromium (as Cr)	mg/L	MS-25 - 0.01%	IS 3025 Part 50
30	Total Dissolved Solids (TDS) (g/l @ 180°C)	mg/L	1108	IS 3025 Part 16
31	Total Hardness (Temporary H ₂)	mg/L	17.8	APHA 2101 Hardness C
32	Total Suspended Solids (TSS) (g/l @ 100°C)	mg/L	40	IS 3025 Part 17
33	Zinc (as Zn)	mg/L	MS-25 - 0.01%	IS 3025 Part 41

Opinion: The above analysis meets the requirements of TMDL norms with respect to the parameters listed.
 DL - Drinking Water Limit, TL - Tolerable Limit
 NA - Not Applicable

--- End of Report ---

For ENVIRO CARE INDIA PRIVATE LIMITED
(Laboratory Director)

[Signature]
Authorized Signatory



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- Notes:**
- The above results apply to the items tested.
 - Any Consumer has obtained shall maintain file record.
 - Report shall not be reproduced anywhere without the consent of the laboratory.
 - Orders informed by customer, the test items will not be released for more than 10 days from date of issue of test report.
 - Responsibility of the laboratory is limited to the tested samples.
 - Any further enquiry on this report is subjected to the lab's jurisdiction only.





TEST REPORT

Accredited by NABL (Chemical & Biological)

Report No.:	ET-WA-202311080	Report Date:	30.11.2023	
Customer Name & Address:	M/s. Sreeva Coal Terminal Pvt. Ltd Puthuvayalpet Village Vellore Road, Palani City Tirunelveli District 626 133			
Customer Reference:	PO-ETWAC/COAL/03-240000010074 Date:28.05.2023	Sample Reference No.:	023-WA-202311080	
Sample Drawn By:	SD	Sample Received On:	27.11.2023	
Sample Collected Date:	26.11.2023	Test Commenced On:	27.11.2023	
City of Sample Received:	23	Test Completed On:	28.11.2023	
Sample Description:	Water	Sampling Method:	IS:3025-Part 21	
Sample Mark:	Ground Water at Each Tank (Parameter list as per IS:3025)			
S.No.	PARAMETERS	UNITS	RESULTS	TEST METHOD
1.	Appearance	—	Clear	IS:3025
2.	Alkalinity (as Ca)	mg/L	125 (CL + 0.01)	IS:3025 Part 27
3.	Calcium (as Ca)	mg/L	55 (CL + 0.01)	IS:3025 Part 41
4.	Calcium (as Ca)	mg/L	264	IS:3025 Part 42
5.	Carbonate hardness (as CaCO ₃)	mg/L	248	IS:3025 Part 21
6.	Chloride (Cl)	mg/L	196	IS:3025 Part 32
7.	Color	Pt-Co	< 1.0	IS:3025 Part 24
8.	Electrical Conductivity (EC) @ 25°C	µmhos/cm	3285	IS:3025 Part 14
9.	Iron (as Fe)	mg/L	0.03	IS:3025 Part 33
10.	Lead (as Pb)	mg/L	ND (CL + 0.01)	IS:3025 Part 47
11.	Magnesium (as Mg)	mg/L	61	IS:3025 Part 49
12.	Manganese (Mn)	mg/L	ND (CL + 0.01)	IS:3025 Part 48
13.	Non-Carbonate hardness (as CaCO ₃)	mg/L	264	IS:3025 Part 21
14.	Odor	—	Absent	IS:3025 Part 55
15.	pH value @ 25°C	—	7.3	IS:3025 Part 11
16.	Fluoride (as F)	mg/L	ND	IS:3025 Part 23
17.	Residual Chlorine (as Cl ₂)	mg/L	0.1	IS:3025 Part 35

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- Note:**
- The results relate only to the test tested.
 - Any Customer has observed clear deviations this report.
 - Report shall not be considered as evidence unless it is read in the same context without the permission of the laboratory.
 - Unless otherwise by customer, the test result will not be returned for more than 15 days from date of issue of this report.
 - Lead validity of our sampling is limited to five working days.
 - Any dispute arising out of this report is subjected to Internal Jurisdiction Only.





TEST REPORT

Accredited by NABL (Chemical & Biological)

Report No: EC-WA-2023/11022

18.	Residual Chlorine	mg/L	> 0.1	IS 3025 Part 28
19.	Residual Free Chlorine (RFC)	mg/L	> 0.1	IS 3025 Part 28
20.	Sulphates (as SO ₄)	mg/L	270	IS 3025 Part 24
21.	Total Alkalinity (as CaCO ₃)	mg/L	340	IS 3025 Part 23
22.	Total Dissolved Solids (TDS) @ 185°C	mg/L	2120	IS 3025 Part 18
23.	Total Hardness (as CaCO ₃)	mg/L	770	IS 3025 Part 21
24.	Total Suspended Solids (TSS) @ 100°C	mg/L	< 1.0	IS 3025 Part 17
25.	Turbidity	NTU	< 0.5	IS 3025 Part 16

Remarks : FC - Below Detectable Limit,
TC - Detectable Limit

— End of Report —

Verified By 



For **ENVIRO CARE INDIA PRIVATE LIMITED**
(Laboratory Division)


Authorized Signatory

843, 2nd Street, Harvey Nagar, Anasara, Madurai - 625016 Tel: 0452-4355103
Email: lab@envirocareindia.com | Web: www.envirocareindia.com

Note: 1. The results relate only to the item tested.

2. Any Correction not showed shall invalidate the report.

3. Report shall not be reproduced anywhere except in full and in the same format without the permission of the laboratory.

4. Labels affixed by customer, the test items will not be returned for more than 10 days from date of issue of test report.

5. The liability of our laboratory is limited to the extent stated.

6. Any dispute arising out of this report is subject to Madurai Jurisdiction Only.





TEST REPORT

Accredited by NABL (Chemical & Biological)

Report No.:	ECI-ANQ-2023/12158	Report Date:	20.12.2023
Customer Name & Address:	M/s. Enviro Coal Terminal Pvt. Ltd Purna, Purnia District Maha Road, Purnia Dist. Purnia District-002 120		
Customer Reference:	PO 21AK/COAL/123-240000/18874 Date 20.08.2023	Sample Reference No.:	ECI-ANQ-2023/12158
Sample Taken By:	ECI	Sample Received On:	18.12.2023
Sample Collected Date:	18.12.2023	Test Commenced On:	19.12.2023
City of Sample Received:	Purnia Nagar & 25th Station	Test Completed On:	20.12.2023
Sample Description:	Ambient Air	Sampling Method:	IS 1162 Part 14
Sample Mark:	Near Weigh Bridge (BTL2)		

S.No.	PARAMETERS	UNITS	RESULTS	TEST METHOD	Permissible Limit of CPCB
1.	Ambient (as NH ₃)	µg/m ³	< 1.0	INDIA Method 2019	400
2.	Ambient (as As)	µg/m ³	< 0.1	IS 1162 Part 22	0.0
3.	Benzene (C ₆ H ₆)	µg/m ³	< 1.0	IS 1162 Part 11	0.0
4.	Benzene-Pyrene (BaP)	µg/m ³	< 1.0	IS 1162 Part 12	1.0
5.	Carbon Monoxide (as CO)	µg/m ³	< 1.2	IS 1162 Part 13	2.0
6.	Lead (as Pb)	µg/m ³	< 0.1	IS 1162 Part 22	1.0
7.	Nickel (as Ni)	µg/m ³	< 0.1	IS 1162 Part 22	20
8.	Nitrogen dioxide (as NO ₂)	µg/m ³	31.0	IS 1162 Part 05	80
9.	Ozone (as O ₃)	µg/m ³	< 0.4	IS 1162 Part 09	100
10.	Particulate Matter (PM ₁₀)	µg/m ³	25.7	IS 1162 Part 24	80
11.	Respirable Particulate Matter (PM ₁₀)	µg/m ³	49.8	IS 1162 Part 23	100
12.	Sulphur Dioxide (as SO ₂)	µg/m ³	8.1	IS 1162 Part 02	80

Observation: In the above mentioned location meets the requirements of CPCB standards with respect to the parameters tested.

--- End of Report ---

Verified By: 		For ENVIRO CARE INDIA PRIVATE LIMITED (Laboratory Division)  Authorized Signatory
--	---	---

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Email: lab@envirocareindia.com | Web: www.envirocareindia.com

Notes: 1. The results apply only to the item tested.

2. Any Correction not obtained shall invalidate this report.

3. Report shall not be reproduced anywhere without its use and in its entire form without the permission of the laboratory.

4. Unless informed by customer, the test items will not be returned for more than 15 days from date of issue of test report.

5. Retention of test specimens is limited to 15 working days.

6. Any dispute arising out of this report is subject to Mutual Jurisdiction Only.





TEST REPORT

Accredited by NABL (Chemical & Biological)

Report No.:	ECI-APG-2023/12168	Report Date:	25.12.2023
Customer Name & Address:	M/s. Enviro Coal Terminal Pvt. Ltd Purushotham Village, Vadai Post, Ponnambali, Thiruvellar District-600 122		
Customer Reference:	PO: SPPH3ACGALN3-240900810074 Date: 25.09.2023	Sample Reference No.:	ECI-APG-2023/12168
Sample Drawn By:	ECI	Sample Received On:	18.12.2023
Sample Collected Date:	18.12.2023	Test Commenced On:	19.12.2023
Qty. of Sample Received:	Filter Paper & 25ml Solution	Test Completed On:	23.12.2023
Sample Description:	Ambient Air	Sampling Method:	IS 5182 Part 14
Sample Mark:	Test Main Copy		

S.No.	PARAMETERS	UNITS	RESULTS	TEST METHOD	Permissible limits of CPCB
1.	Ammonia (as NH ₃)	µgm ³	< 1.0	NIOSH Method 0015	400
2.	Arsenic (as As)	ngm ³	< 0.1	IS 5182 Part 22	5.0
3.	Benzene (C ₆ H ₆)	µgm ³	< 1.0	IS 5182 Part 11	5.0
4.	Benzene-Pyrene (BaP)	ngm ³	< 1.0	IS 5182 Part 12	1.0
5.	Carbon Monoxide (as CO)	ngm ³	< 1.2	IS 5182 Part 10	9.9
6.	Lead (as Pb)	µgm ³	< 0.1	IS 5182 Part 22	1.0
7.	Mercury (as Hg)	ngm ³	< 0.1	IS 5182 Part 22	20
8.	Nitrogen dioxide (as NO ₂)	µgm ³	26.7	IS 5182 Part 05	80
9.	Ozone (as O ₃)	µgm ³	< 0.8	IS 5182 Part 09	100
10.	Particulate Matter (PM _{2.5})	µgm ³	27.7	IS 5182 Part 24	50
11.	Respirable Particulate Matter (PM ₁₀)	µgm ³	58.9	IS 5182 Part 25	100
12.	Sulphur Dioxide (as SO ₂)	µgm ³	6.4	IS 5182 Part 08	80

Opinion: In the above mentioned location results are requirements of CPCB standards with respect to the parameters tested.

*** End of Report ***

For ENVIRO CARE INDIA PRIVATE LIMITED
(Laboratory Director)


Authorized Signatory

Verified By: 



#43, 2nd Street, Harney Nagar, Assaradi, Madurai - 625015. Tel: 0452-4355103
Email: info@envirocareindia.com | Web: www.envirocareindia.com

- NOTE:**
- The results stated are for the test period.
 - Any correction not allowed that duplicates the report.
 - Report shall not be reissued or amended, except in full, and in the same format without a permission of the laboratory.
 - Where intended to duplicate the test items will not be accepted as it will not be done from date of issue of test report.
 - The liability of the laboratory is limited to the sample provided.
 - Any dispute arising out of this report is subject to Madurai Jurisdiction (IN).





TEST REPORT

Accredited by NABL | Chemical & Biological |

Report No :	ECI-AG-2023/12/175	Report Date :	25-12-2023
Customer Name & Address :	M/s. Grease Coal Terminal Pvt. Ltd. Puduchattambam Village, Vilva Patti, Ponnar Taluk, Chennai District-600 120		
Customer Reference :	PO: ENVIRONMENTAL/23-24/095201/074 (Date: 20.09.2023)	Sample Reference No :	ECI-AG-2023/12/175
Sample Drawn By :	ECI	Sample Received On :	18-12-2023
Sample Collected Date :	18-12-2023	Test Commenced On :	19-12-2023
City of Sample Received :	Filter Paper & 3rd Solution	Test Completed On :	26-12-2023
Sample Description :	Ambient Air	Sampling Method :	IS 5182 Part 1a
Sample Mark :	Real Time		

S.No	PARAMETERS	UNITS	RESULTS	TEST METHOD	Permissible Limits of CPCB
1.	Ambient (as SPM)	µg/m ³	< 1.0	IS 5182 Method 5015	600
2.	Ambient (as As)	ng/m ³	< 0.1	IS 5182 Part 22	5.0
3.	Ambient (as Cd)	µg/m ³	< 1.0	IS 5182 Part 11	5.0
4.	Ambient (as Pb)	ng/m ³	< 1.0	IS 5182 Part 12	1.0
5.	Ambient (as SO ₂)	µg/m ³	< 1.0	IS 5182 Part 10	2.0
6.	Ambient (as Fe)	µg/m ³	< 0.1	IS 5182 Part 23	1.0
7.	Ambient (as Ni)	ng/m ³	< 0.1	IS 5182 Part 25	20
8.	Ambient (as HCl)	µg/m ³	19.2	IS 5182 Part 06	80
9.	Ambient (as O ₃)	µg/m ³	< 0.0	IS 5182 Part 09	100
10.	Particulate Matter (PM ₁₀)	µg/m ³	32.4	IS 5182 Part 24	90
11.	Respirable Particulate Matter (PM _{2.5})	µg/m ³	73.9	IS 5182 Part 26	100
12.	Sulphur Dioxide (as SO ₂)	µg/m ³	4.8	IS 5182 Part 03	80

Options: In the above mentioned location meets the requirements of CPCB standards with respect to the parameters listed.

← End of Report →

Verified By 		For ENVIRO CARE INDIA PRIVATE LIMITED (Laboratory Division)
		 Authorized Signatory

843, 2nd Street, Harvey Nagar, Arambadi, Madurai - 625016 | Tel: 0452 4355103

Email: lab@envirocareindia.com | Web: www.envirocareindia.com

Notes: 1. This report is valid only for the test period.

2. Any discrepancy and alteration must be intimated this report.

3. Report shall not be re-issued or printed or copied or put and to the same firm without the permission of the laboratory.

4. Unless otherwise specified, the test methodology used for analysis are as per latest IS 15 days from date of issue of test report.

5. This report is not valid if it is altered in any manner without the written consent.

6. Any dispute arising out of this report is subjected to Madurai Jurisdiction Only.





TEST REPORT

Accredited by NABL | Chemical & Biological |

Report No.:	EC-RAQ-2023/13771	Report Date:	25.12.2023
Customer Name & Address:	M/s. Eastern Coal Terminal Pvt. Ltd Puthuthakuram Village, Tirupur Road, Perambalur, Thiruvallur District-605 120		
Customer Reference No.:	PO-ENR0400CAL23-240000010074 (Date: 28.09.2023)	Sample Reference No.:	EC-RAQ-2023/13771
Sample Drawn By:	ECI	Sample Received On:	19.12.2023
Sample Collected Date:	19.12.2023	Test Commenced On:	19.12.2023
Qty. of Sample Received:	Filter Paper & 20ml Solution	Test Completed On:	25.12.2023
Sample Description:	Ambient Air	Sampling Method:	IS 5182 Part 14
Sample Mark:	None S.A. Station : I		

S.No	PARAMETERS	UNITS	RESULTS	TEST METHOD	Permissible Limit of CPCB
1	Ammonia (as NH ₃)	µg/m ³	< 1.0	NIOSH Method 0613	400
2	Acetic Acid	µg/m ³	< 0.1	IS 5182 Part 22	5.0
3	Benzene (C ₆ H ₆)	µg/m ³	< 1.0	IS 5182 Part 11	5.0
4	Benzene-Pyrene (BaP)	µg/m ³	< 1.0	IS 5182 Part 13	1.0
5	Carbon Monoxide (as CO)	µg/m ³	< 1.2	IS 5182 Part 16	5.0
6	Lead (as Pb)	µg/m ³	< 0.1	IS 5182 Part 20	1.0
7	Nickel (as Ni)	µg/m ³	< 0.1	IS 5182 Part 22	20
8	Nitrogen dioxide (as NO ₂)	µg/m ³	29.0	IS 5182 Part 06	80
9	Ozone (as O ₃)	µg/m ³	< 0.8	IS 5182 Part 08	100
10	Particulate Matter (PM ₁₀)	µg/m ³	37.8	IS 5182 Part 04	60
11	Respirable Particulate Matter (PM _{2.5})	µg/m ³	28.1	IS 5182 Part 23	100
12	Sulphur Dioxide (as SO ₂)	µg/m ³	0.0	IS 5182 Part 05	80

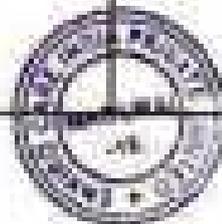
Options: - In the above mentioned location meets the requirements of CPCB standards with respect to the parameters listed.

*** End of Report ***

For ENVIRO CARE INDIA PRIVATE LIMITED
(Laboratory Division)


Authorized Signatory

Verified By: 



843, 2nd Street, Harvey Nagar, Arasavalli, Madurai - 625018 | Tel: 0452 4365103
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- Note:**
- The results relate only to the item tested.
 - Any variation will be noted and immediately report.
 - Results shall not be reproduced anywhere except in full and in the same format without the permission of the Laboratory.
 - Labels returned by customer, the test items will not be returned for more than 15 days from date of issue of test report.
 - The liability of the laboratory is limited to the extent stated.
 - Any matter arising out of this report is subject to Mutual Discussion Only.





TEST REPORT

Accredited by NABL (Chemical & Biological)

Report No:	ECI/AM/2023/127113	Report Date:	20/12/2023
Customer Name & Address:	M/s. Essore Coal Terminal Pvt. Ltd. Pudhupattanam Village, Vadar-Pond, Ponnentank, Vandalur District-605-130		
Customer Reference:	PO: EHCOCOMAL/23-24/0000012974 Date: 20.08.2023	Sample Reference No.:	ECI/AM/2023/127113
Sample Description:	Soil	Monitoring Date:	18/12/2023
Monitored By:	SLD	Date Received On:	20/12/2023

S.No	Location	Day Time	
		Minimum	Maximum
1	North East Corner - Near Weigh Bridge	54.2	68.4
Unit		dB (A)	
TNPCB Max. Permissible Limit for Day Time (Industrial Area)		75	
Reference Method		IS:3999	

Opinion: In the above mentioned location meets the requirements of TNPCB standards.

--- End of Report ---

Verified By: 



For ENVIRO CARE INDIA PRIVATE LIMITED
(Laboratory Division)

Authorized Signatory

343, 2nd Street, Harvey Nagar, Arasaradi, Madurai - 625016 Tel: 0452 4355103
Email: lab@envirocareindia.com | Web: www.envirocareindia.com

Disclaimer: 1. This report is valid only to the test item tested.

2. Any Commission not defined shall prevail in this report.

3. Report shall not be reproduced, republished, stored, or used in any form without the permission of the laboratory.

4. Results returned by customers, their test items will not be returned for more than 15 days from date of issue of test report.

5. Good keeping of test laboratory is provided, not beyond control.

6. Any dispute arising out of this report is subjected to Madurai Jurisdiction Only.





TEST REPORT

Accredited by NABL (Chemical & Biological)

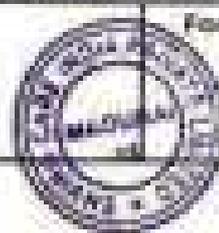
Report No :	EC/AM/2023/12/14	Report Date :	26.12.2023
Customer Name & Address:	M/s. Enviro Coal Terminal Pvt. Ltd Pullichuvakkam Village Vandal Post, Pudukottai Taluk Thiruvarur District-605 120		
Customer Reference:	FD - ENVIROCOAL/23-24/000111874 Date: 28.08.2023	Sample Reference No :	EC-AM-2023/12/14
Sample Description :	Air	Monitoring Date :	19.12.2023
Monitored By :	ECI	Date Received On :	20.12.2023

S. No	Location	Night Time	
		Minimum	Maximum
1	North East Corner - Near Weigh Bridge	52.8	54.2
Unit		dB (A)	
TNPCE Max. Permissible Limit for Night Time (Industrial Area)		75	
Reference Method		IS: 9843	

Opinion: In the above mentioned locations meets the requirements of TNPCE standards

--- End of Report ---

Verified By: 



For ENVIRO CARE INDIA PRIVATE LIMITED
(Laboratory Division)


Authorized Signatory

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- Note:**
- The results necessary to this test report.
 - Any discrepancy in the test report, please the client.
 - Report shall not be reproduced, stored in file and/or be used for any other purpose without the permission of the laboratory.
 - Unless otherwise specified, the test items will not be retained for more than 15 days from date of issue of test report.
 - Test facility of our laboratory is limited to the scope of work.
 - Any change in any part of the report is indicated by the word "Correction" only.





TEST REPORT

Accredited by NABL (Chemical & Biological)

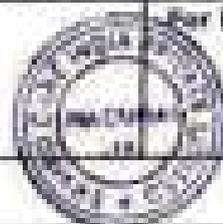
Report No.	ECI-048-2023/12104	Report Date	20.12.2023
Customer Name & Address	M/s. Enviro Coal Terminal Pvt. Ltd. Puthuchikkanam Village, Vijayar Post, Ponnambala, Thiruvananthapuram District-695 120		
Customer Reference	PO ENVIRO-COAL-03-240000110874 Date: 26.04.2023	Sample Reference No.	ECI-048-2023/12104
Sample Drawn By	ECI	Sample Received On	20.12.2023
Sample Collected Date	19.12.2023	Test Commenced On	20.12.2023
Qty of Sample Received	Thermos & 50 ml Sam.	Test Completed On	20.12.2023
Sample Description	Stack	Sampling Method	IS 11255-Part 1
Sample Mark	DG 300 PVA (Ship Unloader - II) -Ganesh/Dheeraj		

S.No	PARAMETERS	UNITS	RESULTS	TEST METHOD	Max. Permissible TSPCM norms for General Emission Standards
1	Ambient Temperature	°C	20	IS 11255-Part 03	NA
2	Carbon dioxide (as CO ₂)	% vol	0.2	IS 13270	NA
3	Carbon Monoxide (as CO)	% vol	0.2	IS 13270	1.0
4	Flow rate	litre/hr	454	IS 11255-Part 03	NA
5	Flue Gas velocity	m/sec	10.8	IS 11255-Part 03	NA
6	Conc. of Nitrogen (as NO _x)	mg/m ³	48.8	IS 11255-Part 02	NA
7	Oxygen (as O ₂)	% vol	17.9	IS 13270	NA
8	Particulate Matter (PM)	mg/m ³	110.2	IS 11255-Part 01	150
9	Port hole Height from G Level	m	12.0	---	NA
10	Stack Diameter at port hole	m	0.15	---	NA
11	Stack Height from G Level	m	12.0	---	NA
12	Stack Temperature	°C	144	IS 11255-Part 01	NA
13	Sulphur Dioxide (as SO ₂)	mg/m ³	21.2	IS 11255-Part 02	NA

Dependent on the above mentioned Parameter meets the requirements of TSPCM standards

NA - Not Applicable

--- End of Report ---

Verified By:  	For ENVIRO CARE INDIA PRIVATE LIMITED (Laboratory Division)  Authorized Signatory
---	---

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- Note:**
- The results given are for the test item.
 - Any comments and queries should include PO report.
 - Report shall not be re-issued/any further issued on the part of the issuing format without the permission of the laboratory.
 - Sample submitted by customer, the test result will not be returned for more than 15 days from date of issue of test report.
 - The validity of our laboratory is listed in the source document.
 - Any dispute arising out of this report is subjected to Madurai Jurisdiction only.





TEST REPORT

Accredited by NABL | Chemical & Biological |

Report No :	EC-04-2023/12/19	Report Date :	25.12.2023
Customer Name & Address	M/s. Enviro Care Terminal Pvt. Ltd. Puduchattaram Village, Vada Post, Ponnasala, Thiruvallur District-606 120		
Customer Reference :	PO 478ACDQALG3-24059011074 Date 24.05.2023	Sample Reference No :	EC-04-2023/12/19
Sample Drawn By :	EC	Sample Received On :	20.12.2023
Sample Collected Date :	19.12.2023	Test Commenced On :	20.12.2023
Qty of Sample Received :	Three (3) 50 ml Btl	Test Completed On :	25.12.2023
Sample Description :	Stack	Sampling Method :	IS 11255 Part 1
Sample Mark:	CG 300 P/A (Sub Station: U-Shower/Diesel)		

S.No	PARAMETERS	UNITS	RESULTS	TEST METHOD	Max. Permissible TMPCB norms for Central Pollution Standards
1	Ambient Temperature	°C	33	IS 11255 Part 03	NA
2	Carbon dioxide (as CO ₂)	% (v/v)	0.4	IS 13270	NA
3	Carbon Monoxide (as CO)	% (v/v)	0.0	IS 13270	1.0
4	Flue Gas	ppm/hr	829	IS 11255 Part 03	NA
5	Flue Gas velocity	m/sec	9.2	IS 11255 Part 03	NA
6	Dioxide of Nitrogen (as NO _x)	mg/m ³	21.2	IS 11255 Part 07	NA
7	Oxygen (as O ₂)	% (v/v)	18.0	IS 13270	NA
8	Particulate Matter (PM)	mg/m ³	19.8	IS 11255 Part 01	100
9	Flue gas Height from G Level	m	5.0	---	NA
10	Stack Diameter at post top	m	0.85	---	NA
11	Stack height from G Level	m	6.0	---	NA
12	Stack Temperature	°C	73	IS 11255 Part 03	NA
13	Sulphur Dioxide (as SO ₂)	mg/m ³	6.7	IS 11255 Part 02	NA

Options: In the above mentioned Parameters check for compliance of TMPCB standards
NA - Not Applicable

End of Report

Verified By:  EC



For ENVIRO CARE INDIA PRIVATE LIMITED
(Laboratory Division)

Authorized Signatory

443, 2nd Street, Harvey Nagar, Arasaradi, Madurai - 625016. Tel: 0482 4365103
Email: lab@envirocareindia.com | Web: www.envirocareindia.com

NOTE: 1. The results were only for test item tested.

2. Any Correction not returned shall constitute this report.
3. Report shall not be reissued at various locations for test and in the same format without the permission of the laboratory.
4. Issues returned by customer, the test report will not be returned for more than 15 days from date of issue of test report.
5. Test results of our laboratory is limited to the stated amount.
6. Any dispute arising out of the report is subject to Madurai Jurisdiction Only.





TEST REPORT

Accredited by NABL (Chemical & Biological)

Report No.:	EC-04-202412198	Report Date:	25.12.2023
Customer Name & Address:	M/s. Enviro Coal Terminal Pvt. Ltd Pardubankhori Village, Gopal Posh, PowerSaha, Durgam Cheruvu District-500 126.		
Customer Reference:	PO 14800006, 05, 24/08/2023 1074 Date: 26.08.2023	Sample Reference No.:	EC-04-202412198
Sample Order By:	CCI	Sample Received On:	26.12.2023
Sample Collected Date:	18.12.2023	Test Commenced On:	18.12.2023
City of Sample Received:	Thrissur & Madhav	Test Completed On:	25.12.2023
Sample Description:	Stack	Sampling Method:	IS-11205 Part 1
Sample Mark:	CG 400 30W (Electrical Room) -Glycerol (Direct)		

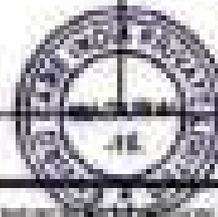
S.No	PARAMETERS	UNITS	RESULTS	TEST METHOD	Max. Permissible TSPCB norms for General Emission Standards
1	Ambient Temperature	°C	33	IS-11205 Part 03	NA
2	Carbon dioxide (as CO ₂)	% by vol	0.4	IS-11279	NA
3	Carbon Monoxide (as CO)	% by vol	0.3	IS-11279	1.0
4	Flue rate	km/hr	498	IS-11205 Part 02	NA
5	Flue Gas velocity	m/sec	13.8	IS-11205 Part 02	NA
6	Concentration of Nitrogen (as NO _x)	mg/m ³	28.1	IS-11205 Part 07	NA
7	Oxygen (as O ₂)	% by vol	18.9	IS-11279	NA
8	Particulate Matter (PM)	mg/m ³	85.1	IS-11205 Part 01	100
9	Flue gas Height from G Level	m	5.0	---	NA
10	Stack Diameter at top of stack	m	0.15	---	NA
11	Stack height from G Level	m	7.0	---	NA
12	Stack Temperature	°C	130	IS-11205 Part 04	NA
13	Sulphur Dioxide (as SO ₂)	mg/m ³	12.7	IS-11205 Part 06	NA

Observation: In the above mentioned Parameters meets the requirements of TSPCB standards.

NA - Not Applicable

--- End of Report ---

Verified By: 



For ENVIRO CARE INDIA PRIVATE LIMITED
(Laboratory Division)


Authorized Signatory

443, 2nd Street, Harvey Nagar, Anna Nagar, Chennai - 600 016. Tel: 0452-4359100
Email: lab@envirocareindia.com | Web: www.envirocareindia.com

Note: 1. The results given only for the test carried.

2. Any discrepancy not detected shall invalidate the report.

3. Results obtained by unapproved agencies should be left and to the same format without the permission of the laboratory.

4. Results obtained by unapproved agencies will not be accepted by them for the report that does not include the report.

5. The liability of the laboratory is limited to the machine amount.

6. Any change or sign out of this report is subjected to physical verification only.





TEST REPORT

Accredited by NABL | Chemical & Biological |

Report No:	ECI-DM-2023/0107	Report Date:	25/12/2023
Customer Name & Address:	M/s. Ennore Coal Terminal Pvt. Ltd Puzhupakkam Village, Vadu-Pondy, Pooneri Taluk, Thiruvallur District 600 120.		
Customer Reference:	PO ENNOCORPL/23-240000010574 Date: 20/02/2023	Sample Reference No:	ECI-DM-2023/12/107
Sample Drawn By:	ECI	Sample Received On:	20/12/2023
Sample Collected Date:	19/12/2023	Test Commenced On:	20/12/2023
Qty of Sample Received:	Normal & M of Smt	Test Completed On:	25/12/2023
Sample Description:	Stack	Sampling Method:	IS-11255 Part 1
Sample Mark:	CO 400 NVA (Sub Station - I) - Ennore Power		

S.No	PARAMETERS	UNITS	RESULTS	TEST METHOD	Max. Permissible TSPCB norms for General Emission Standards
1	Ambient Temperature	°C	32	IS 11255 Part 03	NA
2	Carbon Dioxide (as CO ₂)	% (v/v)	0.4	IS 13273	NA
3	Carbon Monoxide (as CO)	% (v/v)	0.8	IS 13273	1.0
4	Flue rate	Nm ³ /hr	485	IS 11255 Part 03	NA
5	Flue Gas velocity	m/sec	11.1	IS 11255 Part 03	NA
6	Concns of Nitrogen (as NO _x)	mg/Nm ³	30.8	IS 11255 Part 07	NA
7	Oxygen (as O ₂)	% (v/v)	17.8	IS 13273	NA
8	Particulate Matter (PM)	mg/Nm ³	105.2	IS 11255 Part 05	150
9	Flue hole Height from G Level	m	5.0	---	NA
10	Stack Diameter at port hole	m	0.15	---	NA
11	Stack Height from G Level	m	7.0	---	NA
12	Stack Temperature	°C	141	IS 11255 Part 03	NA
13	Sulfur Dioxide (as SO ₂)	mg/Nm ³	18.8	IS 11255 Part 03	NA

Options: If the above mentioned Parameters meet the requirements of TSPCB standards.
NA - Not Applicable

--- End of Report ---

 Verified By: 		FOR ENVIRO CARE INDIA PRIVATE LIMITED (Laboratory Division)  Authorized Signatory
---	---	--

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 Email: lab@envirocareindia.com | Web: www.envirocareindia.com

Notes: 1. The results valid only for this test period.
 2. Any Complaint has to be raised immediately for report.
 3. Report should not be reprinted, reproduction is not allowed without the permission of the Laboratory.
 4. Samples returned to customer. The test items will not be returned for more than 15 days from date of issue of this report.
 5. The liability of our Laboratory is limited to the scope of report.
 6. Any dispute arising out of this report is subject to Madurai Jurisdiction Only.





TEST REPORT

Accredited by NABL (Chemical & Biological)

Report No. :	EC-PA-2023/12023	Report Date :	25.12.2023
Customer Name & Address :	M/s. Enviro Coal Terminal Pvt. Ltd Puduchikkulam Village Vallur Post, Ponnai Taluk Thiruvallur District-602 110		
Customer Reference :	PO : ENVIRONMENTAL MONITORING Date: 20.09.2023	Sample Reference No. :	EC-PA-2023/12023
Sample Taken By :	ECI	Sample Received On :	19.12.2023
Sample Collected Date :	18.12.2023	Test Commenced On :	19.12.2023
Qty of Sample Received :	1 L	Test Completed On :	25.12.2023
Sample Description :	Water	Drinking Method :	IS 3025 Part 01
Sample Mark :	Drain Water at Stock Yard (Ponnai Taluk, Dist: Thiruvallur)		

S.No	PARAMETERS	UNITS	RESULTS	TEST METHOD
1	Appearance	-	Clear	IS 3025
2	Arsenic (as As)	mg/L	NDL (DL = 0.01)	IS 3025 Part 37
3	Cadmium (as Cd)	mg/L	NDL (DL = 0.001)	IS 3025 Part 41
4	Calcium (Ca)	mg/L	217	IS 3025 Part 43
5	Carbonate Hardness (CaCO ₃)	mg/L	219	IS 3025 Part 21
6	Chlorides (Cl)	mg/L	738	IS 3025 Part 38
7	Color	pcu/cm	< 10	IS 3025 Part 04
8	Electrical Conductivity (EC) @ 25°C	µmhos/cm	2682	IS 3025 Part 14
9	Iron (as Fe)	mg/L	0.80	IS 3025 Part 53
10	Lead (Pb)	mg/L	NDL (DL = 0.01)	IS 3025 Part 67
11	Magnesium (as Mg)	mg/L	70	IS 3025 Part 46
12	Mercury (as Hg)	mg/L	NDL (DL = 0.001)	IS 3025 Part 48
13	Total Carbonate Hardness (as CaCO ₃)	mg/L	328	IS 3025 Part 21
14	Odor	-	Agreeable	IS 3025 Part 05
15	pH Value @ 25°C	-	7.6	IS 3025 Part 11
16	Thrombocytosis Acidity (as CaCO ₃)	mg/L	60	IS 3025 Part 23
17	Residue (as SO ₄)	mg/L	6.6	IS 3025 Part 36

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- Notes: 1. The results relate only to the test listed.
2. Any Customer not mentioned above does not appear in this report.
3. Please check that the instrument used is properly calibrated and used in the same format without any permission of the laboratory.
4. Unless informed by customer, the data herein will not be released for any other use than that for which it was issued.
5. Total volume of this laboratory is limited to the capacity of the instrument.
6. We reserve the right to amend or discontinue any method or material without prior notice.





TEST REPORT

Accredited by NABL (Chemical & Biological)

Report No: ECI/MA/2023/12023

19.	Residual Chlorine	mg/L	< 0.1	15/02/23 Part 20
19.	Residual Free Chlorine (RFC)	mg/L	< 0.1	15/02/23 Part 20
20.	Residual Free Chlorine (RFC) %	mg/L	298	15/02/23 Part 24
21.	Total Hardness (as CaCO ₃)	mg/L	370	15/02/23 Part 26
22.	Total Dissolved Solids (TDS) @ 100°C	mg/L	1418	15/02/23 Part 19
23.	Total Hardness (as CaCO ₃)	mg/L	701	15/02/23 Part 21
24.	Total Suspended Solids (TSS) @ 100°C	mg/L	< 1.0	15/02/23 Part 17
25.	Turbidity	NTU	< 0.5	15/02/23 Part 18

Remarks: 1. ND - Below Detectable Limit,
CL - Detectable Limit

--- End of Report ---

For ENVIRO CARE INDIA PRIVATE LIMITED
(Laboratory Division)


Authorized Signatory

Verified By:





443, 2nd Street, Harvey Nagar, Arasaradi, Madurai - 625016 Tel: 0452-4365103
Email: lab@envirocareindia.com | Web: www.envirocareindia.com

Note: 1. The reader responsibility is not to be blamed

2. Any Commission related report shall be available from report.

3. Report shall not be considered genuine unless received in full and in the same format without the participation of our laboratory.

4. Samples returned by customer. The test results will not be considered for more than 15 days from date of issue of test report.

5. Total liability of our laboratory is limited to the invoice amount.

6. This report was prepared in strict compliance as stipulated by NABL Accreditation Dept.





TEST REPORT

Accredited by NABL (Chemical & Biological)

Report No :	ECI-VR-2023/12024	Report Date :	25-12-2023	
Customer Name & Address :	M/s. Enviro Coal Terminal Pvt. Ltd Pudhuchakkam Village Vallur Post, Ponnentank Thiruvellar District-601 020			
Customer Reference :	PO: ENVIROCORL03-0400001804 Date: 26.06.2023	Sample Reference No. :	ECI-VR-2023/12024	
Sample Drawn By :	GG	Sample Received On :	18-12-2023	
Sample Collected Date :	18-12-2023	Test Commenced On :	18-12-2023	
Qty of Sample Received :	2L	Test Completed On :	25-12-2023	
Sample Description :	Water	Sampling Method :	IS-3025 Part 01	
Sample Mark :	3 Rivers Raw Water (Can Fe)			
S.No	PARAMETERS	UNITS	RESULTS	TEST METHOD
1	Ammoniacal Nitrogen (N)	mg/L	14.7	IS-3025 Part 34
2	Arsenic (as As)	mg/L	BDL (DL = 0.01)	IS-3025 Part 37
3	Biochemical oxygen demand (BOD @ 27°C for 5 days)	mg/L	103	IS-3025 Part 44
4	Boron (as B)	mg/L	+ 0.2	IS-3025 Part 57
5	Cadmium (as Cd)	mg/L	BDL (DL = 0.001)	IS-3025 Part 41
6	Chemical Oxygen Demand (COD)	mg/L	189	IS-3025 Part 35
7	Chloride (as Cl)	mg/L	1843	IS-3025 Part 33
8	Copper (as Cu)	mg/L	BDL (DL = 0.01)	IS-3025 Part 42
9	Cyanide (as Cn)	mg/L	+ 0.02	IS-3025 Part 37
10	Fluoride (as F)	mg/L	0.55	IS-3025 Part 33
11	Free Ammonia (as NH ₃)	mg/L	4.8	APHA22 [™] 8500 NH ₃ C
12	Hexavalent Chromium (as Cr ^{VI})	mg/L	+ 0.01	IS-3025 Part 43
13	Lead (as Pb)	mg/L	BDL (DL = 0.01)	IS-3025 Part 47
14	Mercury (Hg)	mg/L	BDL (DL = 0.001)	IS-3025 Part 48
15	Nickel (as Ni)	mg/L	BDL (DL = 0.01)	IS-3025 Part 54
16	Oil & Grease	mg/L	+ 1.0	IS-3025 Part 38
17	Particle Size of suspended solids	micron	+ 800	APHA 22 [™] Edition 2000 A Section
18	Percent Solids	%	38	IS-3025 Part 45
19	Pesticides (Total)	mg/L	BDL (DL=0.000025)	USCPA

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Notes: 1. The results apply only to the sample tested.
2. Any Corrosion and amount shall exclude this report.
3. Report shall not be reproduced, republished, stored in M, and in the form, format without the permission of the laboratory.
4. Sample collected by customer, the test items will not be reported for items like 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100.
5. All test items are not mandatory to include in the master contract.
6. The charges along with of the report is subject to Master contract only.





TEST REPORT

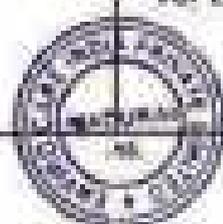
Accredited by NABL (Chemical & Biological)

Report No: ECI/PHL/2023/2024				
17	Mercury (Ascorbic acid method)	mg/L	< 0.001	IS 3025 Part 41
18	Iron (as Fe)	mg/L	6.1	IS 3025 Part 11
19	Phosphate (as P ₂ O ₅)	mg/L	0.76	APHA22 "Standard 4500 P-5"
20	Residual Chlorine	mg/L	> 0.1	IS 3025 Part 26
24	Residual Sodium Carbonate	mg/L	15.6	IS 11024
25	Selenium (as Se)	mg/L	NDL (DL = 0.01)	IS 3025 Part 50
26	Sulfates (as SO ₄ ²⁻)	mg/L	1024	IS 3025 Part 24
27	Sulfides (as S ²⁻)	mg/L	< 0.04	APHA22 "Standard 4500 S ²⁻ "
28	Temperature	°C	28	IS 3025 Part 08
29	Total Chromium (as Cr)	mg/L	NDL (DL = 0.01)	IS 3025 Part 52
30	Total Dissolved Solids (TDS) @ 180°C	mg/L	898	IS 3025 Part 18
31	Total Hardness (Nitrogen as Ca)	mg/L	48.3	APHA22 "Standard 4500 Hard C"
32	Total Suspended Solids (TSS) @ 100°C	mg/L	60	IS 3025 Part 17
33	Zinc (as Zn)	mg/L	NDL (DL = 0.01)	IS 3025 Part 48

Remarks : NDL - Below Detectable Limit.
DL - Detectable Limit

End of Report

Verified by



For: ENVIRO CARE INDIA PRIVATE LIMITED
(Laboratory Division)

Authorized Signatory

1. Our results are only for the test listed.
2. No. Our services are intended for all registered test reports.
3. Report shall not be reproduced anywhere without the prior written permission of the company.
4. Unless otherwise specified, this test being carried out by reference to the IS code, from date of issue of test report.
5. Total liability of our company is limited to the extent of amount.
6. This document being out of this, shall be subjected to Indian Jurisdiction Only.





TEST REPORT

Accredited by NABL (Chemical & Biological)

Report No.:	EC/PLA/2023/02275	Report Date:	25-12-2023
Customer Name & Address:	M/s. Enviro Care Terminal Pvt. Ltd Puduchatturam Village Vahar Pool, Panner Taluk Thiruvellar Road 600 125		
Customer Reference:	PO: ENVIROCARE/03/240916010074 Date: 26.08.2023	Sample Reference No.:	EC-PLA-2003/02023
Sample Drawn By:	EC	Sample Received On:	18-12-2023
Sample Collected Date:	18-12-2023	Test Commenced On:	18-12-2023
Qty of Sample Received:	2L	Test Completed On:	25-12-2023
Sample Description:	Water	Sampling Method:	IS 3025 Part 01
Sample Mark:	Effluent Treated Water (Settling Pond)		

S.No	PARAMETERS	Units	RESULTS	TEST METHOD	Max. Permissible Limits of TAPCB for Treated Effluent
1	Ammoniacal Nitrogen (N)	mg/L	0.1	IS 3025 Part 36	50
2	Arsenic (as As)	mg/L	NDL (DL = 0.01)	IS 3025 Part 37	0.2
3	Bio chemical oxygen demand (BOD @ 27°C for 2 days)	mg/L	15	IS 3025 Part 44	50
4	Boron (as B)	mg/L	< 0.2	IS 3025 Part 37	2.0
5	Calcium (as Ca)	mg/L	NDL (DL = 0.001)	IS 3025 Part 41	2.0
6	Chemical Oxygen Demand (COD)	mg/L	85	IS 3025 Part 56	500
7	Chloride (as Cl)	mg/L	300	IS 3025 Part 33	1000
8	Copper (as Cu)	mg/L	NDL (DL = 0.01)	IS 3025 Part 42	0.5
9	Cyanide (as CN)	mg/L	< 0.02	IS 3025 Part 37	0.2
10	Fluoride (as F)	mg/L	0.15	IS 3025 Part 60	2.0
11	Free Ammonia (as NH ₃)	mg/L	< 1.0	APHA22 [®] 1000 NH ₃ C	0.5
12	Hexavalent Chromium (as Cr ⁶⁺)	mg/L	< 0.01	IS 3025 Part 52	0.1
13	Lead (as Pb)	mg/L	NDL (DL = 0.01)	IS 3025 Part 47	0.1
14	Mercury (as Hg)	mg/L	NDL (DL = 0.001)	IS 3025 Part 48	0.01
15	Nickel (as Ni)	mg/L	NDL (DL = 0.01)	IS 3025 Part 54	2.0
16	Oil & Grease	mg/L	< 1.0	IS 3025 Part 58	10

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NOTE: 1. The results relate only to the test listed.
2. Any Certificate for detection limit is available on request.
3. Please check our website regarding sampling protocol for all the water samples. Contact us for the permission of the laboratory.
4. Results returned by e-mail are the best results and may be altered for those that 15 days from date of issue of test report.
5. Reliability of our analytical services is based on the standard method.
6. Any further enquiry call of this report is subjected to standard laboratory only.





TEST REPORT

Accredited by NABL (Chemical & Biological)

Report No : ECP/WH/2024/15025

Sl. No.	Parameter	Unit	Result	Method	Limit
17	Particulate Matter (suspended solids)	mg/L	< 500	APHA 22 nd Edition 2500-A Section	Drift pass 500 : Metric 1.0 Sieve
18	Hardness (Total)	°d	28	IS 3025 Part 45	—
19	Residual Chlorine	mg/L	BDL (DL = 0.0004%)	USEPA	Absent
20	pH Value @ 25°C	—	7.8	IS 3025 Part 11	5.0 - 9
21	Free Chlorine (as Cl ₂)	mg/L	< 0.001	IS 3025 Part 45	1.0
22	Phosphate (as P ₂ O ₅)	mg/L	< 0.1	APHA 22 nd Edition 8000 F-1	0.5
23	Residual Chlorine	mg/L	< 0.1	IS 3025 Part 28	1.0
24	Residual Sodium Carbonate	mg/L	2.4	IS 11924	—
25	Selenium (as Se)	mg/L	BDL (DL = 0.01)	IS 3025 Part 55	0.05
26	Sulphate (as SO ₄ ²⁻)	mg/L	148	IS 3025 Part 24	1000
27	Soluble Hardness (H ₂ O)	mg/L	< 0.04	APHA 22 nd Edition 4500 G-1	2.0
28	Temperature	°C	28	IS 3025 Part 08	40
29	Total Chromium (as Cr)	mg/L	BDL (DL = 0.01)	IS 3025 Part 52	2.0
30	Total Dissolved Solids (TDS) @ 100°C	mg/L	1588	IS 3025 Part 15	2100
31	Total Kjeldahl Nitrogen (TKN)	mg/L	15.9	APHA 22 nd Edition 4500 mg C	150
32	Total Suspended Solids (TSS) @ 100°C	mg/L	50	IS 3025 Part 17	500
33	Zinc (Zn)	mg/L	BDL (DL = 0.01)	IS 3025 Part 48	1.0

Opinion: The above sample meets the requirements of the PCB norms with respect to the parameters tested.
BDL - Below Detectable Limit, DL - Detectable Limit
NA - Not Applicable

--- End of Report ---

For ENVIRO CARE INDIA PRIVATE LIMITED
(Laboratory Division)

Verified By: 




Authorized Signatory

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Notes: 1. The results relate only to the item tested.

2. Any discrepancy and comment upon inclusion in this report.

3. Please do not use the information provided herein for any purpose other than that intended by the issuer of this report.

4. Unless informed by customer, the test items will not be returned for reuse after 15 days from date of receipt of test report.

5. Your liability of our laboratory is limited to the scope stated.

6. Any dispute arising out of the report is subjected to Madurai Jurisdiction only.



FORM –V
(See rule 14 of Environment (Protection) Rules, 1986)

Environmental Statement for the financial year ending with 31th December 2023

PART -A

i) Name and Address of the owner/ occupier of the Industry operation or process	:	Mr. Rashmi Ranjan Patra Director, S.F. 143, Puzhidhivakkam Village, Near NCTPS Quarters, Vallur - Post, Chennai -600 120
ii) Industry Category		Primary : Red Secondary : 1065-Ports and Harbour, Jetties and Dredging Operations.
iii) Year of Establishment		2011
iv) Date of the last environmental statement submitted		

PART-B

Water and Raw Material Consumption:

i) Water consumption in m³/ d

Process	:	16500(Re-used - Zero Discharge)
Cooling	:	-
Domestic	:	8

Name of Products	Process water consumption per unit of products (KL/ MT)	
	During the previous Year 2022-23	During the current Year 2023
1. Coal (Handling Only) (Unloading, transfer, storage and loading of Coal)	0.55	0.52

ii. Raw Material consumption

Name of Materials*	Name of the Products	Consumption of raw material per unit of output	
		During the previous financial year	During the current financial Year
N/ A	N/ A	N/ A	N/ A
The unit does not undergo any manufacturing process. The water consumed is mainly for Firefighting, greenbelt development, domestic and maintenance, etc.,			

PART-C

Pollution discharged to environment/unit of output

(Parameter as specified in the consent issued)

Pollutants	Quantity of pollutants discharged (mass/ day)	Concentration of Pollutants discharged (mass/ volume)	Percentage of variation from prescribed standards with reasons.
(a) Water	ZERO DISCHARGE	ZERO DISCHARGE	ZERO DISCHARGE
(b) Air	1) DG 500 KVA – 2 Nos. 2) DG 400 KVA – 2 Nos. 3) DG 200 KVA – 1 No. Used for Lighting		

PART -D

HAZARDOUS WASTES

(as specified under Hazardous Wastes (Management & Handling Rules, 1989))

Hazardous Wastes	Total Quantity (Kg)	
	During the previous financial year	During the current financial year
1. From Process	N/ A	N/ A
2. From Pollution Control Facilities	N/ A	N/ A

PART-E

SOLID WASTES

Solid Wastes	Total Quantity (Kg)	
	During the previous financial year	During the current financial year
a. From Process	N/ A	N/ A
b. From Pollution Control Facilities	N/ A	N/ A
c. Quantity recycled or re-utilized within the unit.	N/ A	N/ A

KAMARAJAR PORT LIMITED



Compliance Report

On

Ministry's guidelines for

**“EXPANSION PROPOSALS - DEVELOPMENT OF TERMINALS
FOR MARINE LIQUIDS, COAL, IRON AND CONTAINERS IN
SECOND PHASE AND ASSOCIATED DREDGING AT ENNORE
PORT”**

Point wise compliance report on Ministry's guidelines for the Ennore Port Expansion Proposals-Development of Terminals for marine liquids, coal, iron and containers in Second phase and associated dredging at Ennore Port Environmental clearance

Ref: MoEF Letter No. 10-28/2005-IA-III dated 10th September 2007.

Back ground information

MoEF had accorded environmental clearance vide letter No. 10-28/2005-IA-III dated 19th May 2006 for the following projects:-

1. Marine Liquid Terminal to handle 3 MTPA.
2. Coal Terminal other than TNEB Users to handle 8 MTPA.
3. Iron Ore Terminal to handle 12 MTPA.
4. Container Terminal for a quay length of 700m to handle 12 MTPA.
5. Associated Capital Dredging of 15.50 million cubic meters.

Kamarajar Port Limited requested for modification of the above environmental clearance **with respect to the Container Terminal**, for the following reasons:

Reason for Modification of Environmental Clearance

- i. The draft policy for maritime sector (Ports, merchant Shipping and IWT) suggested that Port Planning for the Development of Container Terminal should have a quay length of 1000m and capacity of 1.50 million TEUs.
- ii. In accordance the NMDP prepared by Dept. of Shipping included the Development of Container Terminal at Ennore Port with 1000 meters.
- iii. Department of Shipping has formulated an Action Plan for development of 18 Berths in various major Ports, which includes the Container Terminal of 1000 m quay length at Ennore Port during the financial year, 2007-08.
- iv. Accordingly, it was proposed to reconfigure the container Terminal from 700 m to 1000m.
- v. Reconfiguration of the quay length of the proposed container Terminal from 700 m to 1000 m would require an associated capital dredging of additional 4 million cu.m
- vi. Reconfiguration would revise the capacity of the Container Terminal from 1.0 million TEUs to 1.50 million TEUs.

MoEF had accorded environmental clearance vide letter No. 10-28/2005-IA-III dated 10th September 2007

Status of the project:

Further KPL modified the above Environment Clearance for the development of Container Terminal and Multi Cargo Terminal.

Modified Environmental clearance from MoEF&CC

MoEF&CC has accorded environmental clearance for the development of container terminal in the 730m quay length and multi cargo berth in the 230m quay length vide its communication No. 10-28/2005-IA.III dated 24.12.2014.

Compliance report on MoEF Letter No. 10-28/2005-IA-III dated 10th September 2007:

S. No	(A) Specific Conditions	Compliance Status
(i)	It should be ensured that no mangroves are destroyed during reclamation.	Complied with. No mangroves are present at container project site inside the port.
(ii)	The proposed extension to the project should not cause any shoreline change abutting Ennore Port.	Complied with. The proposed extension of the project was addition of 300m to the quay length of 700m. (The container terminal will be developed to handle 11.68 MTPA in the 730m quay length and multi cargo berth of 2.0 MTPA in the 230m quay length). The alignment of the berth is in the N-S direction abutting the land side which is within the existing break-waters; hence, no shoreline changes are caused.
(iii)	Adequate provision for beach nourishment and sand by pass should be provided.	Complied with. The dredge material was used as beach nourishment in the north of north break water and filling up of back up area.
(iv)	The dredged material obtained should be utilized for filling up of	Complied with. About 2.0 million cubic meter of dredge

	backup area.	material was used as filling up of back up area.
(v)	All conditions stipulated in the environmental clearance letter of even number dated 19.5.2006 should be strictly complied with.	Complied with. All stipulated conditions applicable in the environmental clearance letters are being complied with and the compliance reports are submitted to Regional Office of MoEF & CC, Chennai.
(vi)	The additional dredged material of 4 million cubic meters obtained from the project should not be disposed of into the sea.	Complied with. The dredge material was used as beach nourishment and filling up of back up area.
(vii)	The reclaimed area should be used as container stackyards only.	Complied with. Reclaimed area was used as container stack yard.
(viii)	Adequate drainage facilities should be provided in the reclaimed area along with collection and treatment system for treating the run-off from the container stackyard.	Complied with. The drainage facilities are provided.
(ix)	Necessary approvals/clearances should be obtained from the Tamil Nadu Coastal Zone Management Authority and Tamil Nadu Pollution Control Board before implementing the project.	Complied with. Tamil Nadu Coastal Zone Management Authority has recommended the project vide letter No. 17250/EC-3/2009-1 dated 26.10.2009. TNPCCB has accorded the renewal of Consent To Operate (CTO) for the facility vide orders nos. 2108136876855 & 2108236876855 dated 24.08.2021 under Water and Air Acts., valid till 31.03.2026.
B. General Conditions		Compliance report
(i)	Construction of the proposed structures should be undertaken meticulously conforming to the	Noted and complied with.

	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.	
(ii)	Adequate provisions for infrastructure facilities such as water supply, fuel, sanitation, etc. should 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 with. Construction of the Terminals was completed and the projects are under operation.
(iii)	The project authorities must 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 with. M/s. AECTPL has installed and operating 25 KLD sewage treatment plant to collect and treat the sewage generated from the terminal. The entire treated water is being used for horticulture purpose. M/s AECTPL has implemented integrated waste management system-waste segregation yard. All the solid waste generated is being handled in line to Solid Waste Management Rules' 2016 as amended. M/s AECTPL vision is based on adoption of 5R principle of Solid Waste Management i.e reduce, Reuse, Reprocess, Recycle & recover. All waste is being handled inline to 5R principle.
(iv)	The proponent shall obtain the requisite consents for discharge of	Complied with.

	<p>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 Pollution Control Board before commissioning of the project and a copy of each of these shall be sent to this Ministry.</p>	<p>The quay length 1000m was bifurcated into 730m quay length to handle containers of 11.68 MTPA and in the remaining 270m to develop Multi Cargo terminal to handle 2.0 MTPA of cargo. Environmental clearance for the above was obtained from MoEF&CC vide letter dated 10-28/2005-IA.III dated 24.12.2014.</p> <p>TNPCB has accorded the renewal of Consent To Operate (CTO) for the facility, vide their orders nos. 2108136876855 & 2108236876855 dated 24.08.2021 under Water and Air Acts., valid till 31.03.2026.</p>
(v)	<p>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.</p>	<p>Complied with.</p> <p>M/s AECTPL has awarded Environmental monitoring services to a NABL accredited laboratory. Monitoring of Ambient Air Quality, Noise, Stack, STP, Drinking water, Marine Surface Water, Sea Sediment is carried out on regular basis. The reports are being submitted to Tamilnadu Pollution Control Board on monthly basis and also as part of six monthly compliance report. Environment Monitoring report for the compliance period is enclosed herewith.</p> <p>Reports are made available for the inspection to the concerned State/central officials during their visits.</p>
(vi)	<p>In order to carry out the environmental monitoring during the operational phase of the projects, the project authorities should provide an environmental laboratory well equipped with standard equipment and facilities</p>	<p>Complied with.</p> <p>Environmental Monitoring is being carried out through NABL accredited laboratory. Monitoring of Ambient Air Quality, Noise, Stack and STP is carried out on regular basis.</p>

	and qualified manpower to carry out the testing of various environmental parameters.	The reports are being submitted to Tamilnadu Pollution Control Board on monthly basis and also as part of six monthly compliance reports. Environment Monitoring report for the period compliance period is enclosed herewith.																					
(vii)	The sand dunes and mangroves, if any, on the site should not be disturbed in any way.	Complied with. No sand dunes or mangroves are present inside the port of this project 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 with. No suggestion or representation was received from Panchayat/local NGO while processing the proposal.																					
(ix)	The Tamil Nadu Pollution Control Board should display a copy of the clearance letter at the Regional Office, District Industries centre and Collectors Office/Thasildhar office for 30 days.	Complied with. No action needed as far as KPL is concerned.																					
(x)	The funds earmarked for environment protection measures should be maintained in a separate account and there should be no diversion of these funds for any other purpose. A year-wise expenditure on environmental safeguards should be reported to this Ministry's Regional Office at Bangalore and the State Pollution Control Board.	The environmental expenditure carried out by M/s AECTPL during the compliance period is Rs. 15.66 Lakhs. The breakup details are as follows. <table border="1" data-bbox="846 1423 1419 1711"> <thead> <tr> <th>S. No</th> <th>Description</th> <th>Amount (Rs. in Lakhs)</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Environmental Monitoring</td> <td>3.76</td> </tr> <tr> <td>2</td> <td>Greenbelt</td> <td>3.02</td> </tr> <tr> <td>3</td> <td>STP-O&M</td> <td>2.86</td> </tr> <tr> <td>4</td> <td>Housekeeping</td> <td>4.22</td> </tr> <tr> <td>5</td> <td>IWMS</td> <td>1.80</td> </tr> <tr> <td colspan="2">Total</td> <td>15.66</td> </tr> </tbody> </table>	S. No	Description	Amount (Rs. in Lakhs)	1	Environmental Monitoring	3.76	2	Greenbelt	3.02	3	STP-O&M	2.86	4	Housekeeping	4.22	5	IWMS	1.80	Total		15.66
S. No	Description	Amount (Rs. in Lakhs)																					
1	Environmental Monitoring	3.76																					
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4	Housekeeping	4.22																					
5	IWMS	1.80																					
Total		15.66																					

(xi)	Full support should be extended to the officers of this Ministry's Regional Office at Bangalore and the officers of the Central and State Pollution Control Boards by the Project proponent 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.	<p>Being complied with.</p> <p>TNPCB officials are visiting the terminal on monthly basis. There was no visit from RO-MoEF & CC during the compliance period.</p> <p>All the necessary support is being provided during the site visit.</p>
(xii)	In case of deviation or alteration in the project including the implementing agency, a fresh reference should be made to this Ministry for modification in the clearance conditions or imposition of new ones for ensuring environmental protection.	<p>Complied with.</p> <p>The quay length of the container terminal of 1000m length was bifurcated into 730m quay length to handle containers of 11.68 MTPA and in the remaining 230m to develop Multi Cargo terminal to handle 2.0 MTPA of cargo. Environmental clearance for the above was obtained from MoEF&CC vide letter dated 10-28/2005-IA.III dated 24.12.2014.</p>
(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.	<p>Noted.</p>
(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.	<p>Noted.</p>

(xv)	<p>The Project proponent should advertise at least in two local newspapers widely circulated in the region around the project, one of which shall be in the vernacular language of the locality concerned informing that the project has been accorded environmental clearance and the copies of clearance letters are available with the state pollution Control Board and may also be seen at web site of the Ministry of Environment & Forests at //http://www.envfor.nic.in. The advertisement should be made within 7 days from the date of issue of the clearance letter and a copy of the same should be forwarded to the Regional office of this Ministry at Bangalore.</p>	<p>Complied with.</p> <p>It was advertised in the vernacular Tamil and English newspapers on 17/9/2008.</p>
(xvi)	<p>The project proponents should inform the Regional Office at Bangalore 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.</p>	<p>Complied with.</p>

Point wise compliance report on the conditions issued by Tamil Nadu State Coastal Zone Management vide Letter No. 17250/EC-3/2009-1 dated 26.10.2009

1.	The composition of the dredged materials should be duly analyzed and examined to find out the availability of any toxic contents.	<ul style="list-style-type: none"> • Port has carried out a study through Institute of Ocean Management, Anna University, Chennai entitled “Assessment of Water, Sediment & Biota in Ennore Port” during January 2009. • The study revealed that the toxic heavy metals are found to be well within the safety limits and as such do not pose any problem to the marine environment. • Sediment quality is also monitored during dredging operations. • Port is also monitoring monthly marine water quality for various physio-chemical parameters including heavy metals.
2.	Based on the analysis, a suitable methodology for the disposal of dredging material has to be evolved out.	<p>National Institute of Ocean Technology (NIOT), Chennai has carried out EIA and Risk assessment for the second phase expansion proposals, which is inclusive of Modeling studies has identified a marine disposal area (5 km x 5 km area) for disposal of dredged material.</p> <p>The study has identified a location for the safe disposal of dredged material with a holding capacity of 18.0 million cubic meters.</p>
3.	A permanent air quality monitoring station should be established to check and maintain the air quality within the permissible level.	<p>Port has engaged M/s. Hubert Enviro Care Systems (P) Ltd, a MoEF an NABL accredited laboratory, for sampling and testing of various environmental parameters inside the port premises. Port is monitoring ambient air quality (PM10 & PM2.5). All the monitored parameters are well within the standard limits.</p> <p>The analysis reports are regularly submitted to TNPCB & Regional Office of MoEF&CC.</p>

		<p>District Environmental Laboratory, Tamil Pollution Control Board also monitors annually, the air quality at different locations inside the port.</p> <p>The results of analysis reveal that ambient air quality and noise levels inside the port are well within standards during the survey carried out.</p>
4.	<p>A study should be carried out to ascertain the occurrence of coastal erosion/coastal accretion due to the dredging/dumping of dredged materials in the low lying coastal areas and if so, its extent of implication and the steps required to prevent erosion, mitigate the adverse impacts, etc.</p>	<ul style="list-style-type: none"> • Desk studies for shoreline management for the proposed phase –II development at Ennore Port” CWPRS, (September 2009; Technical Report- 4658). • The study recommended creation of sand trap at the entrance • Regular dredging of the sand trap and dredging the sand accumulated at the mouth of the Ennore creek would be required to keep the inlet open. • This would enable minimizing further accretion / stabilization of land already formed on the south of the south breakwater. Regular dredging of sand accumulated at the creek mouth is being carried out by TNEB.

**REPORT ON
COMPREHENSIVE ENVIRONMENTAL MONITORING
FOR**

**ADANI ENNORE CONTAINER TERMINAL CONTAINER PRIVATE LIMITED
(AECTPL)
(WITHIN KAMARAJAR PORT LIMITED)
VALLUR POST, PONNERI TALUK, CHENNAI - 600 056.**

JULY 2023 - DECEMBER 2023



PREPARED BY:

**M/S. SV ENVIRO LABS & CONSULTANTS,
(MoEF & CC Recognized, NABL & NABET Accredited,
ISO 9001 & 45001 Certified Laboratory),
B1, Block-B, IDA, Autonagar,
Visakhapatnam - 530012.**

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1.0 INTRODUCTION

M/s. Adani Ennore Container Terminal Pvt Ltd (AECTPL) located inside Kamarajar Port, Ennore is operating container berth and handling containerized Import/Export cargoes.

AECTPL have engaged M/s. SV ENVIRO LABS AND CONSULTANTS, an Accredited Consultant by NABL to carry out the Comprehensive Environmental monitoring studies in AECTPL continuously as per the Statuary Requirement. This report covers the monitored environmental data for the Period of July 2023 to December 2023.

1.1 LOCATION OF THE PROJECT

The Project site is located at Port area inside the Kamarajar Port Limited.

The location map is shown in Fig - 1

Fig – 1 – Location Map



2.0 SCOPE OF WORK

The scope of Comprehensive Environmental monitoring includes the following environmental components;

1. Meteorological data
2. Ambient Air Quality
3. Ambient Noise Level
4. Marine Sampling
5. Treated STP / ETP Water.
6. Potable water
7. DG Set Emission

The parameters covered under the scope for each of the above attributes are given below:

SCOPE OF WORK

S.No	Attribute	Scope	Frequency
1.	Meteorological Data	Collection of micrometeorological data on hourly basis by installing an auto weather monitoring station at plant site covering the following parameters: <ul style="list-style-type: none"> • Wind speed • Wind direction • Rainfall • Relative Humidity • Temperature • Barometric pressure • Solar Radiation 	Daily
2.	Ambient Air Quality	Sampling of ambient air at 03 stations for analysing the following parameters: <ul style="list-style-type: none"> • PM10 • PM2.5 • SO₂ • NO₂ • CO • Lead • Ozone • Ammonia • Benzene • Benzo Pyrene • Arsenic • Nickel 	Weekly Twice
3.	Ambient Noise	Collection of Noise levels on hourly basis at 3 locations <ul style="list-style-type: none"> • L_{eq} – Day (Max and Min) • L_{eq} – Night (Max and Min) 	Monthly Once

4.			
4a.	Surface and Bottom Water	<p>Collection of Surface and Bottom Water analysed for -1location</p> <ul style="list-style-type: none"> • Temperature • pH @ 25°C • Total Suspended Solids • BOD at 27 °C for 3 days • Dissolved oxygen • Salinity at 25 °C • Oil & Grease • Nitrate as NO₃ • Nitrite as NO₂ • Ammoniacal Nitrogen as N • Total phosphates as PO₄ • Total Nitrogen, • COD • Turbidity • Total Iron as Fe • Colour • Odour • Mercury as Hg • Cadmium as Cd • Total Chromium as Cr • Copper as Cu • Lead as Pb • Nickel as Ni • Iron • Zinc • Particulate Organic Carbon • Petroleum Hydrocarbons 	Monthly Once
4b.	Marine Sediment	<p>Collection of Marine sediment analyzedfor-1 location</p> <ul style="list-style-type: none"> • pH • Organic Matter • Moisture Content • Conductivity • Iron • Sodium • Copper • Nickel • Zinc • Manganese • Lead • Boron • Phosphate • Chloride • Sulphate • Sulphide • Pesticide • Potassium • Total Chromium • Petroleum Hydrocarbon • Aluminium • Total Nitrogen • Organic Nitrogen • Phosphorus 	Monthly Once

		<ul style="list-style-type: none"> • Texture 	
4c.	Phytoplankton Monitoring	<ul style="list-style-type: none"> • Total Count • No. of species • Major Species 	Monthly Once
4d.	Zooplankton Monitoring	<ul style="list-style-type: none"> • Total Count • No. of species • Major 	Monthly Once
4e.	Microbiological Monitoring	<ul style="list-style-type: none"> • Pseudomonas aeruginosa • Streptococcus Faecalis • Total Coliform • Faecal Coliform • E.Coli • Total viable count • Salmonella • Shigella • Vibrio Cholera • Vibrio Parahaemolyticus 	Monthly Once
4f.	Biological Monitoring	<ul style="list-style-type: none"> • primary productivity • Chlorophyll-a • Phaeopigment • Total Biomass 	Monthly Once
4g.	Phytobenthos Monitoring data	<ul style="list-style-type: none"> • Fungus • Total Count • No. of species • Diversity Index • Major species 	Monthly Once
4h.	Total Fauna Monitoring	<ul style="list-style-type: none"> • Name of phylum • Class • Number of Individuals encountered • Total no. of species encountered • Total fauna 	Monthly Once
5.	STP Treated Water	<p>Collection of STP Inlet and Treated water analysed for – 11location</p> <ul style="list-style-type: none"> • pH • TSS • BOD • Faecal Coliforms • COD • TDS • Oil & Grease • Cl • SO₄ 	Monthly Once
6.	Potable Water analysis	<p>Collection of Drinking water sample at 01 location. Analysing As per IS 10500: 2012 – 36 Parameters</p>	Monthly Once
7.	DG Set Emissions	<p>Sampling of Emission at 02 stations for analysing the following parameters:</p> <ul style="list-style-type: none"> • PM • Carbon Monoxide • NO_x – NO₂ • SO₂ 	Monthly Once

3. METHODOLOGY

Methodologies adopted for sampling and analysis for each of the above parameters are detailed below

1	Meteorological parameters	
	Online Met station	
2	Ambient Air Quality	
	Parameters	Method
	Respirable Suspended Particulate Matter (PM10)	IS5182Part23:2006(Reaff.2017)
	Particulate Matter PM2.5	IS5182Part24:2019
	Sulphur dioxide as SO ₂	IS5182 Part02:2001(Reaff.2017)
	Oxides of Nitrogen as NO ₂	IS5182 Part06:2006(Reaff.2017)
	Lead as Pb	IS5182 Part22:2004(Reaff.2019)
	Arsenic as As	CPCB Guidelines
	Nickel as Ni	IS5182Part26:2020
	Carbon monoxide as CO	IS5182Part10:1999(Reaff.2019)
	Ozone as O ₃	IS5182Part09:1974(Reaff.2017)
	Ammonia as NH ₃	IS5182Part25:2018
	Benzene (α) pyrene	IS5182 Part12: 2004 (Reaff.2017)
	Benzene as C ₆ H ₆	IS5182Part11:2006(Reaff.2019)
3	Ambient Noise Monitoring	
	L _{eq} Day& Night	Instrument Manual, SV/LAB/SOP/Noise/001
4	Marine Sampling	
	Surface and Bottom Water	APHA Methods 23 rd Edition, 2017 Standard Methods for examination of Water and Wastewater and IS 3025 & USEPA Test Methods
	Sea Sediment	
	Phytoplankton Monitoring	
	Zooplankton Monitoring	
	Microbiological Monitoring	
	Primary Productivity Monitoring	
	Phytobenthos Monitoring data	
Total Fauna Monitoring		
5	STP Water Analysis	
	pH, TSS, BOD, Faecal Coliforms	APHA Methods 23 rd Edition, 2017 Standard Methods for examination of Water and Wastewater and IS 3025
6	Emission Monitoring	
	PM, Carbon Monoxide, NO _x – NO ₂ , SO ₂	IS 11255 Methods of measurement of emissions from Stationary source
7	New Water Analysis	
	As per IS 10500 : 2012–36 Parameters	APHA Methods 23 rd Edition, 2017 Standard Methods for examination of Water and Waste water and IS 3025

4. ENVIRONMENTAL STUDIES – JULY 2023 – DECEMBER 2023.

S.No	ATTRIBUTE	STUDIES CARRIED OUT
1.	Meteorological parameters	Collection of micrometeorological data at project site on daily basis with hourly frequency
2.	Ambient Air Quality	Collection of ambient air at 4 locations.
3.	STP water	Collection of STP outlet water at two locations
4.	Ambient Noise	Collection of Ambient noise levels for day and night at 4 locations
5.	Drinking Water	Collection of Drinking water at Canteen Building
6.	Marine Water and Marine Sediments	Collection of Marine water and Marine Sediments at Three locations
7.	DG Set Emissions	Collection of DG Set Emissions.

1. METEOROLOGICAL DATA

Meteorological data was collected on hourly basis by installing an auto weather monitoring station at Plant site. The report depicted here under presents the data for July 2023 – December 2023.

The following parameters were recorded

- Wind speed
- Wind direction
- Temperature
- Pressure
- Relative humidity
- Rainfall



ANNEXURE - 1 MICROMETEOROLOGY DATA

JULY - 2023

Marine Infrastructure Developer Private Ltd

Report Type: Average Report

From: 01-07-2023 0:00:00 Hrs To: 31-07-2023 23:59:59 Hrs

Created by Adani. Created at 01-08-2023 9:22:46 AM

Date	AQMS-Wind_Speed (km/h)	AQMS-Wind_Direction(Degree)	AQMS-RH (%)	AQMS Total Rain Fall (mm)	AQMS-Atm. Pressure (mBar)	AQMS-Atm. Temperature (Degree)	AQMS-Solar_Radiation (w/m2)
Avg	5.5	237	89	0.0	1003.1	31.9	197.8
Min	3.8	206	76.7	-	996.1	28.6	98.1
Max	8.2	262	99.8	-	1008.4	33.8	282.5
01-07-2023	4.8	221.3	88.6	0.0	999.0	33.3	255.9
02-07-2023	4.4	232.9	94.5	0.0	998.6	31.5	98.3
03-07-2023	4.8	234.4	96.1	0.0	997.3	31.0	117.2
04-07-2023	5.0	231.3	93.9	0.0	995.8	31.3	202.3
05-07-2023	5.7	250.0	91.2	0.0	994.4	31.4	169.8
06-07-2023	6.9	241.8	82.0	0.0	996.8	32.9	186.0
07-07-2023	6.5	234.8	83.8	0.0	999.2	33.1	274.8
08-07-2023	6.2	243.3	84.0	0.0	1000.0	33.1	211.2
09-07-2023	5.1	206.0	89.6	0.0	999.3	32.0	266.8
10-07-2023	5.0	226.3	97.5	0.0	999.1	30.6	139.1
11-07-2023	6.3	228.5	96.8	0.0	998.2	31.0	178.2
12-07-2023	3.8	244.1	94.5	0.0	998.2	31.3	143.7
13-07-2023	5.2	230.7	96.3	0.0	998.8	30.6	208.2
14-07-2023	3.8	241.2	93.3	0.0	999.2	31.8	240.6
15-07-2023	4.8	219.6	90.2	0.0	998.4	32.9	280.6
16-07-2023	4.0	235.7	92.0	0.0	998.2	32.3	162.8
17-07-2023	5.6	231.0	85.4	0.0	997.2	33.1	253.3
18-07-2023	5.6	240.9	83.2	0.0	996.1	33.5	258.8
19-07-2023	7.2	253.0	83.9	0.0	995.1	32.5	246.9
20-07-2023	7.6	228.6	81.9	0.0	994.6	33.1	207.0
21-07-2023	6.6	251.5	76.7	0.0	995.5	33.5	192.0
22-07-2023	7.3	246.7	85.1	0.0	997.6	31.6	117.2
23-07-2023	4.3	238.0	98.7	0.0	998.6	29.7	103.8
24-07-2023	5.5	240.0	97.9	0.0	997.8	29.4	110.5
25-07-2023	4.9	243.9	99.8	0.0	997.9	28.6	98.1
26-07-2023	6.4	245.0	95.9	0.0	998.1	29.7	133.9
27-07-2023	8.2	240.0	84.3	0.0	998.4	32.2	268.2
28-07-2023	4.5	229.1	87.2	0.0	998.0	32.2	240.4
29-07-2023	5.2	254.4	80.5	0.0	997.7	33.4	237.1
30-07-2023	5.8	262.4	79.9	0.0	997.2	33.8	282.5
31-07-2023	4.1	218.8	86.2	0.0	996.9	33.1	247.3

Remarks: -

AUG - 2023

Marine Infrastructure Developer Private Ltd

Report Type: Average Report

From: 01-08-2023 0:00:00 Hrs To: 31-08-2023 23:59:59 Hrs

Created by Adani. Created at 01-09-2023 9:36:35 AM

Date	AQMS-Wind Speed (km/h)	AQMS-Wind_Direction (Degree)	AQMS-RH (%)	AQMS Total Rain Fall (mm)	AQMS-Atm. Pressure (mBar)	AQMS-Atm. Temperature (Degree)	AQMS-Solar_Radiation (w/m2)
Avg	4.3	218	93	62.0	1003.1	31.8	249.5
Min	2.4	182	75.9	-	996.1	30.0	176.0
Max	6.7	243	99.2	-	1008.4	33.8	299.1
01-08-2023	4.6	214.1	84.21	0.0	996.9	33.2	176.0
02-08-2023	6.7	242.6	75.87	0.0	997.6	33.8	248.0
03-08-2023	6.0	223.8	81.75	0.0	997.5	33.1	276.4
04-08-2023	4.5	221.6	88.01	0.0	999.5	32.7	270.2
05-08-2023	4.8	216.8	89.07	0.0	1000.7	32.7	291.7
06-08-2023	4.4	219.5	90.3	0.0	999.8	33.0	299.1
07-08-2023	4.6	199.1	92.61	0.0	998.3	32.5	266.6
08-08-2023	4.2	191.4	91.31	0.0	998.9	32.5	208.6
09-08-2023	4.5	202.7	92.16	0.0	1000.3	32.4	275.7
10-08-2023	6.7	234.4	89.07	0.0	1000.5	32.0	239.3
11-08-2023	4.5	201.5	93.19	0.0	1000.1	31.1	222.6
12-08-2023	5.4	209.6	94.81	0.0	999.4	31.1	193.1
13-08-2023	5.4	198.9	93	0.0	998.8	31.5	206.7
14-08-2023	4.1	228.1	96.75	6.0	999.6	30.3	194.1
15-08-2023	2.9	224.2	97.95	0.0	999.7	30.9	275.8
16-08-2023	3.5	217.6	96.53	16.0	999.7	30.8	258.8
17-08-2023	4.2	237.5	93.43	11.5	998.6	31.5	269.8
18-08-2023	3.8	225.5	92.1	0.0	997.3	31.7	237.5
19-08-2023	4.9	230.6	90.04	0.0	996.8	31.7	246.8
20-08-2023	3.4	210.6	91.42	0.0	997.3	31.6	260.5
21-08-2023	4.1	182.0	95.72	0.0	997.3	31.9	298.4
22-08-2023	2.6	227.8	95.29	0.0	997.3	31.9	232.0
23-08-2023	4.4	222.9	95.34	0.5	997.6	31.3	271.0
24-08-2023	4.1	229.3	97.44	6.5	997.5	30.7	265.2
25-08-2023	2.5	217.4	96.95	0.0	997.5	31.8	265.0
26-08-2023	3.0	217.3	97.8	9.0	998.7	31.2	239.7
27-08-2023	2.4	228.6	99.2	12.5	999.5	30.0	200.8
28-08-2023	4.9	219.7	94.43	0.0	998.0	32.1	288.5
29-08-2023	4.1	227.6	95.75	0.0	997.7	31.3	210.3
30-08-2023	3.8	202.3	92.48	0.0	997.8	32.0	277.4
31-08-2023	5.0	218.9	94.88	0.0	997.8	31.3	268.7

Remarks: -

SEPTEMBER - 2023

Marine Infrastructure Developer Private Ltd							
Report Type: Average Report							
From: 01-09-2023		0:00:00 Hrs		To: 30-09-2023		23:59:59 Hrs	
Created by Adani.			Created at 01-10-2023 9:40:35 AM				
Date	AQMS-Wind_Speed (km/h)	AQMS-Wind_Direction (Degree)	AQMS-RH (%)	AQMS Total Rain Fall (mm)	AQMS-Atm. Pressure (mBar)	AQMS-Atm. Temperature (Degree)	AQMS-Solar_Radiation (w/m2)
<i>Avg</i>	5.0	231	94	90.0	1003.1	31.2	240.4
<i>Min</i>	2.8	210	85.9	-	996.1	29.6	92.9
<i>Max</i>	7.6	251	97.8	-	1008.4	33.1	308.1
01-09-2023	4.3	210.4	94.9	14.2	998.0	31.7	307.7
02-09-2023	4.5	232.4	95.5	0.2	997.2	31.7	308.1
03-09-2023	3.8	227.8	96.7	0.0	996.2	30.3	254.3
04-09-2023	4.1	250.8	96.1	0.0	994.2	30.3	132.4
05-09-2023	5.6	249.7	95.5	0.0	994.4	29.6	92.9
06-09-2023	5.8	232.9	92.0	0.0	994.8	31.5	206.2
07-09-2023	7.6	234.2	92.3	5.5	995.8	31.3	269.0
08-09-2023	4.9	231.4	93.6	0.0	996.9	31.1	263.3
09-09-2023	5.6	227.7	92.2	0.0	996.0	32.0	289.4
10-09-2023	5.0	241.1	92.0	0.0	995.5	31.7	166.5
11-09-2023	4.2	223.1	91.7	0.0	995.6	32.0	207.3
12-09-2023	4.8	234.4	85.9	0.0	995.9	32.7	245.9
13-09-2023	6.3	219.4	91.3	0.0	996.0	31.8	243.8
14-09-2023	5.1	229.6	91.7	0.0	996.0	31.6	231.7
15-09-2023	6.4	211.0	92.9	38.0	996.6	31.3	240.2
16-09-2023	3.2	222.5	96.6	0.0	997.3	29.8	231.5
17-09-2023	6.7	231.2	97.8	16.0	996.5	30.2	235.9
18-09-2023	6.2	238.4	93.7	3.0	996.1	31.0	262.2
19-09-2023	4.6	234.6	95.5	0.0	997.4	30.8	260.1
20-09-2023	4.5	227.4	95.2	0.0	997.6	31.9	256.2
21-09-2023	4.6	241.1	96.4	0.0	998.4	31.0	176.3
22-09-2023	3.9	226.1	97.0	0.0	998.3	31.8	240.5
23-09-2023	2.8	241.7	96.9	0.0	998.3	31.4	257.8
24-09-2023	5.0	232.1	94.9	0.0	997.5	30.9	266.1
25-09-2023	5.4	224.7	96.0	13.1	996.6	31.0	260.8
26-09-2023	5.8	237.2	96.4	0.0	996.5	30.9	271.5
27-09-2023	4.5	222.8	96.4	0.0	996.4	30.8	263.9
28-09-2023	5.5	238.6	93.7	0.0	995.9	31.6	253.7
29-09-2023	6.5	236.8	91.6	0.0	996.2	31.0	256.2
30-09-2023	3.9	235.8	95.2	0.0	996.9	31.1	253.3
Remarks:	-						

OCTOBER - 2023

MARINE INFRASTRUCTURE DEVELOPER PVT LTD							
AVERAGE REPORT							
FACTORY: 21.10.2023 to 31.10.2023							
Date	Atms. Temp. (°C)	Relative Humidity (%)	Rainfall (mm)	Wind Speed (km/hr)	Wind Direction (Degrees)	Atms. Pressure (mmHg)	Solar Radiation (kwh/m ²)
Avg	28.8	74.7	4.3	25.8	147.8	1010.7	245.6
Min	26.3	69.6	0.1	14.8	18.4	1009.1	60.1
Max	29.7	84.8	16.9	43.8	211.8	1012.0	291.1
2023-10-01	28.6	75.5	0.3	54	211.8	1009.1	167.5
2023-10-02	29.0	75.3	0.323	43.1	204.4	1009.3	187.3
2023-10-03	28.8	77.8	0.3	48.8	201	1009.7	208.7
2023-10-04	29.0	76.8	0.1	48	202.8	1009.7	201.3
2023-10-05	29.2	76.4	0.3	37.1	203.4	1008.8	207.0
2023-10-06	29.6	74.5	1.3	38.1	197.8	1008.3	179
2023-10-07	29.7	71.1	0.6	27.4	190.4	1008.1	178.1
2023-10-08	29.2	76.5	0.5	31	193.5	1009.8	181
2023-10-09	29.3	76.4	1	28.4	198.7	1011.3	271.7
2023-10-10	29.4	74.8	0.1	25.8	197.1	1010.8	208.3
2023-10-11	29.5	74	0.081	30.2	202.3	1010.4	274.9
2023-10-12	29.8	75.5	0.7	28.4	204	1011.1	197
2023-10-13	29.9	75.1	?	30.5	185.2	1011.9	208
2023-10-14	29.5	75.8	2.212	22.7	198	1011.3	165.7
2023-10-15	29.8	74.5	0.7	25.6	192.8	1010.6	241.8
2023-10-16	29.9	78	26.888	20.8	221.3	1011.4	182.2
2023-10-17	29.1	75.8	0.4	32.4	41.2	1011.1	217.4
2023-10-18	29.5	71.4	1.192	21.5	57.9	1011.7	205.7
2023-10-19	29.7	72.8	0.738	25.3	41.6	1011.6	258.4
2023-10-20	29.8	71.1	0.8	18	113.2	1011.8	253.8
2023-10-21	29.9	73.4	0.358	33.1	126.2	1011.7	188.0
2023-10-22	29.6	71.4	0.551	17.3	113.2	1011.8	240.2
2023-10-23	29.5	72.7	3.1	22.8	124.2	1011.9	202.4
2023-10-24	29.9	72.5	2.7	33.4	125.2	1011.8	251.1
2023-10-25	29.9	73.1	12.484	34.8	125.2	1012	286.7
2023-10-26	29.1	69.0	0.7	22.8	107.8	1011.3	243.3
2023-10-27	29.4	69.4	1.6	24	61.2	1011.8	258.6
2023-10-28	29.0	71.7	0.6	38.2	88.8	1011.8	260.2
2023-10-29	29.6	73.4	5.886	18	62	1010.6	126.4
2023-10-30	29.1	81.8	12.671	22	10.4	1010.8	62.1
2023-10-31	29.7	69.2	4.173	20.5	24.5	1011	247.6

NOVEMBER - 2023

MARINE INFRASTRUCTURE DEVELOPER LTD							
AVERAGE REPORT							
FROM 01.11.2023 TO 30.11.2023							
Date	Abs. Temp (°C)	Relative Humidity (%)	Rainfall (mm)	Wind Speed (km/hr)	Wind Direction (degrees)	Abs. Pressure (mb)	Solar Radiation (kJ/m ²)
Avg	27.3	80.4	14.4	21.0	94.7	1010.8	204.3
Min	25.8	74	0	11.9	4.2	1009	95.2
Max	28.7	88.8	71.2	76	203.2	1012.4	254.3
2023-11-01	28.7	78.4	22.5	21.4	37.9	1010.9	242.8
2023-11-02	28.1	79.5	0	20.9	49	1010.1	199.7
2023-11-03	27.6	81.8	18.2	18.7	83.6	1009	142.4
2023-11-04	26.9	82.9	36.1	16.6	203.2	1009.3	95.2
2023-11-05	27.9	78.7	0	21.8	199.9	1010.5	219.1
2023-11-06	28.7	74.9	0	15.1	84.2	1011.8	204.2
2023-11-07	28.1	77.7	7.8	23	34.6	1011.6	192.0
2023-11-08	27.8	79.9	2.2	15.5	98.1	1011	181.0
2023-11-09	27.5	79.6	23.9	16.9	51.6	1011.4	147.2
2023-11-10	27.6	81	0	20.9	40	1012.3	217.9
2023-11-11	27.4	82.7	0	27.4	21.8	1012.4	242.2
2023-11-12	27.0	74	0	26.0	10.8	1012.4	199.4
2023-11-13	27.1	76.9	0	27	18.2	1011.7	210.1
2023-11-14	26.4	81.1	49.5	36	4.9	1011	136.6
2023 11 15	26.2	77.6	58.5	27.4	4.2	1010.2	224.6
2023 11 15	27.5	78.6	0	21.6	23.5	1011.3	238.9
2023 11 17	28.3	78.8	0	22.3	33	1011.3	243.3
2023 11 18	27.5	83.2	0	22.3	24.5	1010.8	185.1
2023-11-19	28.1	88.8	0	22.7	96.4	1011.1	110.8
2023-11-20	27.4	80.3	8.8	21.2	22.1	1011	207.5
2023-11-21	28.1	80.7	71.2	19.8	75.8	1010	223.3
2023-11-22	27.5	82.0	25.7	11.9	144.2	1009.9	111.4
2023-11-23	27.1	80.0	4.4	22.7	144.9	1009.9	224.7
2023-11-24	27.9	79.4	7.1	19.8	82.0	1009.9	290.7
2023-11-25	27.4	81.9	3.9	22.7	39.7	1010.9	210.7
2023-11-26	27.5	79.9	1.5	25.2	96.3	1011.5	238.4
2023 11 27	27.4	82.6	12.2	25.2	37.4	1010.3	242.3
2023 11 28	27.7	80.4	9.2	23.4	98.7	1009.6	237.7
2023 11 29	27.2	81.3	65.3	22.3	33.4	1009.7	133.3
2023 11 30	28.6	85.0	3.5	20.5	70.6	1010.7	254.3

DECEMBER - 2023

MARINE INFRASTRUCTURE DEVELOPER LTD							
AVERAGE REPORT							
FROM 01.12.2023 TO 31.12.2023							
Date	Air Temp (°C)	Relative Humidity (%)	Rainfall (mm)	Wind Speed (km/hr)	Wind Direction (degrees)	Air Pressure (mbars)	Solar Radiation (w/m ²)
Avg	26.9	79.6	8.2	27.5	72.8	1011.2	200.0
Min	25.1	73.8	0	13.9	18.8	1006.9	25.1
Max	28.9	88.9	40.700	34.9	107.5	1018.2	300
01-12-2023	26.1	81	1.9	27	34.8	1009.8	81
02-12-2023	27.1	77.9	0.139	16.6	107.1	1008	118
03-12-2023	28.1	74.7	0.288	13.1	125.4	1007.6	101.8
04-12-2023	28.9	77.5	1.9	18.7	109.2	1006.9	134.8
05-12-2023	28.9	78.8	2.4	22	208.8	1007	259
06-12-2023	28.8	79.2	2.4	21.8	107.5	1008.8	227.1
07-12-2023	28.6	76.6	0	19.1	188	1008.7	296.3
08-12-2023	28.7	75.9	0.379	15.5	121.1	1010.4	286.7
09-12-2023	28.4	78.5	18.372	22	45.4	1011.2	248
10-12-2023	27.7	80.3	31.588	28.8	38.2	1010.6	291.8
11-12-2023	27.9	79.6	41.881	18.8	88.8	1011.1	301.1
12-12-2023	27.1	76.7	0	28.7	32.2	1010.6	123.2
13-12-2023	26.4	76.9	0	41.1	44.1	1011.1	42.9
14-12-2023	26.6	77.1	2.896	32.2	32.2	1012	217.1
15-12-2023	26.9	80.2	5.6	21.6	11.4	1012	278.2
16-12-2023	27.3	86.5	11.021	11.2	12.9	1011.1	171
17-12-2023	28.7	87.5	46.725	22.1	25	1009.5	12
18-12-2023	27.1	80.6	27.722	14.2	4.7	1011.6	25.2
19-12-2023	28.6	81	10.07	22	21.7	1012.7	131.6
20-12-2023	27.4	82.4	0	42.4	14.8	1012.8	212.8
21-12-2023	26	83.4	17.122	32.6	32.6	1012.7	213.8
22-12-2023	26.4	80.8	0	25.6	25.6	1012.7	224
23-12-2023	26.7	79.4	0	24.6	7.4	1012.6	240.6
24-12-2023	28.7	79.5	2.896	25.4	25.5	1012.2	225.7
25-12-2023	26.1	80.3	0	11.2	14.6	1012.6	212
26-12-2023	28.1	77.1	0	22.7	22.2	1012.7	221.4
27-12-2023	26.8	82.8	0	44.6	22.6	1012.1	221
28-12-2023	26.9	80.2	12.153	24.6	32.2	1012.6	232.7
29-12-2023	26.8	77.9	0	42.8	44.6	1012.8	232.4
30-12-2023	26.6	77	0	22.7	22.7	1012.6	231
31-12-2023	28.4	77.4	0	22.5	25	1012.5	248.5

i. AMBIENT AIR QUALITY

Ambient air quality monitoring is required to determine the existing quality of air, evaluation of the effectiveness of control system and to identify areas in need of restoration and their prioritization. In order to generate background data, air quality monitoring is conducted to assess existing level of contamination and to assess possible effects of air contamination occurring in future.

Frequency of Monitoring

The frequency of monitoring that has been followed for sampling of ambient air quality is that one sample per weekly twice at three locations.

DETAILS OF AMBIENT AIR QUALITY MONITORING LOCATIONS

Station code	Location	Geographical location	Environmental setting
AAQ1	Port operating building	13.270444° N 80.334657° E	Industrial
AAQ2	RMU Building	13.273412° N 80.337600° E	Industrial
AAQ3	In Terminal Gate	13.273715° N 80.333810° E	Village

Fig - 2. AMBIENT AIR SAMPLING STATIONS LOCATION MAP



Fig.3.AMBIENT AIR SAMPLINGS STATIONS WITH RESPECT TO WIND



TECHNIQUES USED FOR AMBIENT AIR QUALITY MONITORING

S.No	Parameter	Technique	Unit	Minimum Detectable Limit
1	PM ₁₀	Respirable Dust Sampler (Gravimetric method)	µg/m ³	1.0
2	PM _{2.5}	Fine particle Sampler (Gravimetric method)	µg/m ³	5.0
3	Sulphur Dioxide	Modified West and Gaeke method	µg/m ³	4.0
4	Nitrogen Oxide	Jacob & Hochheiser method	µg/m ³	6.0
5	Lead	Atomic Absorption Spectrometry	µg/m ³	0.5
6	Carbon Monoxide	Draggers Tube	mg/m ³	0.1
7	Ozone	UV Photometric	µg/m ³	2.0
8	Ammonia	Indophenol blue method	µg/m ³	2.0
9	Benzene	Gas Chromatography	µg/m ³	1.0
10	Benzene (α) pyrene	Gas Chromatography	ng/m ³	0.1
11	Arsenic	Atomic Absorption Spectrometry	ng/m ³	1.0
12	Nickel	Atomic Absorption Spectrometry	ng/m ³	5.0

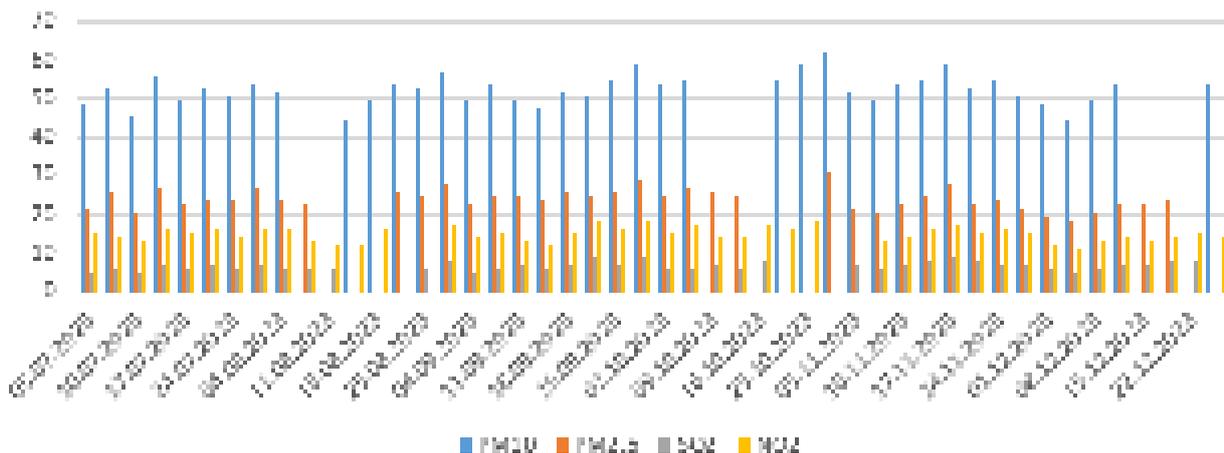
Results and Discussion

The results of the ambient air quality for the study period are submitted. The minimum, maximum 98th percentile and average values have been computed from the observed raw data for all the AAQ monitoring stations. The summary of these results for all the locations is presented in the Table and the detailed analytical results are shown in Annexure - 2. These are compared with the standards prescribed by Central Pollution Control Board (CPCB) for "Industrial, Rural, Residential and other areas"

ANNEXURE - 2 RESULTS OF AMBIENT AIR QUALITY MONITORING DATA

PORT OPERATING BUILDING - (AAQ1)													
Parameters		Particular matter PM10	Particular matter PM2.5	Sulphur dioxide as SO2	Nitrogen dioxide as NO2	Lead as Pb	Carbon monoxide as CO	Ozone as O3	Ammonia as NH3	Arsenic as As	Nickel as Ni	Benzene as C6H6	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												
1	03.07.2023	48.5	22.1	5.5	15.6	<0.1	<1	<10	<2	<2	<2	<1	<0.1
2	07.07.2023	52.6	25.3	6.2	14.9	<0.1	<1	<10	<2	<2	<2	<1	<0.1
3	10.07.2023	45.1	20.8	5	13	<0.1	<1	<10	<2	<2	<2	<1	<0.1
4	14.07.2023	55.7	27	7.3	16.1	<0.1	<1	<10	<2	<2	<2	<1	<0.1
5	17.07.2023	49.4	22.8	6	15.7	<0.1	<1	<10	<2	<2	<2	<1	<0.1
6	21.07.2023	52.6	24	7.1	16.7	<0.1	<1	<10	<2	<2	<2	<1	<0.1
7	24.07.2023	50.3	23.4	5.8	14.6	<0.1	<1	<10	<2	<2	<2	<1	<0.1
8	28.07.2023	54.2	26.8	7.1	16.3	<0.1	<1	<10	<2	<2	<2	<1	<0.1
9	04.08.2023	51.4	24.1	6.2	16.3	<0.1	<1	<10	<2	<2	<2	<1	<0.1
10	07.08.2023	49.8	23	5.6	13.8	<0.1	<1	<10	<2	<2	<2	<1	<0.1
11	11.08.2023	47.3	22.4	5.9	12.7	<0.1	<1	<10	<2	<2	<2	<1	<0.1
12	14.08.2023	44.8	21.6	5.3	11.9	<0.1	<1	<10	<2	<2	<2	<1	<0.1
13	18.08.2023	50.2	23.7	6.7	16.3	<0.1	<1	<10	<2	<2	<2	<1	<0.1
14	21.08.2023	54.3	25.9	8	17.1	<0.1	<1	<10	<2	<2	<2	<1	<0.1
15	25.08.2023	52.8	24.3	6.4	15.9	<0.1	<1	<10	<2	<2	<2	<1	<0.1
16	28.08.2023	56.9	27.9	8.2	17.6	<0.1	<1	<10	<2	<2	<2	<1	<0.1
17	04.09.2023	49.5	22.6	5.5	14.8	<0.1	<1	<10	<2	<2	<2	<1	<0.1
18	08.09.2023	53.6	25.1	6.3	15.2	<0.1	<1	<10	<2	<2	<2	<1	<0.1
19	11.09.2023	50.1	24.3	6.7	13.4	<0.1	<1	<10	<2	<2	<2	<1	<0.1
20	15.09.2023	47.6	23.9	5.8	12.7	<0.1	<1	<10	<2	<2	<2	<1	<0.1
21	18.09.2023	52.1	25.6	7.4	15.5	<0.1	<1	<10	<2	<2	<2	<1	<0.1
22	22.09.2023	50.8	24.9	8.7	18.2	<0.1	<1	<10	<2	<2	<2	<1	<0.1
23	25.09.2023	55.3	26.1	7.3	16.7	<0.1	<1	<10	<2	<2	<2	<1	<0.1
24	29.09.2023	58.6	28.7	9	18.5	<0.1	<1	<10	<2	<2	<2	<1	<0.1
25	02.10.2023	53.8	24.3	6.1	15.6	<0.1	<1	<10	<2	<2	<2	<1	<0.1
26	06.10.2023	55.4	27.2	6.3	17.1	<0.1	<1	<10	<2	<2	<2	<1	<0.1
27	09.10.2023	52.8	25.4	7.5	14.8	<0.1	<1	<10	<2	<2	<2	<1	<0.1
28	13.10.2023	50.4	24.7	6.4	13.9	<0.1	<1	<10	<2	<2	<2	<1	<0.1
29	16.10.2023	56.8	27.5	8.5	17.6	<0.1	<1	<10	<2	<2	<2	<1	<0.1
30	20.10.2023	54.9	26.3	9.6	16.4	<0.1	<1	<10	<2	<2	<2	<1	<0.1
31	23.10.2023	58.6	27.8	8.1	18.2	<0.1	<1	<10	<2	<2	<2	<1	<0.1
32	27.10.2023	62.1	30.6	10.2	19.3	<0.1	<1	<10	<2	<2	<2	<1	<0.1
33	03.11.2023	51.3	21.2	6.7	14.5	<0.1	<1	<10	<2	<2	<2	<1	<0.1
34	06.11.2023	49.6	20.4	5.6	13.6	<0.1	<1	<10	<2	<2	<2	<1	<0.1
35	10.11.2023	53.9	22.9	7.1	14.9	<0.1	<1	<10	<2	<2	<2	<1	<0.1
36	13.11.2023	55.2	24.6	7.8	16.1	<0.1	<1	<10	<2	<2	<2	<1	<0.1
37	17.11.2023	58.6	28.4	9.1	17.2	<0.1	<1	<10	<2	<2	<2	<1	<0.1
38	20.11.2023	52.4	22.5	8.6	15.3	<0.1	<1	<10	<2	<2	<2	<1	<0.1
39	24.11.2023	54.7	24.1	7.5	16.4	<0.1	<1	<10	<2	<2	<2	<1	<0.1
40	27.11.2023	50.4	21.6	7.3	15.8	<0.1	<1	<10	<2	<2	<2	<1	<0.1
41	01.12.2023	48.3	19.6	5.9	12.4	<0.1	<1	<10	<2	<2	<2	<1	<0.1
42	04.12.2023	44.8	18.1	5.2	11.3	<0.1	<1	<10	<2	<2	<2	<1	<0.1
43	08.12.2023	49.5	20.4	6.5	13.1	<0.1	<1	<10	<2	<2	<2	<1	<0.1
44	11.12.2023	53.8	23.1	7.4	14.5	<0.1	<1	<10	<2	<2	<2	<1	<0.1
45	15.12.2023	51.5	22.3	6.9	13.7	<0.1	<1	<10	<2	<2	<2	<1	<0.1
46	18.12.2023	54.2	24.1	7.8	14.6	<0.1	<1	<10	<2	<2	<2	<1	<0.1
47	22.12.2023	56.1	25.7	8.1	15.6	<0.1	<1	<10	<2	<2	<2	<1	<0.1
48	25.12.2023	53.4	23.2	7.7	14.3	<0.1	<1	<10	<2	<2	<2	<1	<0.1

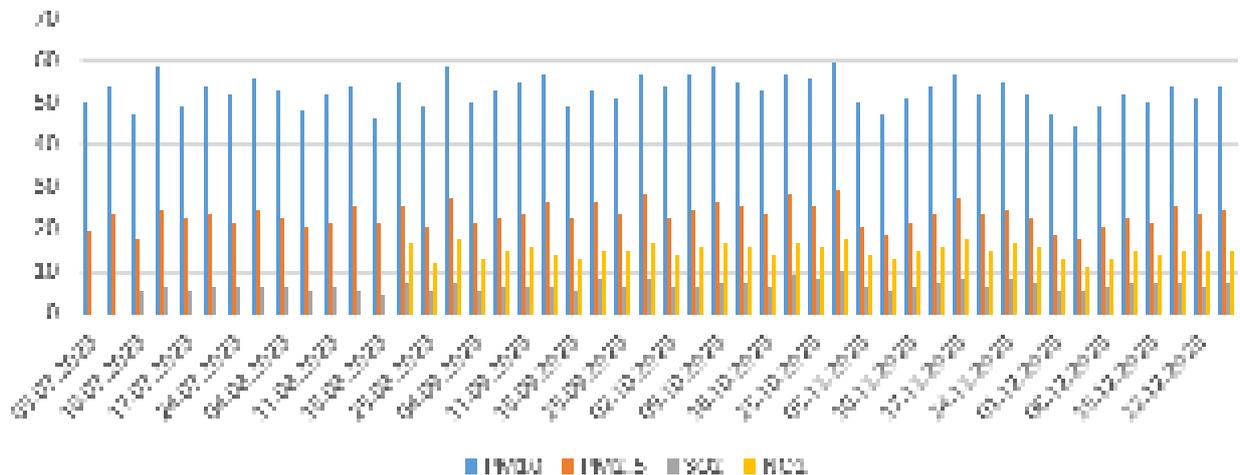
PORT OPERATING BUILDING (AAQ 1)



RMU BUILDING - (AAQ2)

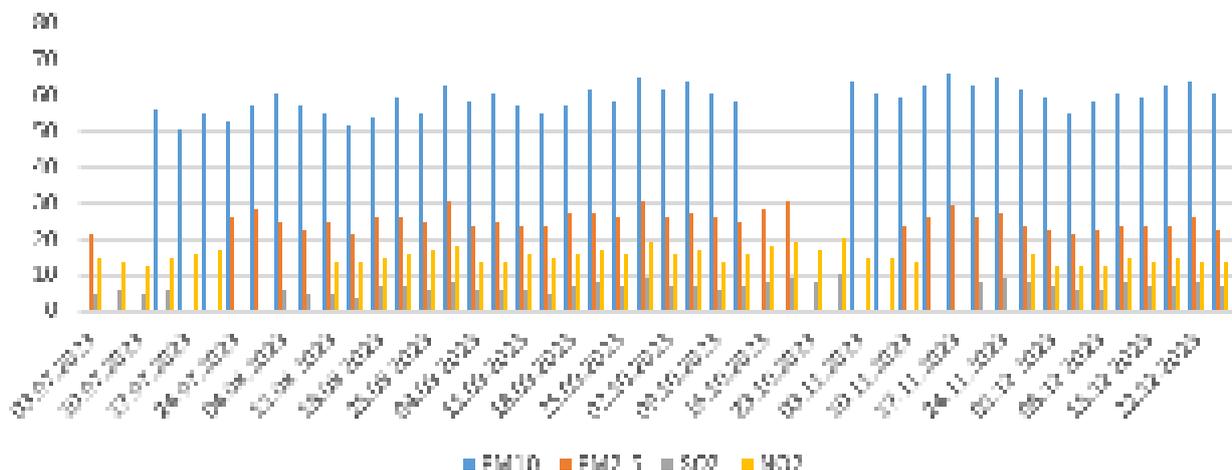
Parameters		Particular matter PM10	Particular matter PM2.5	Sulphur dioxide as SO2	Nitrogen dioxide as NO2	Lead as Pb	Carbon monoxide as CO	Ozone as O3	Ammonia as NH3	Arsenic as As	Nickel as Ni	Benzene as C6H6	Benzo (a) pyrene as BaP
Unit		µg/m3	µg/m3	µg/m3	µg/m3	µg/m3	mg/m3	µg/m3	µg/m3	ng/m3	ng/m3	µg/m3	ng/m3
National AAQM Standard		100	60	80	80	1	4	180	400	6	20	5	1
S.No.	Sampling Date												
1	03.07.2023	50.2	20.1	5.7	13.4	<0.1	<1	<10	<2	<2	<2	<1	<0.1
2	07.07.2023	53.9	23.4	6.5	14.3	<0.1	<1	<10	<2	<2	<2	<1	<0.1
3	10.07.2023	47.5	18.2	5.4	13	<0.1	<1	<10	<2	<2	<2	<1	<0.1
4	14.07.2023	58.3	24.6	6.9	14.8	<0.1	<1	<10	<2	<2	<2	<1	<0.1
5	17.07.2023	49.2	22.9	5.4	14.8	<0.1	<1	<10	<2	<2	<2	<1	<0.1
6	21.07.2023	54.3	23.8	6.5	15.9	<0.1	<1	<10	<2	<2	<2	<1	<0.1
7	24.07.2023	51.7	21.4	6.2	13.7	<0.1	<1	<10	<2	<2	<2	<1	<0.1
8	28.07.2023	56.1	24.5	6.7	16.4	<0.1	<1	<10	<2	<2	<2	<1	<0.1
9	04.08.2023	52.6	22.9	6.4	14.2	<0.1	<1	<10	<2	<2	<2	<1	<0.1
10	07.08.2023	48.6	20.3	5.9	13.1	<0.1	<1	<10	<2	<2	<2	<1	<0.1
11	11.08.2023	51.6	21.5	6.1	13.9	<0.1	<1	<10	<2	<2	<2	<1	<0.1
12	14.08.2023	54.3	25.2	5.8	15.1	<0.1	<1	<10	<2	<2	<2	<1	<0.1
13	18.08.2023	46.5	21.4	5	13.6	<0.1	<1	<10	<2	<2	<2	<1	<0.1
14	21.08.2023	55.2	25.6	7.3	16.7	<0.1	<1	<10	<2	<2	<2	<1	<0.1
15	25.08.2023	49.3	20.6	5.8	12.5	<0.1	<1	<10	<2	<2	<2	<1	<0.1
16	28.08.2023	59.1	27.8	7.7	17.8	<0.1	<1	<10	<2	<2	<2	<1	<0.1
17	04.09.2023	50.3	21.5	5.8	13	<0.1	<1	<10	<2	<2	<2	<1	<0.1
18	08.09.2023	52.7	22.4	6.5	14.6	<0.1	<1	<10	<2	<2	<2	<1	<0.1
19	11.09.2023	55.2	23.5	6.8	15.7	<0.1	<1	<10	<2	<2	<2	<1	<0.1
20	15.09.2023	56.7	26.4	6.4	14.3	<0.1	<1	<10	<2	<2	<2	<1	<0.1
21	18.09.2023	49.3	22.7	5.9	12.8	<0.1	<1	<10	<2	<2	<2	<1	<0.1
22	22.09.2023	53.1	26.8	8.2	15.4	<0.1	<1	<10	<2	<2	<2	<1	<0.1
23	25.09.2023	51.4	23.5	6.7	14.8	<0.1	<1	<10	<2	<2	<2	<1	<0.1
24	29.09.2023	56.3	28.1	8.5	16.9	<0.1	<1	<10	<2	<2	<2	<1	<0.1
25	02.10.2023	54.2	22.8	6.4	14.3	<0.1	<1	<10	<2	<2	<2	<1	<0.1
26	06.10.2023	56.3	24.5	6.9	15.8	<0.1	<1	<10	<2	<2	<2	<1	<0.1
27	09.10.2023	58.4	26.1	7.6	17.2	<0.1	<1	<10	<2	<2	<2	<1	<0.1
28	13.10.2023	54.9	25.3	7.1	15.7	<0.1	<1	<10	<2	<2	<2	<1	<0.1
29	16.10.2023	52.9	23.8	6.5	14.3	<0.1	<1	<10	<2	<2	<2	<1	<0.1
30	20.10.2023	56.6	27.9	9.1	16.8	<0.1	<1	<10	<2	<2	<2	<1	<0.1
31	23.10.2023	55.8	25.7	8.2	15.9	<0.1	<1	<10	<2	<2	<2	<1	<0.1
32	27.10.2023	59.7	29.6	9.9	18.2	<0.1	<1	<10	<2	<2	<2	<1	<0.1
33	03.11.2023	50.4	20.6	6.1	13.9	<0.1	<1	<10	<2	<2	<2	<1	<0.1
34	06.11.2023	47.6	19.2	5.4	13.3	<0.1	<1	<10	<2	<2	<2	<1	<0.1
35	10.11.2023	51.3	21.5	6.7	14.8	<0.1	<1	<10	<2	<2	<2	<1	<0.1
36	13.11.2023	53.9	23.2	7.5	16.1	<0.1	<1	<10	<2	<2	<2	<1	<0.1
37	17.11.2023	56.7	26.9	8.5	17.6	<0.1	<1	<10	<2	<2	<2	<1	<0.1
38	20.11.2023	52.1	23.4	6.7	15.3	<0.1	<1	<10	<2	<2	<2	<1	<0.1
39	24.11.2023	54.6	24.3	8.1	16.9	<0.1	<1	<10	<2	<2	<2	<1	<0.1
40	27.11.2023	51.8	22.9	7.3	16.2	<0.1	<1	<10	<2	<2	<2	<1	<0.1
41	01.12.2023	47.3	19.1	5.6	12.7	<0.1	<1	<10	<2	<2	<2	<1	<0.1
42	04.12.2023	44.7	17.6	5.1	11.5	<0.1	<1	<10	<2	<2	<2	<1	<0.1
43	08.12.2023	48.9	20.8	6.2	13.4	<0.1	<1	<10	<2	<2	<2	<1	<0.1
44	11.12.2023	52.4	22.9	7.9	15.3	<0.1	<1	<10	<2	<2	<2	<1	<0.1
45	15.12.2023	50.2	21.7	7.6	14.2	<0.1	<1	<10	<2	<2	<2	<1	<0.1
46	18.12.2023	53.6	25.1	7.9	14.7	<0.1	<1	<10	<2	<2	<2	<1	<0.1
47	22.12.2023	51.5	23.1	6.8	15.4	<0.1	<1	<10	<2	<2	<2	<1	<0.1
48	25.12.2023	54.2	24.6	7.3	14.7	<0.1	<1	<10	<2	<2	<2	<1	<0.1

RMU BUILDING (AAQ 2)



IN TERMINAL GATE - (AAQ3)													
Parameters		Particular matter PM10	Particular matter PM2.5	Sulphur dioxide as SO2	Nitrogen dioxide as NO2	Lead as Pb	Carbon monoxide as CO	Ozone as O3	Ammonia as NH3	Arsenic as As	Nickel as Ni	Benzene as C6H6	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												
1	03.07.2023	57.8	21.6	5	14.9	<0.1	<1	<10	<2	<2	<2	<1	<0.1
2	07.07.2023	59.4	23.7	5.6	13.5	<0.1	<1	<10	<2	<2	<2	<1	<0.1
3	10.07.2023	47.2	20.4	4.5	12.9	<0.1	<1	<10	<2	<2	<2	<1	<0.1
4	14.07.2023	56.9	28.7	6.1	15	<0.1	<1	<10	<2	<2	<2	<1	<0.1
5	17.07.2023	50.7	24.9	5.8	16.1	<0.1	<1	<10	<2	<2	<2	<1	<0.1
6	21.07.2023	55.4	27	6.9	17.6	<0.1	<1	<10	<2	<2	<2	<1	<0.1
7	24.07.2023	52.8	26.1	5.4	15.7	<0.1	<1	<10	<2	<2	<2	<1	<0.1
8	28.07.2023	57.2	28.6	6.7	17.9	<0.1	<1	<10	<2	<2	<2	<1	<0.1
9	04.08.2023	61.2	24.8	6.3	15.8	<0.1	<1	<10	<2	<2	<2	<1	<0.1
10	07.08.2023	57.6	22.3	5.2	12.4	<0.1	<1	<10	<2	<2	<2	<1	<0.1
11	11.08.2023	55.3	25.1	5.2	14	<0.1	<1	<10	<2	<2	<2	<1	<0.1
12	14.08.2023	51.6	21.4	4	13.6	<0.1	<1	<10	<2	<2	<2	<1	<0.1
13	18.08.2023	53.7	25.8	6.6	15.3	<0.1	<1	<10	<2	<2	<2	<1	<0.1
14	21.08.2023	59.4	26	7.2	16.1	<0.1	<1	<10	<2	<2	<2	<1	<0.1
15	25.08.2023	55.6	24.7	6.3	17.2	<0.1	<1	<10	<2	<2	<2	<1	<0.1
16	28.08.2023	63.4	30.1	8.3	18.4	<0.1	<1	<10	<2	<2	<2	<1	<0.1
17	04.09.2023	58.6	23.4	5.8	14.3	<0.1	<1	<10	<2	<2	<2	<1	<0.1
18	08.09.2023	60.4	25.2	6.4	13.5	<0.1	<1	<10	<2	<2	<2	<1	<0.1
19	11.09.2023	57.2	24	6.1	15.8	<0.1	<1	<10	<2	<2	<2	<1	<0.1
20	15.09.2023	55.1	23.8	5.4	14.9	<0.1	<1	<10	<2	<2	<2	<1	<0.1
21	18.09.2023	57.6	26.9	7.2	16.4	<0.1	<1	<10	<2	<2	<2	<1	<0.1
22	22.09.2023	62.4	27.5	8.4	17.5	<0.1	<1	<10	<2	<2	<2	<1	<0.1
23	25.09.2023	58.3	26.4	6.9	15.8	<0.1	<1	<10	<2	<2	<2	<1	<0.1
24	29.09.2023	65.7	31.2	9.1	19.2	<0.1	<1	<10	<2	<2	<2	<1	<0.1
25	02.10.2023	62.4	26.3	7.1	15.6	<0.1	<1	<10	<2	<2	<2	<1	<0.1
26	06.10.2023	64.1	27.5	7.6	16.8	<0.1	<1	<10	<2	<2	<2	<1	<0.1
27	09.10.2023	60.8	25.8	5.9	14.3	<0.1	<1	<10	<2	<2	<2	<1	<0.1
28	13.10.2023	58.9	24.6	6.7	15.6	<0.1	<1	<10	<2	<2	<2	<1	<0.1
29	16.10.2023	61.4	28.4	8.1	17.8	<0.1	<1	<10	<2	<2	<2	<1	<0.1
30	20.10.2023	65.8	30.1	9.4	18.9	<0.1	<1	<10	<2	<2	<2	<1	<0.1
31	23.10.2023	63.8	28.6	7.8	17.6	<0.1	<1	<10	<2	<2	<2	<1	<0.1
32	27.10.2023	68.4	32.9	10.5	20.4	<0.1	<1	<10	<2	<2	<2	<1	<0.1
33	03.11.2023	63.8	25.6	7.8	14.9	<0.1	<1	<10	<2	<2	<2	<1	<0.1
34	06.11.2023	60.4	24.1	6.7	15.3	<0.1	<1	<10	<2	<2	<2	<1	<0.1
35	10.11.2023	59.3	23.7	5.6	13.8	<0.1	<1	<10	<2	<2	<2	<1	<0.1
36	13.11.2023	62.7	25.9	7.2	16.1	<0.1	<1	<10	<2	<2	<2	<1	<0.1
37	17.11.2023	66.3	29.6	9.6	19.2	<0.1	<1	<10	<2	<2	<2	<1	<0.1
38	20.11.2023	63.2	25.8	8.1	17.3	<0.1	<1	<10	<2	<2	<2	<1	<0.1
39	24.11.2023	65.4	27.6	9.3	18.1	<0.1	<1	<10	<2	<2	<2	<1	<0.1
40	27.11.2023	61.8	24.2	8.4	16.3	<0.1	<1	<10	<2	<2	<2	<1	<0.1
41	01.12.2023	59.4	23.1	6.7	13.1	<0.1	<1	<10	<2	<2	<2	<1	<0.1
42	04.12.2023	55.6	21.8	5.9	12.4	<0.1	<1	<10	<2	<2	<2	<1	<0.1
43	08.12.2023	58.4	22.6	6.3	12.9	<0.1	<1	<10	<2	<2	<2	<1	<0.1
44	11.12.2023	61.3	24.3	7.8	14.8	<0.1	<1	<10	<2	<2	<2	<1	<0.1
45	15.12.2023	59.7	23.6	6.8	13.5	<0.1	<1	<10	<2	<2	<2	<1	<0.1
46	18.12.2023	62.8	24.3	7.4	15.2	<0.1	<1	<10	<2	<2	<2	<1	<0.1
47	22.12.2023	64.8	26.1	8.5	14.3	<0.1	<1	<10	<2	<2	<2	<1	<0.1
48	25.12.2023	60.8	22.5	7.3	13.7	<0.1	<1	<10	<2	<2	<2	<1	<0.1

IN TERMINAL GATE - (AAQ3)



ii. AMBIENT NOISE LEVEL INTENSITY

Collection of ambient noise levels at four locations. Spot noise levels were measured with a precalibrated Noise Level Meter - SL- 4023 SD for day and night periods.

DETAILS OF NOISE MONITORING LOCATIONS

STATION CODE	LOCATIONS	Geographical Location
N1	Port operating building	13.270444° N 80.334657° E
N2	RMU Building	13.273412° N 80.337600° E
N3	In Terminal Gate	13.273715° N 80.333810° E

Fig - 4. Noise Level Sampling Locations

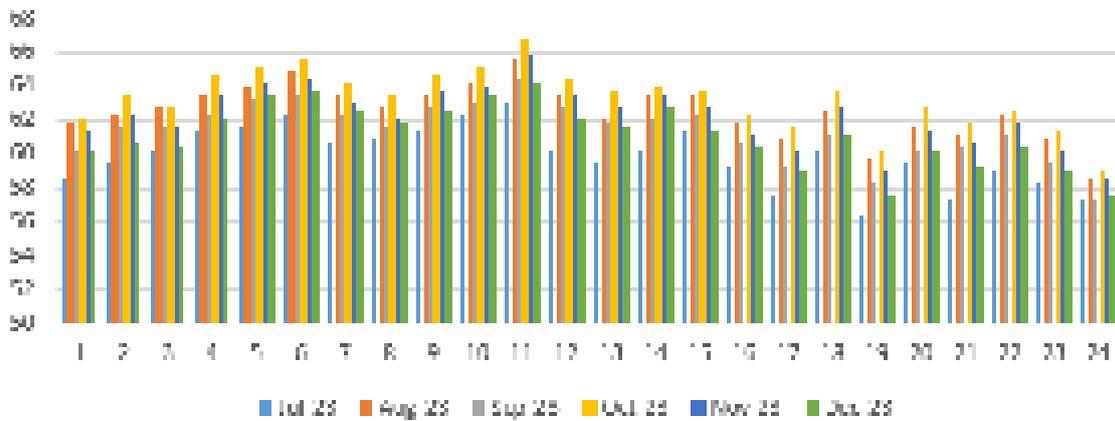


The noise levels monitored during the study period are given hereunder in form of Leq day, Leq night compared with CPCB Standards.

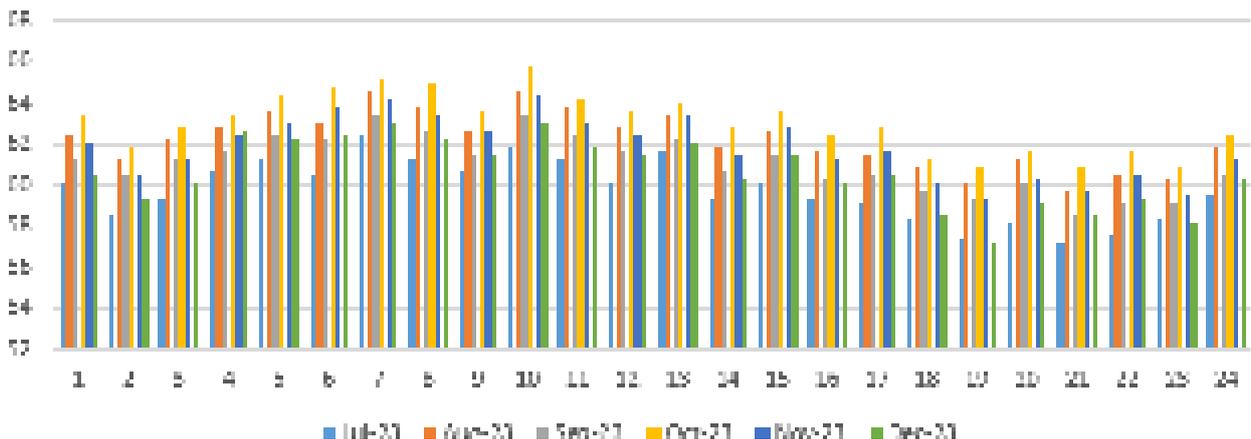
ANNEXURE - 3 RESULTS OF AMBIENT NOISE LEVEL MONITORING DATA

Location		IN TERMINAL GATE - (N1)						RMU BUILDING - (N2)					
Month & Year		July-23	Aug-23	Sept-	oct- 23	Nov- 23	Dec- 23	July-23	Aug-23	Sept- 23	oct- 23	Nov- 23	Dec- 23
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.N	Time of Sampling												
1	06.00 – 07.00 (Day)	58.6	61.8	60.3	62.1	61.3	60.1	60.1	62.4	61.2	63.4	62.1	60.4
2	07.00 – 08.00	59.4	62.3	61.7	63.5	62.4	60.7	58.6	61.2	60.4	61.9	60.5	59.3
3	08.00 – 09.00	60.1	62.8	61.5	62.9	61.6	60.5	59.4	62.3	61.2	62.8	61.3	60.1
4	09.00 – 10.00	61.3	63.5	62.4	64.8	63.5	62.1	60.7	62.9	61.7	63.5	62.4	62.7
5	10.00 – 11.00	61.6	64.1	63.2	65.1	64.2	63.4	61.3	63.7	62.5	64.3	63.1	62.3
6	11.00 – 12.00	62.3	64.9	63.5	65.7	64.5	63.8	60.5	63.1	62.3	64.8	63.9	62.5
7	12.00 – 13.00	60.7	63.5	62.4	64.2	63.1	62.5	62.4	64.5	63.4	65.1	64.2	63.1
8	13.00 – 14.00	60.9	62.7	61.6	63.4	62.2	61.9	61.2	63.9	62.7	64.9	63.5	62.2
9	14.00 – 15.00	61.4	63.6	62.7	64.6	63.7	62.6	60.7	62.7	61.5	63.7	62.6	61.5
10	15.00 – 16.00	62.3	64.2	63.1	65.2	64.1	63.4	61.8	64.5	63.4	65.7	64.3	63.1
11	16.00 – 17.00	63.1	65.7	64.5	66.9	65.8	64.2	61.2	63.9	62.5	64.2	63.1	61.8
12	17.00 – 18.00	60.2	63.5	62.7	64.5	63.4	62.1	60.1	62.8	61.6	63.6	62.5	61.4
13	18.00 – 19.00	59.4	62.1	61.9	63.7	62.9	61.6	61.6	63.5	62.3	64.1	63.4	62.1
14	19.00 – 20.00	60.2	63.4	62.2	64.1	63.5	62.7	59.3	61.8	60.7	62.9	61.5	60.3
15	20.00 – 21.00	61.4	63.5	62.3	63.8	62.9	61.3	60.2	62.6	61.5	63.7	62.9	61.5
16	21.00 – 22.00	59.3	61.9	60.6	62.3	61.2	60.5	59.4	61.7	60.3	62.5	61.3	60.1
17	22.00 – 23.00 (Night)	57.6	60.8	59.3	61.5	60.3	58.9	59.1	61.5	60.4	62.8	61.6	60.4
18	23.00 – 00.00	60.1	62.6	61.2	63.8	62.7	61.2	58.3	60.8	59.7	61.2	60.1	58.6
19	00.00 – 01.00	56.5	59.7	58.4	60.3	59.1	57.6	57.4	60.1	59.3	60.9	59.4	57.2
20	01.00 – 02.00	59.4	61.5	60.3	62.7	61.4	60.1	58.2	61.3	60.1	61.6	60.3	59.1
21	02.00 – 03.00	57.3	61.2	60.4	61.9	60.6	59.3	57.1	59.7	58.6	60.8	59.7	58.6
22	03.00 – 04.00	59.1	62.4	61.2	62.6	61.8	60.5	57.6	60.4	59.2	61.7	60.5	59.4
23	04.00 – 05.00	58.2	60.8	59.6	61.3	60.2	59.1	58.3	60.3	59.1	60.9	59.6	58.1
24	05.00 – 06.00	57.4	58.6	57.3	59.1	58.6	57.6	59.5	61.8	60.4	62.4	61.2	60.3

INTERNAL GATE (N1)

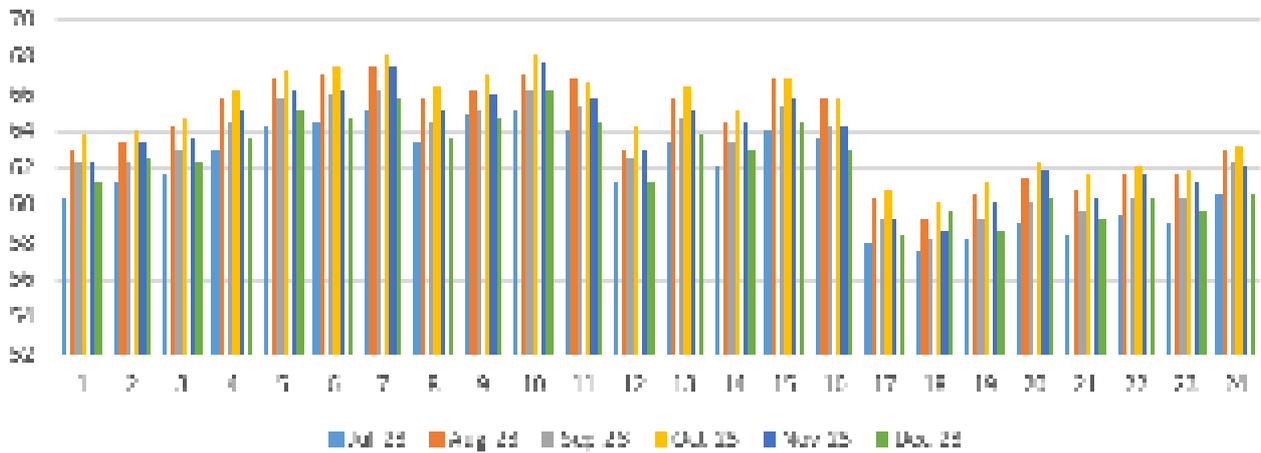


RMU BUILDING - (N2)



Location		PORT OPERATING BUILDING – (N3)					
Month & Year		July-23	Aug-23	Sept- 23	oct- 23	Nov- 23	Dec- 23
Parameter & Unit		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)	60.4	63.1	62.3	63.9	62.4	61.2
2	07.00 –08.00	61.3	63.5	62.4	64.1	63.5	62.5
3	08.00 – 09.00	61.8	64.2	63.1	64.8	63.7	62.4
4	09.00 – 10.00	63.1	65.8	64.5	66.2	65.1	63.7
5	10.00 – 11.00	64.3	66.9	65.7	67.4	66.2	65.1
6	11.00 – 12.00	64.5	67.2	66.1	67.6	66.3	64.8
7	12.00 – 13.00	65.1	67.5	66.3	68.1	67.5	65.9
8	13.00 – 14.00	63.4	65.9	64.5	66.4	65.2	63.6
9	14.00 – 15.00	64.9	66.3	65.1	67.2	66.1	64.7
10	15.00 – 16.00	65.2	67.2	66.3	68.1	67.8	66.3
11	16.00 – 17.00	64.1	66.8	65.4	66.7	65.9	64.5
12	17.00 – 18.00	61.3	63.1	62.5	64.2	63.1	61.2
13	18.00 – 19.00	63.4	65.9	64.8	66.4	65.2	63.8
14	19.00 –20.00	62.2	64.5	63.5	65.1	64.5	62.9
15	20.00 – 21.00	64.1	66.9	65.4	66.9	65.8	64.6
16	21.00 – 22.00	63.7	65.7	64.2	65.7	64.3	63.1
17	22.00 – 23.00 (Night)	58.1	60.5	59.3	60.9	59.4	58.4
18	23.00 – 00.00	57.6	59.4	58.2	60.1	58.7	59.8
19	00.00 – 01.00	58.3	60.7	59.4	61.3	60.2	58.6
20	01.00 – 02.00	59.1	61.6	60.2	62.4	61.9	60.5
21	02.00 – 03.00	58.4	60.9	59.7	61.8	60.5	59.3
22	03.00 – 04.00	59.6	61.7	60.4	62.1	61.7	60.4
23	04.00 – 05.00	59.2	61.8	60.5	61.9	61.2	59.8
24	05.00 – 06.00	60.6	63.1	62.4	63.2	62.1	60.7

PORT OPERATING BUILDING – (N3)



Ambient Air Quality Standards in respect of Noise

Area Code	Category of Area / Zone	Limits in dB(A) Leq*	
		Day Time	Night Time
(A)	Industrial area	75	70
(B)	Commercial area	65	60
(C)	Residential area	55	45
(D)	Silence Zone	50	40

- Notes: 1. Day time shall mean from 6:00 a.m. to 10:00 p.m.
 2. Night time shall mean from 10:00 p.m. to 6:00 a.m.
 3. Silence zone is an area comprising not less than 100 metres ground frontage, residential structures, courts, religious places or any other area which is declared as such by the competent authority.
 4. Mixed categories of areas may be declared as one of the four above mentioned categories by the competent authority.

* dB(A) Leq denotes the time weighted average of the level of sound in decibels on scale A which is readable to human hearing.

A "decibel" is a unit in which noise is measured.

"A", in dB(A) Leq, denotes the frequency weighting in the measurement of noise and corresponds to frequency response characteristics of the human ear.

Leq is an energy mean of the noise level over a specified period.



iii. DG SET EMISSIONS

Sampling of Flue gas emission of 2000 KVA DG Set was done and its emissions were determined along with its noise intensity. The Detailed report has been is enclosed as Annexure - 4

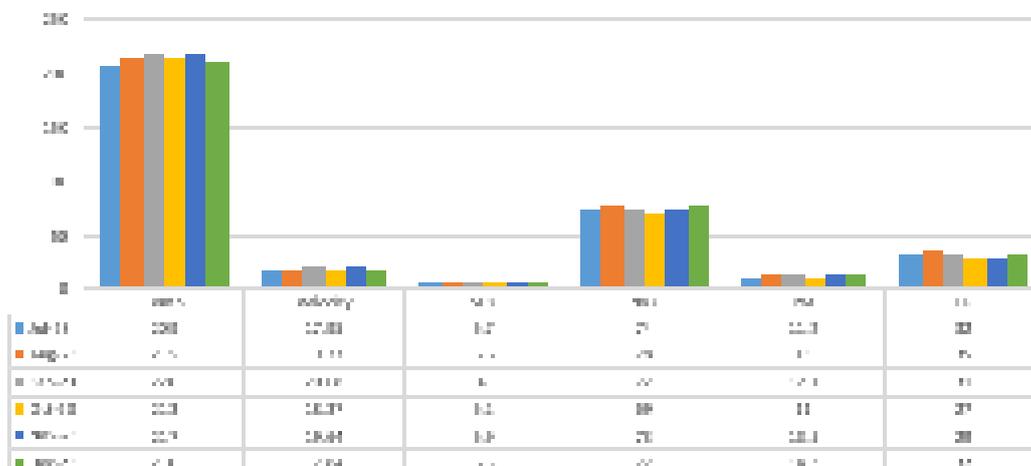
DETAILS OF EMISSION MONITORING LOCATIONS

STATION CODE	LOCATIONS	Geographical Location
SM-01	DG – 1 1500 KVA (Near MRSS)	13°16'13.40"N 80°20'8.15"E
SM-02	DG – 2 1500 KVA (Near MRSS)	13°16'13.40"N 80°20'8.15"E
SM-03	DG – 3 1500 KVA (Near MRSS)	13°16'13.40"N 80°20'8.15"E
SM-04	DG-4 125 KVA (Near MRSS)	13°16'13.16"N 80°20'7.19"E

ANNEXURE - 4 RESULTS OF SOURCE EMISSION MONITORING DATA

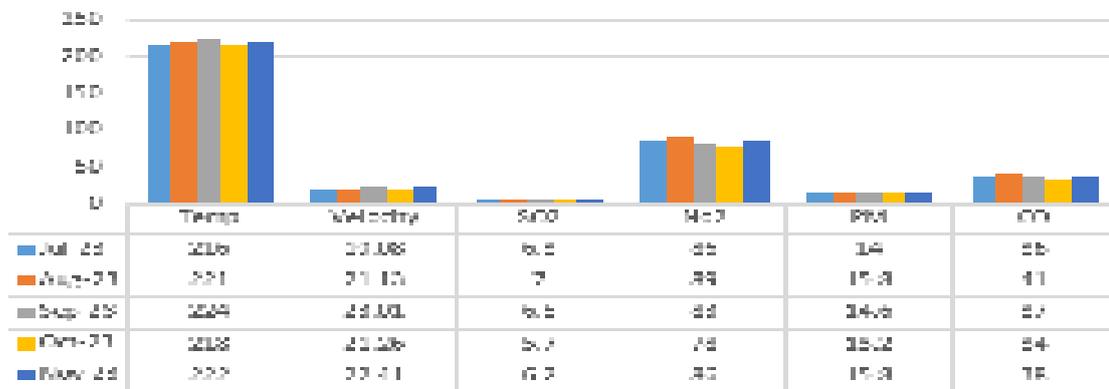
STACK MONITORING							
Location		DG 1500 KVA - 1					
Month & Year		July - 23	Aug - 23	Sept - 23	Oct - 23	Nov - 23	Dec - 23
S.No.	Parameters						
1	Stack Temperature, °C	209	215	220	213	217	210
2	Flue Gas Velocity, m/s	17.92	19.23	20.68	18.37	19.64	17.84
3	Sulphur Dioxide, mg/Nm3	5.7	6.6	6.0	5.2	5.9	6.3
4	NOX (as NO2) in ppmv	74	78	72	69	73	77
5	Particular matter, mg/Nm3	11.2	13.0	12.1	11.0	13.5	14.3
6	Carbon Monoxide, mg/Nm3	32	35	31	27	29	32
7	Gas Discharge, Nm3/hr	14578	15348	15986	14869	15579	15938

DG Set 1500 KVA - 1



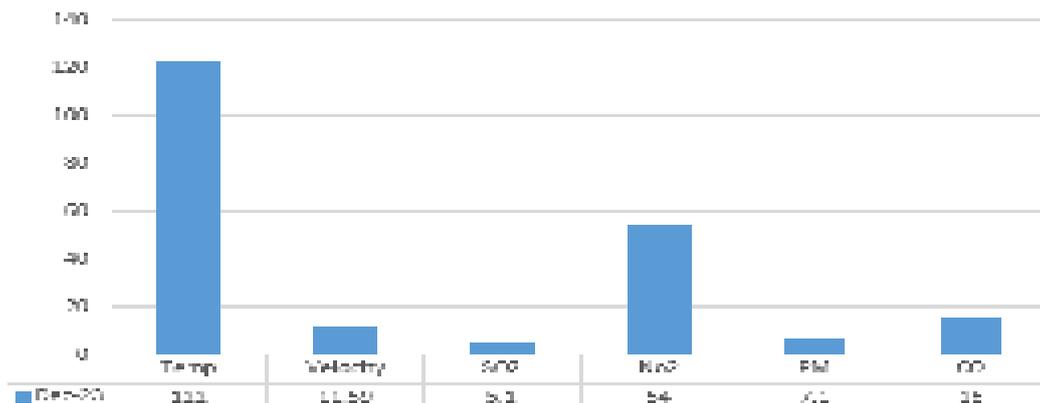
STACK MONITORING							
Location		DG 1500 KVA - 2					
Month & Year		July - 23	Aug - 23	Sept - 23	Oct - 23	Nov - 23	Dec - 23
S.No.	Parameters						
1	Stack Temperature, °C	216	221	224	218	222	-
2	Flue Gas Velocity, m/s	19.08	21.13	23.01	21.26	22.41	-
3	Sulphur Dioxide, mg/Nm3	6.3	7.0	6.5	5.7	6.2	-
4	NOX (as NO2) in ppmv	86	89	83	78	86	-
5	Particular matter, mg/Nm3	14.0	15.8	14.6	13.2	15.8	-
6	Carbon Monoxide, mg/Nm3	36	41	37	34	38	-
7	Gas Discharge, Nm3/hr	16329	17124	18045	17324	17863	-

DG Set 1500 KVA



STACK MONITORING							
Location		DG 125 KVA					
Month & Year		July - 23	Aug - 23	Sept - 23	Oct - 23	Nov - 23	Dec - 23
S.No.	Parameters						
1	Stack Temperature, °C	-	-	-	-	-	122
2	Flue Gas Velocity, m/s	-	-	-	-	-	11.59
3	Sulphur Dioxide, mg/Nm3	-	-	-	-	-	5.1
4	NOX (as NO2) in ppmv	-	-	-	-	-	54
5	Particular matter, mg/Nm3	-	-	-	-	-	7.10
6	Carbon Monoxide, mg/Nm3	-	-	-	-	-	16
7	Gas Discharge, Nm3/hr	-	-	-	-	-	1010

DG Set 125 KVA



Parameter	Site Category	Total number of samples of the plant, including on-site as well as near-adjacent sites	Compliance with ambient air quality standards		
			Before 1.7.2019	Between 1.7.2019 and 1.7.2020	On or after 1.7.2020
NO _x (as NO ₂) (µg/m ³) (24-hr average)	A	1	100	100	100
	B	1	100	100	100
	A	1	100	100	100
	B	1	100	100	100
PM ₁₀ (µg/m ³) (24-hr average)	Site A and B	1	100	100	
PM _{2.5} (µg/m ³) (24-hr average)	Site A and B	1	100	100	
	Site A and B	1	100	100	
SO ₂ (µg/m ³) (24-hr average)	Site A and B	1	100	100	

¹ Based on the data from the Environmental Protection Agency (EPA) monitoring sites, 100% compliance with the standards for NO_x (as NO₂) (µg/m³) (24-hr average) and PM₁₀ (µg/m³) (24-hr average) was achieved by all sites.

² Based on the data from the Environmental Protection Agency (EPA) monitoring sites, 100% compliance with the standards for PM_{2.5} (µg/m³) (24-hr average) was achieved by all sites.



iv. STP WATER SAMPLE ANALYSIS

Water samples were collected at the following points.

- 25 KLD Inlet and Treated Water Outlet

DETAILS OF STP WATER LOCATIONS

STATION CODE	LOCATIONS	Geographical Location
STP – 1	25 KLD	13°16'15.33"N 80°20'0.46"E

Analysis results of the water sample collected from the above location are enclosed as Annexure - 5.

ANNEXURE - 5 RESULTS OF STP WATER QUALITY DATA

STP WATER													
Location		STP 25KLD INLET						STP 25KLD OUTLET					
Month & Year		July - 23	Aug- 23	Sept - 23	Oct - 23	Nov - 23	Dec - 23	July - 23	Aug - 23	Sept - 23	Oct - 23	Nov - 23	Dec - 23
S.N	Parameters												
1	pH @ 25°C	7.04	6.92	6.80	6.71	6.89	6.63	7.10	7.03	7.14	7.05	7.15	7.04
2	Total Suspended	97.0	89.0	95.0	86.0	79.0	83.0	21.0	18.0	22.0	17.0	15.0	18.0
3	BOD at 27°C for 3	116	102	120	106	102	110	14.0	10.0	16.0	13.0	11.0	14.0
4	Fecal Coliform	1060	1030	1120	1060	900	952	110	97.0	118	104	90	98
5	COD	320	296	330	304	289	314	50.1	36.2	45.9	39.7	35.1	41.0
6	Oil & Grease	5.8	5.3	6.0	5.0	4.7	5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
7	Total Dissolved Solids	794	728	810	760	726	816	710	664	724	687	644	720
8	Chlorides (as Cl)	389	376	395	380	362	378	342	330	342	327	315	324
9	Sulphates (as SO4)	54	49	53	48	40	45	40	36	39	35	31	35

ANNEXURE 10: ENVIRONMENTAL ASSESSMENT AND MANAGEMENT PLAN
WATER SUPPLY

New York, the 13th October 2017

Section 100(1)(b) – In pursuance of the provisions contained in sections 2 and 22 of the Environment Protection Act, 1986 (EP of 1986), the Central Government hereby makes the following rules (to be known as the Environment Protection Rules, 1986) as:

1. **Short title and commencement** – These rules may be called the Environment Protection (Water Supply) Rules, 1986.
2. They shall come into force on the date of their publication in the Official Gazette.
3. In the Environment Protection Rules, 1986, in Schedule 1, after sub-section (1) and the words therein occurring shall be followed by the words and figures in brackets immediately below:-

No.	Section	Amendment	Amendment
1	1		
2	2		
3	3		
4	4		
5	5		
6	6		
7	7		
8	8		
9	9		
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v. DRINKING WATER SAMPLE ANALYSIS

Drinking Water samples were collected at the Canteen or Office Building. Analysis results of the water sample collected from the above location are enclosed as Annexure - 6.

vi. RAW WATER SAMPLE ANALYSIS

Raw water samples were collected at the Pond. Analysis results of the water sample collected from the above location are enclosed as Annexure - 7.

ANNEXURE - 6 RESULTS OF WATER SAMPLE (DRINKING WATER) QUALITY DATA

DRINKING WATER								
S.No.	Month & Paramete	Unit	July - 23	Aug- 23	Sept - 23	Oct - 23	Nov - 23	Dec - 23
1	pH @ 25°C	-	6.75	6.83	6.71	6.89	6.91	6.84
2	Total Hardness as CaCo ₃	mg/L	15.8	17.6	19.7	16.9	14.23	12.3
3	Chloride as Cl	mg/L	15.6	18.2	21.3	16.4	14.2	11.2
4	Total Dissolved Solids	mg/L	49.8	53.4	58.6	49.2	40.5	33.9
5	Calcium as Ca	mg/L	3.87	4.24	4.67	4.18	3.49	2.96
6	Sulphate as SO ₄	mg/L	BDL (D.L.0.01)					
7	Total Alkalinity as CaCo ₃	mg/L	26.4	30.2	33.7	27.6	24.8	20.6
8	Magnesium as Mg	mg/L	1.49	1.71	1.96	1.59	1.34	1.21
9	Color	Hazen	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
10	Odour	-	Unobjectionable	Unobjectionable	Unobjectionable	Unobjectionable	Unobjectionable	Unobjectionable
11	Taste	-	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
12	Turbidity	NTU	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
13	Nitrate as No ₃	mg/L	BDL(DL:1.0)	BDL(DL:1.0)	BDL(DL:1.0)	BDL(DL:1.0)	BDL(DL:1.0)	BDL(DL:1.0)
14	Iron as Fe	mg/L	0.05	0.07	0.09	0.06	0.04	0.02
15	Total Residual Chlorine	mg/L	BDL (D.L.<0.01)					
16	Copper as Cu	mg/L	BDL (D.L.0.01)					
17	Manganese as Mn	mg/L	BDL (D.L.0.01)					
18	Fluoride as F	mg/L	BDL (D.L.0.01)					
19	Phenolic compounds as	mg/L	Nil	Nil	Nil	Nil	Nil	Nil
20	Mercury as Hg	mg/L	BDL (D.L.0.01)					
21	Cadmium as Cd	mg/L	BDL (D.L.0.01)					
22	Selenium as Se	mg/L	BDL (D.L.0.01)					
23	Arsenic as As	mg/L	BDL (D.L.0.01)					
24	Lead as Pb	mg/L	BDL (D.L.0.01)					
25	Zinc as Zn	mg/L	BDL (D.L.0.01)					
26	Anionic Detergents as MBAS	mg/L	Nil	Nil	Nil	Nil	Nil	Nil
27	Total Chromium as Cr	mg/L	BDL (D.L.0.01)					
28	Phenolphthalein Alkalinity as CaCO ₃	mg/L	Nil	Nil	Nil	Nil	Nil	Nil
29	Aluminium as Al	mg/L	BDL (D.L.0.01)					
30	Boron as B	mg/L	BDL (D.L.0.01)					
31	Mineral Oil	mg/L	BDL (D.L.0.01)					
32	Polynuclear Aromatic Hydrocarbons as	mg/L	BDL (D.L.0.0001)					
33	Pesticides	mg/L	Absent	Absent	Absent	Absent	Absent	Absent
34	Cyanide as CN	mg/L	BDL (DL : 0.01)					
35	E. coli	MPN/100ml	Absent	Absent	Absent	Absent	Absent	Absent
36	Total Coliform	MPN/100ml	Absent	Absent	Absent	Absent	Absent	Absent

ANNEXURE - 7 RESULTS OF RAINWATER HARVESTING POND WATER SAMPLE QUALITY DATA

RAW WATER SAMPLE								
Month & Year		Unit	July - 23	Aug- 23	Sept - 23	Oct - 23	Nov - 23	Dec - 23
S.No.	Parameters							
1	pH @ 25°C	-	-	-	-	-	7.41	7.25
2	Total Hardness as CaCo3	mg/L	-	-	-	-	362	340
3	Chloride as Cl	mg/L	-	-	-	-	580	557
4	Total Dissolved Solids	mg/L	-	-	-	-	1280	1226
5	Calcium as Ca	mg/L	-	-	-	-	62.6	60.3
6	Sulphate as SO4	mg/L	-	-	-	-	71.6	67.1
7	Total Alkalinity as CaCo3	mg/L	-	-	-	-	390	360
8	Magnesium as Mg	mg/L	-	-	-	-	49.8	46.2
9	Color	Hazen	-	-	-	-	<1.0	<1.0
10	Odour	-	-	-	-	-	Unobjectionable	Unobjectionable
11	Taste	-	-	-	-	-	Agreeable	Agreeable
12	Turbidity	NTU	-	-	-	-	0.58	0.49
13	Nitrate as No3	mg/L	-	-	-	-	10.5	9.04
14	Iron as Fe	mg/L	-	-	-	-	0.19	0.15
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	-	-	-	-	0.58	0.52
19	Phenolic compounds as	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	-	-	-	-	0.039	0.035
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	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	Per 100ml	-	-	-	-	Absent	Absent
36	Total Coliform	Per 100ml	-	-	-	-	Absent	Absent

vii. Marine Sampling

Marine Water samples and sediment samples were collected at locations South side berth and North side berth. Analysis data of Marine and sediments as represented in Annexure - 8 & 9.

DETAILS OF MARINE WATER AND SEDIMENT LOCATIONS

STATION CODE	LOCATIONS	Geographical Location
MW - 1 / MS - 1	CB - 1	13 ⁰ 18' 50" N 80 ⁰ 20' 51" E
MW - 2 / MS - 2	CB - 2	13 ⁰ 18' 46" N 80 ⁰ 20' 49" E
MW - 3 / MS - 3	BERTH - 3	13 ⁰ 18' 41" N 80 ⁰ 21' 4" E

Fig - 5. Water and Marine Sampling Locations



ANNEXURE – 8 RESULTS OF MARINE WATER QUALITY DATA

MARINE WATER														
S.NO	PARAMETER	UNITS	Berth Area											
			July - 23		Aug- 23		Sept - 23		Oct - 23		Nov - 23		Dec - 23	
			Surface	Bottom										
Physicochemical Parameters			Surface	Bottom										
1	Colour	Hazan	21	35	21	35	21	38	19	35	17	33	14	29
2	Odour	-	Unobject ionable	Unobjecti onable										
3	pH @ 25°C	-	8.02	8.01	8.02	8.01	8.09	8.05	8.16	8.10	8.28	8.14	9.21	8.10
4	Temperature	°C	28.6	28.5	28.6	28.5	28.5	28.4	28.3	28.2	28.1	28.0	28.0	27.8
5	Turbidity	NTU	20	27	20	27	18	25	16	23	14	21	12	17
6	Total Suspended Solids	mg/L	31	38	31	38	29	35	26	32	22	29	25	33
7	BOD at 27 oC for 3 days	mg/L	3.4	3.6	3.4	3.6	3.3	3.4	3.1	3.3	3.0	3.1	3.1	3.3
8	COD	mg/L	98.5	106	98.5	106	95.6	101	92.8	98.4	89.8	95.3	84.6	90.5
9	Dissolved oxygen	mg/L	3.4	3.0	3.4	3.0	3.5	3.2	3.6	3.3	3.7	3.4	3.5	3.3
10	Salinity at 25 °C	ppt	35.9	36.1	35.9	36.1	35.7	35.9	35.5	35.7	35.3	35.5	35.1	35.3
11	Oil & Grease	mg/L	BDL (DL : 1.0)											
Nutrient Parameters														
12	Nitrate as No3	mg/L	6.89	9.21	6.89	9.21	6.24	8.78	5.89	8.26	5.71	8.08	5.40	7.62
13	Nitrite as No2	mg/L	3.01	3.69	3.01	3.69	2.89	3.50	2.76	3.39	2.62	3.25	2.48	3.11
14	Ammonical Nitrogen as N	mg/L	BDL (DL : 1.0)											
15	Total Nitrogen	mg/L	BDL (DL : 1.0)											
16	Inorganic phosphates as PO4	mg/L	4.70	6.80	4.70	6.80	4.65	6.75	4.48	6.50	4.35	6.38	4.18	6.20
17	Silica as SiO2	mg/L	6.22	7.39	6.22	7.39	5.95	7.20	5.78	7.05	5.62	6.93	5.36	6.58
18	Particulate Organic Carbon	µgC/L	13	16	13	16	11	14	10	12	08	11	06	10
19	Pertoleum Hydrocarbons	µg/L	BDL (DL : 1.0)											
Heavy Metals														
20	Cadmium as Cd	mg/L	BDL (DL : 0.001)	BDL (DL : 0.01)	BDL (DL : 0.001)	BDL (DL : 0.01)	BDL (DL : 0.001)	BDL (DL : 0.01)						
21	Copper as Cu	mg/L	BDL (DL : 0.01)											
22	Total Iron as Fe	mg/L	0.75	0.84	0.75	0.84	0.71	0.80	0.63	0.77	0.61	0.71	0.57	0.68
23	Zinc as Zn	mg/L	BDL (DL : 0.01)											
24	Lead as Pb	mg/L	BDL (DL : 0.01)											
25	Mercury as Hg	mg/L	BDL (DL : 0.001)											
26	Nickel as Ni	mg/L	BDL (DL : 0.01)											
27	Total Chromium as Cr	mg/L	BDL (DL : 0.01)											
Bacteriological Parameters														
28	Escherichia Coli (ECLO)	per100ml	Absent											
29	Faecal Coliform (FCLO)	per100ml	Absent											
30	Pseudomonas aeruginosa (PALO)	per100ml	Absent											
31	Streptococcus faecalis (SFCLO)	per100ml	Absent											
32	Shigella (SHLO)	per100ml	Absent											
33	Salmonella (SLO)	per100ml	Absent											
34	Total Coliform (TC)	per100m	Absent											
35	Total Viable Count (TVC)	cfu/ml	9.0	15.0	6.0	11.0	9.0	15.0	12	18	09	15	14	21
36	Vibrio cholera (VC)	per100m	Absent											
37	Vibrio parahaemolyticus (VPHLO)	per100m	Absent											

CB - 1														
Month & Year			July - 23		Aug- 23		Sept - 23		Oct - 23		Nov - 23		Dec - 23	
S.No	Parameters	Unit	Surface	Bottom	Surface	Bottom	Surface	Bottom	Surface	Bottom	Surface	Bottom	Surface	Bottom
38	Primary Productivity	mg C/m ³ /hr	8.75	9.13	8.72	9.10	8.74	9.13	8.77	9.15	8.79	9.17	8.81	9.19
39	Chlorophyll a	mg /m ³	6.12	6.75	6.10	6.72	6.14	6.75	6.17	6.79	6.19	6.81	6.21	6.84
40	Phaeopigment	mg /m ³	2.91	3.56	2.89	3.53	2.92	3.55	2.93	3.57	2.94	3.59	2.96	3.62
41	Total Biomass	ml /100 m ³	1.88	2.17	1.86	2.16	1.89	2.19	1.91	2.21	1.92	2.22	1.94	2.23
PHYTOPLANKTON														
42	Bacteriastrium hyalinum	nos/ml	17	15	19	16	22	18	25	20	29	17	31	19
43	Bacteriastrium varians	nos/ml	15	19	13	17	15	19	13	16	15	21	17	24
44	Chaetoceros didymus	nos/ml	13	10	12	08	13	10	17	13	19	16	21	17
45	Chaetoceros decipiens	nos/ml	12	17	14	21	11	18	13	21	10	19	12	23
46	Biddulphia mobiliensis	nos/ml	23	19	25	17	28	19	32	22	35	26	38	28
47	Ditylum brightwellii	nos/ml	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
48	Gyrosigma sp	nos/ml	7	5	9	6	11	8	8	5	11	9	8	6
49	Cladophyxis sps	nos/ml	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
50	Coscinodiscus centralis	nos/ml	19	16	22	18	25	21	28	23	33	24	31	22
51	Coscinodiscus granii	nos/ml	12	8	14	10	17	13	19	14	22	18	25	20
52	Cylcotella sps	nos/ml	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
53	Hemidiscus hardmanianus	nos/ml	21	15	19	12	23	15	27	17	34	21	31	18
54	Laudaria annulata	nos/ml	23	18	26	21	28	23	33	25	29	22	27	20
55	Pyropacus horologicum	nos/ml	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
56	Pleurosigma angulatum	nos/ml	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
57	Leptocylindrus danicus	nos/ml	16	11	19	13	16	11	18	13	15	10	14	08
58	Guinardia flaccida	nos/ml	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
59	Rhizosolenia alata	nos/ml	12	9	15	12	18	13	25	16	30	19	34	21
60	Rhizosolenia imbricata	nos/ml	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
61	Rhizosolenia semispina	nos/ml	23	20	21	17	23	19	25	21	21	16	24	19
62	Thalassionema nitzschioides	nos/ml	25	22	28	20	31	23	28	18	34	21	38	23
63	Triceratium reticulatum	nos/ml	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
64	Ceratium trichoceros	nos/ml	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
65	Ceratium furca	nos/ml	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
66	Ceratium macroceros	nos/ml	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
67	Ceracium longipes	nos/ml	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
ZOOPLANKTONS														
68	Acrocalanus gracilis	nos/ml	18	17	21	19	23	17	27	19	34	22	42	27
69	Acrocalanus sp	nos/ml	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
70	Paracalanus parvus	nos/ml	11	13	13	17	156	19	18	23	15	20	21	25
71	Eutintinus sps	nos/ml	4	2	6	3	3	2	5	3	9	5	9	4
72	Centropages furcatus	nos/ml	15	12	17	13	25	16	28	19	32	22	24	14
73	Corycaeus dana	nos/ml	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
74	Oithona brevicornis	nos/ml	15	22	18	26	21	28	24	32	20	28	20	27
75	Euterpina acutifrons	nos/ml	11	16	13	19	16	21	11	16	16	23	23	31
76	Metacalanus aurivilli	nos/ml	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
77	Copipod nauplii	nos/ml	10	8	12	10	15	11	17	12	19	13	18	13
78	Cirripede nauplii	nos/ml	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
79	Bivalve veliger	nos/ml	18	14	21	16	23	18	25	21	31	26	29	27
80	Gastropod veliger	nos/ml	15	19	17	21	19	23	22	27	17	24	11	16

ANNEXURE - 9 RESULTS OF MARINE SEDIMENT QUALITY DATA

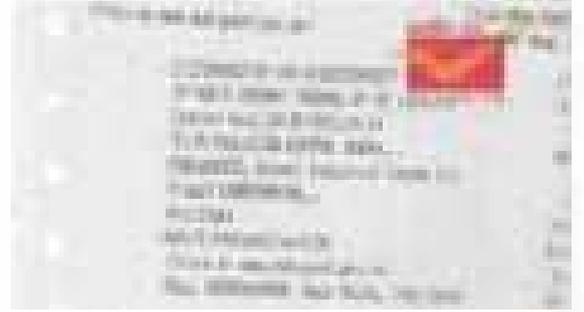
		SEA SEDIMENT						
Location		CB - 1						
Month & Year		Uni	July - 23	Aug- 23	Sept - 23	Oct - 23	Nov - 23	Dec - 23
S.No.	Parameters							
1	Total organic matter	%	0.63	0.59	0.63	0.57	0.54	0.51
2	% Sand	%	21	23	21	23	26	29
3	%silt	%	36	33	37	39	36	41
4	%Clay	%	43	44	42	38	38	30
5	Iron (as Fe)	mg/kg	19.5	18.6	20.1	18.9	17.8	19.5
6	Aluminium (as Al)	mg/kg	8925	8813	9056	8852	8781	8452
7	Chromium (as cr)	mg/kg	51	48	51	48	45	41
8	Copper (as cu)	mg/kg	45	43	45	43	41	38
9	Manganese (as Mn)	mg/kg	53	50	53	51	47	45
10	Nickel (as Ni)	mg/kg	47	45	47	44	42	38
11	Lead (as Pb)	mg/kg	18	16	18	16	14	11
12	Zinc (as Zn)	mg/kg	235	221	240	234	224	218
13	Mercury(as Hg)	mg/kg	BDL(D.L. 0.1)					
14	Total phosphorus as P	mg/kg	141	136	141	135	131	124
15	Octane	mg/kg	BDL(D.L. 0.1)					
16	Nonane	mg/kg	BDL(D.L. 0.1)					
17	Decane	mg/kg	BDL(D.L. 0.1)					
18	Undecane	mg/kg	0.59	0.56	0.50	0.48	0.43	0.39
19	Dodecane	mg/kg	BDL(D.L. 0.1)					
20	Tridecane	mg/kg	BDL(D.L. 0.1)					
21	Tetradecane	mg/kg	BDL(D.L. 0.1)					
22	Phntadecane	mg/kg	BDL(D.L. 0.1)					
23	Hexadecane	mg/kg	BDL(D.L. 0.1)					
24	Heptadecane	mg/kg	BDL(D.L. 0.1)					
25	Octadecane	mg/kg	BDL(D.L. 0.1)					
26	Nonadecane	mg/kg	BDL(D.L. 0.1)					
27	Elcosane	mg/kg	BDL(D.L. 0.1)					
I. Nematoda								
28	Oncholaimussp	nos/m ²	22	25	29	32	35	32
29	Tricomasp	nos/m ²	23	22	23	25	27	24
II. Foraminifera								
30	Ammoniaebecarii	nos/m ²	18	20	18	21	17	19
31	Quinquinasp	nos/m ²	28	25	28	32	29	33
32	Discorbinellasp.,	nos/m ²	16	19	21	24	28	30
33	Bolivinaspathulata	nos/m ²	13	15	18	19	21	23
34	Elphidiumsp	nos/m ²	17	19	21	18	23	27
35	Noniondepressula	nos/m ²	19	22	24	22	26	29
III. Molluscs-Bivalvia								
36	Meretrixveligers	nos/m ²	23	26	29	34	38	35
37	Anadoraveligers	nos/m ²	18	17	19	15	18	15
	Total No. of individuals	nos/m ²	198	210	230	242	262	267
	Shanon Weaver Diversity Index		2.30	2.27	2.29	2.27	2.27	2.28

AECTPL/ENV/TNPCB/ES/2023/26

Date: 23.09.2023

To,

The Member Secretary,
Tamil Nadu Pollution Control Board,
76, Mount Salai,
Guindy,
Chennai - 600 032



Dear Sir,

Sub: Submission of Environmental Statement (Form V) for the financial year ending 31st March, 2023 of Adani Ennore Container Terminal Private Limited (AECTPL) - Reg.

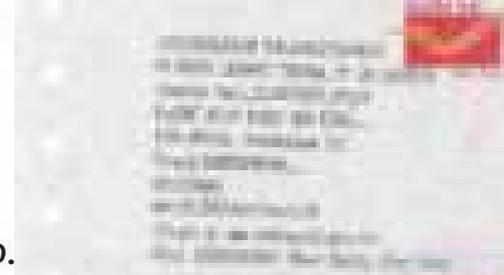
Ref: 1. Consent to Operate Order No. 2108136876855 dated 24.08.2021 under Water Act
2. Consent to Operate Order No. 2108236876855 dated 24.08.2021 under Air Act

With reference to the captioned subject and cited references above, we submit herewith the Environmental Statement of M/s Adani Ennore Container Terminal Private Limited, in Form-V prescribed under Rule 14 of the Environment (Protection) Rules 1986 for the financial year ending 31st March 2023.

Submitted for your kind information and records.

Thanking you,

For, M/s. ADANI ENNORE CONTAINER TERMINAL PRIVATE LIMITED.



Sudip Dasgupta
Chief Executive Officer



Enclosure: as above

Copy To:

- 1) The Joint Chief Environmental Engineer, Tamilnadu Pollution Control Board, First Floor, 950/1, Poonamallee High Road, Arumbakkam, Chennai-600 106
- 2) The District Environmental Engineer, Tamil Nadu Pollution Control Board, Gummidipoondi - 601201.



Adani Ennore Container Terminal Pvt Ltd
Adani House
C/o. Kamarajar Port Limited
Ponneri Taluk, Tiruvallur District
Tamil Nadu- 600 120.

Tel +91 44 2824 3062

info@adani.com
www.adani.com

CIN: U61200GJ2014PTC078795



Form-V

(See rule 14 of Environment (Protection) Rules, 1986)

Environmental Statement for the financial year ending 31st March 2023

PART - A

i) Name and Address of the owner / occupier of the industry operation or process	Mr. Sudip Desgupta Chief Executive Officer Adani Ennore Container Terminal Private Limited C/O Kamarajar Port Limited Vattar Post, Ennore Thiruvattur District – 600 120 Tamil Nadu, India
ii) Industry Category	Primary (Red) Secondary - 1055 – Ports and Harbour, Jetties and Dredging Operations.
iii) Production Capacity	Cargo Handling Capacity 11.58 MMTPA of Container cargo
iv) Year of establishment	2016
v) Date of the last environmental statement submitted	Vide our Letter No. ADCTPL/TNFCB/2022-23/128 dated 22.09.2022

PART - B

WATER AND RAW MATERIAL CONSUMPTION

(i) Water Consumption

S. No	Water Consumption (m ³ /Calendar Day)	2021-2022	2022-2023
1.	Process	NIL	NIL
2.	Cooling	NIL	NIL
3.	Domestic	12.6	12.1

(ii) Raw Material Consumption

S. No.	Name of Raw Material	Name of Products	Consumption of Raw Material per Unit of output	
			During the previous financial year (2021-22)	During the current financial year (2022-23)
1	Not Applicable	Not Applicable	NIL	NIL

The unit does not undergo any manufacturing process. Hence, there is no raw material consumption.

PART - C

POLLUTION DISCHARGE TO ENVIRONMENT/ UNIT OF OUTPUT

(Parameters as specified in the consent issued)

Pollutants	Quantity of Pollutants Discharged (Mass/day)	Concentration of Pollutants discharges (mass/volume)	Percentage of variation from prescribed standards with reason	
a) Water	STP Treated Water Characteristics -			
	Parameter	Consent Limit	Actual	% Variation with prescribed standard
	pH	8.5-9	7.6	-66
	Total Suspended Solids (mg/l)	50	25.83	-49
	BOD (3 days at 20°C) (mg/l)	20	18.18	-9
Fecal Coliform (MPN/100ml)	1000	214.17	-78	
b) Air	<p>DG sets are provided as standby power source and are used during power failure only. The Height of DG stacks as per CPCB/ TNPCB Standards. All the monitored parameters are within standards.</p> <p>All the DG Sets are retrofitted to reduce the Particulate Matter emission level. Efficiency of the retrofitting equipment is observed above 90% against the TNPCB requirement of >70%.</p> <p>All the monitored parameters are well within the prescribed standards.</p>			
Particulate Matter (mg/m ³)	DG stack emission report is enclosed as Annexure 1			
Sulphur Dioxide (mg/m ³)				
Nitrogen Oxide (ppm)				

PART-D**HAZARDOUS WASTES**

(As specified under Hazardous Waste Management and Handling Rules 1989)

Hazardous Wastes	Total Quantity (Kg)	
	During the previous Financial Year (2021-22)	During the current Financial Year (2022-23)
(a) From Process	<ul style="list-style-type: none"> Used/Spent Oil (S.1) - 2500 Liters (2.268 Tons) Wastes or residue containing oil (S.2) - 800 Liters (0.72 Tons) 	NA
(b) From Pollution control facilities	NA	NA

PART-E**SOLID WASTES**

TOTAL QUANTITY GENERATED			
Solid Waste		During the previous Financial Year (2021-22)	During the current Financial Year (2022-23)
a)	From process	Nil	Nil
b)	From pollution control facilities- STP	99.3 kgs	105.8 kgs
c)	1. Quantity recycled or reused within the Unit	99.3 kgs	105.8 kgs
	2. Sent	Nil	Nil
	3. Dumped	Nil	Nil

PART-E

Please specify the characterization (in terms of Composition and quantum) of Hazardous as well as solid wastes and indicate disposal practice adopted for both these categories of waste:

- "Zero Waste to Landfill" Initiative - No waste is being sent to landfill or incineration facility. AECTPL is having Integrated Waste Management System (IWMS) to properly segregate & recover the materials and are handled as per 5R (Reduce, Reuse, Recycle, Recover and Re-process) principle.
- AECTPL has awarded with Zero Waste to Landfill Management System (ZWL MS 2020) from TUV Rheinland India Pvt. Ltd (Annexure - J).
- Hazardous wastes include Used oil, Filters contaminated with Oil and Empty barrels / containers contaminated with hazardous wastes. All the hazardous wastes are collected and stored properly in Integrated Waste Management Shed & are being disposed to TNPCB authorized registered recycler in line with Hazardous and other Wastes (Management and Transboundary Movement) Rules, 2016 (As amended).
- The used batteries and E -wastes are also stored in Integrated Waste Management Shed and disposed off through approved vendor in line to E-Waste Management Rules 2016 (as amended).
- Hazardous waste Annual returns in Form 4 was submitted in line with the Hazardous and Other Wastes (Management & Trans boundary Movement) Rules, 2016.
- E-waste returns in Form 3 was submitted in line with the E-waste Management Rules, 2016.
- 100% utilization of STP sludge for greenbelt maintenance as manure.
- AECTPL certified as "Single Use Plastic (SUP) Free" site from OI -ITC Centre of Excellence for Sustainable Development.

FART-G

Impact of the pollution abatement measures taken on conservation of natural resources and on the cost of production.

- Adani Ennore Container Terminal Private Limited is having electrified cranes only and hence the diesel consumption by the cranes is eliminated completely.
- All the DG Sets are retrofitted to reduce the Particulate Matter emission level. Efficiency of the retrofitting equipment is observed above 90% against the TNPCB requirement of >70%.
- All the domestic wastewaters being generated at port is treated at existing sewage treatment plant and the treated water is being reused within port premises for gardening/horticulture purpose.
- Sewage Treatment Plant (STP) is in continuous operation and the treated effluent water quality is meeting the TNPCB norms. The total cost spent on STP operation during the year 2022-23 is Rs. 5.11 Lakhs.
- Regular Environmental monitoring is being carried out through NABL accredited laboratory. All the monitored environmental parameters are well within the prescribed norms & the details of monitored data is being submitted regularly to TNPCB, CPCB, MoEF&CC and other concerned authorities.
- Unit is continuously developing and maintaining Greenbelt within the port premises.
- Implemented Integrated Waste Management System (IWMS) for managing all types of wastes in line with 3R (Reduce, Reuse, Recycle, Recover and Reprocess) principle.

FART-H

Additional measures/investment proposal for Environmental protection including abatement of pollution, prevention of pollution.

Regular Expenditure (Cost in INR lakhs/year)		
S. No.	Description	Cost
1	Environmental monitoring & Environment Studies	13.28
2	Green belt & Horticulture development	5.11
3	Annual maintenance contractor of STP operation	5.11
4	Operation & Maintenance of Integrated Waste Management System	3.14
5	Housekeeping	8.27

PART-3

ANY OTHER PARTICULARS IN RESPECT TO ENVIRONMENT

- Handling of all types of wastes in line with 5R (Reduce, Reuse, Recycle, Recover and Reprocess) Principle.
- Paperless Operation is in place (except for statutory requirements) using application tools and Software – Terminal Info Gateway (TIG).
- Energy Conservation Committee to measure the amount of energy consumed and take actions to reduce the energy consumed through port operations.
- Water Warriors committee to identify and reduce the water consumption. The committee would propose innovative water solutions.
- Integrated Management System (ISO 9001:2015, 14001:2015, 45001:2018 and 30001:2018) certified Port.
- Obtained "5S" Certification at MOP.
- AICTEPL is bestowed with the top honors and the details of accolades received during the year 2022-23 are mentioned here under (photos attached at Annexure-3);
 - EMDOT's "Platinum Award" under Environment Improvement category

• **Community Development:**

Katupalli Port has been propagating the community development through a broad based Corporate Social Responsibility (CSR) program in the project area through Adani Foundation since 2018 to ensure inclusive growth and catering to the developmental needs of the community at the grassroots level. The project area encompasses 17 panchayats covering about 45 villages within 10 Km radius of the Katupalli Port. The key interventions introduced in the project area are as under:

- Education
- Community Health
- community infrastructure facility
- Sustainable Livelihood development
- Tree Plantation & Bio-Diversity development program
- Special Focus Groups
- COVID / Cyclone relief measures

Significant highlights during the year 2022-23 are as follows.

Education: 20 Adani Evening Education Centers where 600 students from fishermen, kulars and other backward communities get benefit through this program.

Established Computer Smart Lab for government school students, where 450 students get benefit through this program, Pulicat Panchayat, Minjur and Tiruvetur, Tamilnadu.

Health: Addressing health issues of rural communities through mobile health care program where 1600 persons get benefit every month through this program.

Supesha: Creating awareness and preventing unwanted health issues faced by mothers and children below 5 years of age working closely with government system and ensuring to improve the health condition of the children below 5 years of age.

Sustainable Livelihood Development: Natural Farming: Ensuring 100 farmers do natural farming by assisting them to ensure to adopt and implement the natural farming protocols as per the norms of government where government will certify them under POS program.

Livelihood Enhancement program for 121 women through group based entrepreneurship program and providing livelihood support to 30 individuals- widows, destitute and persons with disabilities.

Community Infrastructure Development: Installed 10 high mast lights in the rural communities, Established 5 RO plants in the community, Government Schools and Government Hospitals in addressing its access to drinking water, Community Toilet for women was constructed, Desalinated Kattupalli pond and gave life to the pond, built toilet block for girl students of government school students, Pulicat Panchayats which will be benefited by girl students from four panchayats, planned to build a community hall for Satanguppam and to do Desalination of boat parking areas of fishermen in 18 locations.

Date: 23.09.2023

(Signature of a person carrying out an industry operation or process)

Name : **Sudip Dasgupta**

Designation: **Chief Executive Officer**

Address : Adani Ennore Container Terminal Pvt Ltd
C/O Kamarajar Port Limited
Vafur post, Ennore
Tiruvallur District- 606 120.



ANNEXURE - 1

AECTPL- STACK MONITORING (April'2022 to March'2023)													
Location		DG - 1 1500KVA											
Month & Year		Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	Feb-23	Mar-23
S.No.	Parameters	20.04.22	21.05.22	19.06.22	21.07.22	19.08.22	16.09.22	22.10.22	16.11.22	27.12.22	24.01.23	17.02.23	24.03.23
1	Stack Temperature, °C	241.0	253.0	240.0	228.0	218.0	221.0	237.0	214.0	225.0	216.0	210.0	207.0
2	Flue Gas Velocity, m/s	23.3	24.1	24.9	23.5	21.1	22.4	24.0	22.1	21.3	21.0	22.8	22.6
3	Gas Discharge, Nm ³ /hr	6124.0	6159.0	6520.0	6316.0	5771.0	6093.0	6342.0	6096.0	5739.0	5771.0	6346.0	6340.0
4	Sulphur Dioxide, mg/Nm ³	7.5	7.9	7.4	6.9	6.0	6.9	8.1	7.8	7.0	7.7	6.4	6.3
5	NOX (as NO ₂) in ppmv	136.0	142.0	135.0	122.0	110.0	118.0	129.0	117.0	98.0	98.0	92.0	87.0
6	Particular matter, mg/Nm ³	11.0	9.6	8.2	8.9	8.1	9.2	8.5	9.3	7.4	31.6	8.5	11.3
7	Carbon Monoxide, mg/Nm ³	38.0	40.0	38.0	33.0	35.0	37.0	34.0	31.0	28.0	68.0	30.0	41.0
Location		DG-2 1500KVA											
Month & Year		Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	Feb-23	Mar-23
S.No.	Parameters	20.04.22	21.05.22	19.06.22	21.07.22	19.08.22	16.09.22	22.10.22	16.11.22	27.12.22	24.01.23	17.02.23	24.03.23
1	Stack Temperature, °C	230.0	-	-	238.0	244.0	231.0	219.0	210.0	218.0	214.0	231.0	125.0
2	Flue Gas Velocity, m/s	22.0	-	-	23.9	23.1	23.8	22.0	22.5	22.0	20.7	21.0	13.2
3	Gas Discharge, Nm ³ /hr	5879.0	-	-	6295.0	6004.0	6362.0	6005.0	6262.0	6052.0	5720.0	5595.0	626.0
4	Sulphur Dioxide, mg/Nm ³	7.1	-	-	8.4	8.7	9.2	7.8	7.3	6.5	7.3	7.8	6.1
5	NOX (as NO ₂) in ppmv	130.0	-	-	136.0	139.0	132.0	115.0	104.0	94.0	93.0	96.0	76.0
6	Particular matter, mg/Nm ³	9.6	-	-	9.4	10.3	9.8	7.4	8.1	7.6	8.6	7.0	9.7
7	Carbon Monoxide, mg/Nm ³	35.0	-	-	39.0	41.0	37.0	30.0	27.0	25.0	31.0	36.0	32.0

Location		DO-3 1800VIA											
Month & Year		Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	Feb-23	Mar-23
Site	Parameter	04-04-22	05-05-22	06-06-22	07-07-22	08-08-22	09-09-22	10-10-22	11-11-22	12-12-22	01-01-23	02-02-23	03-03-23
1	Soak Temperature, °E	-	-	-	221.0	218.0	218.0	221.0	221.0	-	-	-	-
2	Flow Gas Velocity, m/s	-	-	-	20.1	20.7	21.7	22.8	22.7	-	-	-	-
3	Gas Discharge, km3/hr	-	-	-	6009.2	5950.0	5939.0	6101.0	5930.0	-	-	-	-
4	Sulfur Dioxide, mg/Nm3	-	-	-	8.0	8.4	8.8	8.0	8.8	-	-	-	-
5	NOx (as NO2) in ppm	-	-	-	125.0	132.0	125.0	132.0	115.0	-	-	-	-
6	Particulate matter, mg/Nm3	-	-	-	8.0	8.3	8.0	8.8	8.0	-	-	-	-
7	Carbon Monoxide, mg/Nm3	-	-	-	15.0	16.0	15.0	18.0	22.0	-	-	-	-

Location		DO-4 1200VIA											
Month & Year		Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	Feb-23	Mar-23
Site	Parameter	04-04-22	05-05-22	06-06-22	07-07-22	08-08-22	09-09-22	10-10-22	11-11-22	12-12-22	01-01-23	02-02-23	03-03-23
1	Soak Temperature, °E	-	129.0	121.0	118.0	123.0	120.0	125.0	120.0	-	-	-	-
2	Flow Gas Velocity, m/s	-	12.4	12.0	12.8	13.0	14.7	13.2	13.0	-	-	-	-
3	Gas Discharge, km3/hr	-	588.0	579.0	623.0	670.0	709.0	629.0	623.0	-	-	-	-
4	Sulfur Dioxide, mg/Nm3	-	4.8	4.2	4.4	4.8	5.0	5.4	5.1	-	-	-	-
5	NOx (as NO2) in ppm	-	38.0	32.0	38.0	39.0	40.0	37.0	36.0	-	-	-	-
6	Particulate matter, mg/Nm3	-	4.9	4.0	4.8	4.3	5.4	5.0	5.8	-	-	-	-
7	Carbon Monoxide, mg/Nm3	-	21.0	10.0	18.0	21.0	23.0	21.0	19.0	-	-	-	-

KAMARAJAR PORT LIMITED



Compliance Report

On

Ministry's guidelines for

**“CONSTRUCTION OF GENERAL CARGO BERTH AT ENNORE
PORT CARGO TERMINAL PROJECT”**

Point wise compliance report on Ministry's guidelines for the CRZ and Environmental clearance for the construction of General Cargo Berth at Ennore port cargo terminal project.

Ref: MoEF Letter No. 11-21/2009-IA-III dated 23.7.2009

Back ground information

MoEF had accorded environmental clearance vide letter No. 11-21/2009-IA-III dated 23rd July, 2009 for the development of a general cargo berth. The length of the berth is 250m length and 35m width to handle about 2 lakh cars per year and project cargoes & finished cargo of 0.5 million tons per year.

Status of the project:

A General Cargo Berth with Car parking area was developed for the export of automobiles and handling project cargo, etc. The terminal is under operational.

S.No.	Specific Conditions	Compliance Status
(i)	As the Ennore expressway is very busy. It is suggested to examine the details of traffic analysis and incorporate necessary improvement study the impact of additional traffic due to the proposed development	Complied with. The copy of report on traffic analysis carried out by M/s. Wilber Smith Association Pvt. Ltd., was sent to MoEF vide our letter dated 17.2.2010.
(ii)	No construction work other than those permitted in Coastal Regulation Zone Notification shall be carried out in Coastal Regulation Zone area.	Complied. No construction works other than those permitted in the Coastal Regulation Zone Notification are carried out in Coastal Regulation Zone area.
(iii)	Oil spills if any shall be properly collected and disposed as per the Rules.	Noted for compliance.
(iv)	The project proponent shall set up separate environmental management cell for effective implementation of the stipulated environmental safeguards under the supervision of a Senior Executive.	Complied. Port is having Environmental Cell under HSE-Division of Marine Services Department, headed by General Manager (MS). The compliance of Environmental Management Plan of the Port is monitoring by Environmental Cell of HSE division.

		Port is monitoring the environment. Port has engaged M/s. Nitya Laboratories (MoEF & CC/ NABL certified) for sampling and testing of various environmental parameters.
(v)	The project proponent shall take up mangrove plantation/green belt in the project area, wherever possible. Adequate budget shall be provided in the Environment Management Plan for such mangrove development.	At present, port is having a green belt of 636.14 Acres, including a green belt (planted) of 210.74 acres, green cover natural 349.26 acres and mangroves in an area of 76.14 acres. However, KPL has proposed to utilize the existing operational area in the custom bound area for future development projects/infrastructure activities. As per approved Biodiversity Management Plan of Port, it is planned to develop the green belt of 68.66Acres inside the custom bound area and 621.91 Acres outside the custom bound area. Upon implementation of the plan, the total green belt area of the port will be 690.77Acres.
(vi)	The funds earmarked for environment management plan shall be included in the budget and this shall not be diverted for any other purposes.	The details of expenditure incurred towards Environmental management by KPL during the compliance period is Rs.68,84,925/- (Excl.GST), furnished herewith as below: 1. Environmental Monitoring = Rs. 6,92,900/- (Excl. GST). 2. Solid Waste Management = Rs. 21,45,225/- (Excl. GST). 3. Statutory fee payments= Rs. 40,46,800/-.

General Conditions:

S No.	General Conditions	Compliance Status
(i)	The construction of the structures should be undertaken as per the plans approved by the concerned local authorities/local administration, meticulously conforming	Complied with. All constructions and plans are approved by port itself as port is a

	to the existing local and Central rules and regulations including the provisions of Coastal Regulation Zone Notification dated 19.02.1991 and the approved Coastal Zone Management Plan of Tamil Nadu.	regulatory authority by itself.
(ii)	Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.	Complied with. Local labors were engaged during the construction and the labour camps were located outside the CRZ area.
(iii)	Appropriate measures must be taken while undertaking digging activities to avoid any likely degradation of water quality.	Complied with. Digging activities were carried out during the construction of berth. Marine water quality was monitored to notice any degradation of water quality.
(iv)	<i>Borrow sites for each quarry sites for road construction material and dump sites must be identified keeping in view the following:</i>	
	a. No excavation or dumping on private property is carried out without written consent of the owner.	Complied with. No excavation was carried out in the project area or any material dumped in any private property. Concrete structure on pile foundation was carried out.
	b. No excavation or dumping shall be allowed on wetlands, forest areas or other ecologically valuable or sensitive locations.	No excavation or dumping was carried out on wetlands or any ecologically sensitive areas during the development of the project.
	c. Excavation work shall be done in close consultation with the Soil Conservation and Watershed Development Agencies working in the area, and	Complied with. No excavation work was carried in the project area.

	d. Construction spoils including bituminous material and other hazardous materials must not be allowed to contaminate water courses and the dump sites for such materials must be secured so that they shall not leach into the ground water.	Complied with. No construction spoils or any other hazardous materials such as bituminous were generated during the construction process.
(v)	The construction material shall be obtained only from approved quarries. In case new quarries are to be opened, specific approvals from the competent authority shall be obtained in this regard.	Complied with. Construction material does not involve any quarry materials other than blue granite. Only iron & metal steel are used for RCC.
(vi)	Adequate precautions shall be taken during transportation of the construction material so that it does not affect the environment adversely.	Complied with. Adequate measures like covering the material etc. were undertaken during the transportation of construction material.
(vii)	Full support shall be extended to the officers of this Ministry/ Regional Office at Bangalore by the project proponent during inspection of the project for monitoring purposes by furnishing full details and action plan including action taken reports in respect of mitigation measures and other environmental protection activities.	Being complied.
(viii)	Ministry of Environment & Forests or any other competent authority may stipulate any additional conditions or modify the existing ones, if necessary in the interest of environment and the same shall be complied with.	Noted.
(ix)	The Ministry reserves the right to revoke this clearance if any of the conditions stipulated are not complied with the satisfaction of the Ministry	Noted.

(x)	In the event of a change in project profile or change in the implementation agency, a fresh reference shall be made to the Ministry of Environment and Forests.	Noted.
(xi)	The project proponents shall inform the Regional Office 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 with. KPL has informed MoEF&CC and RO of MoEF&CC vide its letter No. EPL/MS/Env/GCB/1/08, dated 07.12.2009.
(xii)	Tamil Nadu State Pollution Control Board shall display a copy of the clearance letter at the Regional Office, District Industries Center and Collector's Office/ Tehsildar's Office for 30 days.	Complied with.
7	These stipulations would be enforced among others under the provisions of Water (Prevention and Control of Pollution) Act 1974, the Air (Prevention and Control of Pollution) Act 1981, the Environment (Protection) Act, 1986, the Public Liability (Insurance) Act, 1991 and EIA Notification 1994, including the amendments and rules made thereafter.	KPL is enforcing the provisions of Water (Prevention and Control of Pollution) Act 1974, the Air (Prevention and Control of Pollution) Act 1981 and the Environment (Protection) Act, 1986. With regard to the Public Liability Insurance, Port has obtained Public Liability Insurance through Oriental Insurance Company Ltd.' vide Policy No:411400/22/2023/1, valid till 05/05/2024.
8	All other statutory clearances such as the approvals for storage of diesel from Chief Controller of Explosives, Fire Department, Civil Aviation Department, Forest Conservation Act, 1980 and Wild (Protection) Act, 1972 etc. shall be obtained, as applicable by project proponents from the respective competent authorities.	Complied with. The terminal is exclusively for export/import of brand new assembled automobiles; hence the said clearances are not applicable to this terminal.
9	The project proponent shall advertise in at least two local Newspapers widely circulated in the region, one of which shall be in the	Complied with. The receipt of the environment and CRZ clearance was

	<p>vernacular language informing that the project has been accorded Environmental Clearance and copies of clearance letters are available with the Tamil Nadu State Pollution Control Board and may also be seen on the website of the Ministry of Environment and Forests at http://www.envfor.nic.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 Bangalore.</p>	<p>advertised in two local news papers on 6.8.2009. The copies of the advertisements were forwarded to MoEF, RO, Bangalore vide our letter No.EPL/MS/Env/GCB/01/2008 dated 25.8.2009.</p> <ol style="list-style-type: none"> 1. 'The Dinamani dated: 06.08.2009 2. The New Indian Express' Dated: 06.08.2009.
10	<p>Environmental Clearance is subject to final order of the Hon'ble Supreme Court of India in the matter of Goa Foundation Vs. Union of India in Writ Petition (Civil) No.460 of 2004 as may be applicable to this project.</p>	<p>Noted.</p>
11	<p>Any appeal against this Environmental Clearance shall lie with the National Environment Appellate Authority, if preferred, within a period of 30 days as prescribed under Section 11 of the National Environment Appellate Act, 1997.</p>	<p>There is no appeal against this EC was made with National Environment Appellate.</p>
12	<p>A copy of the Clearance letter shall be sent by the proponent to concerned Panchayat, ZillaParishad/Municipal Corporation, Urban Local Body and the Local NGO, if any, from whom suggestions/ representations, if any, were received while processing the proposal. The clearance letter shall also be put on the website of the company by the proponent.</p>	<p>Complied with.</p> <p>No public hearing was conducted as the same was not recommended by MoEF & CC in the ToR. No suggestions / representations were received while processing the proposal.</p> <p>The clearance letter was put on the KPL website.</p>

13	The proponent shall upload the status of compliance of the stipulated EC conditions, including results of monitored data on their website and shall update the same periodically. It shall simultaneously be sent to the Regional Office of MoEF, the respective Zonal Office of CPCB and the SPCB. The criteria pollutant levels namely; SPM, RSPM, SO ₂ , NO _x (ambient levels as well as stack emissions) or critical sect oral parameters, indicated for the project shall be monitored and displayed at a convenient location near the main gate of the company in the public domain.	<p>Complied with.</p> <p>Only brand new cars (Green Cargo) are handled in this terminal.</p> <p>The status of compliance of the stipulated EC conditions and the results of the monitored data are being sent to Regional office of MoEF.</p> <p>The result of the monitoring data carried out by the Port is uploaded in the company's website.</p>
14	The project proponent shall also submit six monthly reports on the status of compliance of the stipulated EC conditions including results of monitored data (both in hard copies as well as by e-mail) to the respective Regional Office of MoEF, the respective Zonal Office of CPCB and the SPCB.	<p>Complied with.</p> <p>The reports are regularly submitted to Regional Office of MoEF & CC. The same is being uploaded in MoEF & CC and KPL websites also.</p>
15	The environmental statement for each financial year ending 31st March in Form – V as is mandated to be submitted by the project proponent to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be put on the website of the company along with the status of compliance of EC conditions and shall also be sent to the respective Regional Offices of MoEF by e-mail.	<p>Complied with.</p> <p>The environmental statement (Form-V) is enclosed herewith as Annexure-I.</p>

Point wise compliance report on the conditions issued by Tamil Nadu State Coastal Zone Management vide Letter No. 151/EC3/2009-1 dated 24.02.2009

1	There should not be any extraction of ground water in Coastal Regulation Zone	<p>Complied with.</p> <p>No ground water is extracted in the CRZ area. Open dug wells are provided beyond the CRZ area in the port exclusively for watering of plants.</p>
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2	The project activity should not affect the coastal ecosystem including marine flora and fauna	<p>Complied with.</p> <p>Only automobiles (green cargo) are handled in the project. No sewage or wastes are dumped in the port waters. KPL is monitoring marine water quality inside the port. Monitoring reports are regularly submitted to R.O of MoEF&CC. Port waters conform to SW Class IV standards.</p>
3	The composition of the dredged materials should be duly analyzed and examined to find out the availability of any toxic contents.	<ul style="list-style-type: none"> • Port has carried out a study through Institute of Ocean Management, Anna University, Chennai entitled “Assessment of Water, Sediment & Biota in Ennore Port” during January 2009. • The study revealed that the toxic heavy metals are found to be well within the safety limits and as such do not pose any problem to the marine environment. • Sediment quality is also continuously monitored during dredging operations. • Port is also monitoring monthly marine water quality for various physio-chemical parameters including heavy metals.
4	Based on the analysis, a suitable methodology for the disposal of dredging material has to be evolved out.	<p>National Institute of Ocean Technology (NIOT), Chennai has carried out EIA and Risk assessment for the second phase expansion proposals, which is inclusive of Modelling studies and identified a marine disposal area (6 KM x 6 KM area) for disposal of dredged material. The study has identified a location for the safe disposal of dredged material with a holding capacity of 18.0 million cubic meters.</p>

5	No blasting activities in Coastal Regulation Zone is permissible	<p>Complied with.</p> <p>No blasting activity was carried out during the construction phase. Berth constructions are made up of RCC super structure on pile foundation.</p>
6	The proponent shall not undertake any activity, which is violative of the provisions of Coastal Regulation Zone Notification 1991 and the subsequent amendments.	<p>Noted.</p> <p>No activity in violation of the provisions of CRZ Notification will be carried out.</p>
7	The coastal Regulation Zone clearance will be revoked if any of the condition stipulated is not complied with	<p>Noted.</p>

**KAMARAJAR PORT LIMITED - GENERAL CARGO BERTH (GCB)
ENVIRONMENTAL STATEMENT FOR THE FINANCIAL YEAR ENDING THE 31ST
MARCH-2021**

PART - A

S. No	Description	Remarks
1.	Name and address	Kamarajar Port Limited, Vallur Post, Near NCTPS, Chennai-120.
2.	Type of Cargo handled	Auto mobiles (green cargo) & Project cargo
3.	Industry category Primary (STC Code) Secondary (SIC Code)	Major port under the administrative control of Ministry of shipping, GOI.
4.	Cargo handling capacity as per CTO	2Lakh cars/year and project/finished cargo of 0.5 MTPA. All these cargo are green cargo.
5.	Date of start of commercial operation	28.01.2011

PART - B

(1) Water and Raw Material Consumption

Water consumption m³/d: 2KL per Day for this terminal.

Process/ sprinkling: Nil. Only brand new and assembled automobiles (green cargo) are handled (export/import) in this terminal.

Cooling: Not applicable.

Domestic: 2KLD

Any other: Nil

Name of Cargo handled	Process water consumption per unit of product output.(per Annum)	
	During the previous financial year (2021-22)	During the Current financial year (2022-23)
Auto mobiles	Only brand new assembled automobiles (green cargo) are handled in this terminal.	

(2) Raw Material Consumption (if applicable)

*Name of raw materials	Name of Products	Consumption of raw material per Unit of output	
		During the financial	During the financial Year

		year 2021-22	2022-23
Auto mobiles & Project cargo	Auto mobiles & Project cargo	1,56,000	1,93,672

*Industry may use codes if disclosing details of raw material would violate contractual obligations, otherwise all industries have to name the raw materials used.

PART - C

Pollution discharged to environment/unit of output (Parameter as specified in the consent issued)

Pollutants	Quantity of pollutants discharged (mass/day)	Concentrations of pollutants in discharges (mass/volume)	Percentage of variation from prescribed standards with reasons
Water	Not Applicable. Only brand new assembled automobiles (green cargo) are handled (export/import) in this terminal. No wastes are discharged into the marine/surface water bodies. Port is monitoring the surface and marine water quality through M/s. Nitya Laboratories (MoEF & CC recognised and NABL accredited laboratory). The results of analysis are found to be well within the prescribed standards by the CPCB. The reports are submitted to Tamilnadu Pollution Control Board.		
Air	Not Applicable. Only brand new assembled automobiles (green cargo) are handled (export/import) in this terminal. No stacks are there in port. KPL is monitoring the various environmental parameters through M/s. Hubert Enviro Care Systems Pvt. Ltd. Chennai (MoEF & CC/ NABL certified laboatory). The ambient air quality is monitored at eight different locations inside the port area. The results of analysis are found to be well within the prescribed standards by the CPCB. The monthly monitoring reports are submitted to Tamilnadu Pollution Control Board.		

PART - D

Hazardous Wastes

(As specified under Hazardous and other wastes Transboundary Rules, 2016)

Hazardous Wastes	Total Quantity (Kg.)	
	During the previous Financial Year 2021-22	During the Financial year 2022-23
Source of Hazardous waste generation	Only brand new assembled automobiles (Green Cargo) are handled (export/import) in this terminal. No hazardous wastes are generated.	
Disposal procedure	Not Applicable.	
Quantity disposed	Not Applicable.	

Any other details	Port has formulated 'Waste Oil, Sewage & Other Wastes Disposal Policy, 2019'. The Policy is uploaded in the KPL website for the easy access of the port users. The ship generated oily wastes are being disposed off through CPCB/SPCB approved recyclers. The list of empanelled recyclers is made available in 'swchh sagar' portal of Director General of Shipping and KPL website.
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PART - E
Solid Wastes

Solid Wastes	Total Quantity (M ³)	
	During the Financial Year 2021-22	During the Financial Year 2022-23
Quantity collection	The total collected quantity from the terminal and ships calling at the terminal is about 141.4 Cu.M (Apr'21 to Mar'22).	The collected total quantity from the terminal and ships calling at the terminal is about 167.2 Cu.M (Apr'22 to Mar'23).
a) Source of solid waste generation	Solid waste generated in the port is of domestic wastes likes, paper, packing material, water bottles, etc. Ship generated wastes include paper, plastic cans, metal drums, e-wastes, food waste, ropes, wooden packing material, etc.	
Disposal procedure	As per MARPOL regulations, every port has to provide reception facility for the disposal of ship generated wastes. Accordingly port has engaged a contractor for the collection of wastes from the ships. The collected wastes are segregated into different species and sent to various recyclers for further beneficial use.	
Quantity disposed	The disposed quantity from port and ships is 141.4 Cu.M (Apr'21 to Mar'22).	The disposed quantity from port and ships is 167.2 Cu.M (Apr'22 to Mar'23).
Any other details	NIL	

PART - F

Please specify the characterizations (in terms of composition of quantum) of hazardous as well as solid wastes and indicate disposal practice adopted for both these categories of wastes.

Port has Waste Oil, sewage & Other Wastes Reception Facilities Policy, 2019. The generated oily wastes from the ships are disposed off through CPCB/SPCB approved recyclers.

No hazardous wastes are generated. Solid waste generated in the terminal is of domestic wastes like paper, packing material, water bottles, etc. and ship generated wastes including paper, plastic cans, metal drums, e-wastes, food waste, ropes, wooden packing material, etc.,

As per MARPOL regulations, reception facility port has facilitated for the collection and disposal of ship generated wastes. The collected waste are segregated into different categories and sent to various recyclers for further beneficial use.

PART – G

Impact of pollution abatement measures taken towards conservation of natural resources and the cost of production

Only brand new assembled automobiles (Green Cargo) are handled (export/import) in this terminal. Therefore, there is no pollution generated from the operations in this terminal.

Moreover, Port has developed a green belt of 636.14 acres inside and outside the custom bound areas which acts as barrier for dust emissions and pollutants.

PART – H

Additional measures/investment proposal for environmental protection including abatement of pollution, prevention of pollution

Port's Environmental Management Plan (EMP) is aimed at mitigating the possible adverse impacts of projects and for ensuring to maintenance of the existing environmental quality. Port has facilitated the ships with reception facilities as per MARPOL regulations for ships for disposal of wastes under Annexure- I (oil) and Annexure- V (Garbage). Port generated domestic wastes are disposed off at approved dumping yards. The domestic sewage wastes are disposed through septic tank & soak pits.

Workers are provided with ear protection devices, masks and helmets. Emergency/Crisis Response Plan that covers situations such as cyclones, marine accidents, bomb threats, fire, explosion and accidents is in place. Port is having oil spill contingency plan prepared in line with National Oil Spill Disaster Contingency plan (NOS-DCP).

PART – I

Any other particulars for improving the quality of the environment.

Nil



Kamarajar Port Limited

Vallur Post, Chennai-600 120, Tamil Nadu, India

Reports on Environmental Monitoring of Kamarajar Port Limited



Study Period: July 2023

Prepared By



NITYA LABORATORIES

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BUILDING & ROAD, MATERIAL, SOIL, ENVIRONMENTAL & CALIBRATION TESTING LAB

Test Reports of Ambient Air Quality Monitoring



REGISTRATION NUMBER:

(NITYA/REG/1234)

FOR THE YEAR 2023-24, THE LABORATORY HAS BEEN ACCREDITED BY THE NATIONAL BUREAU OF TESTING LABORATORIES (NABL) TO THE ISIRI: IEC: 60000 FOR THE TESTING OF BUILDING & ROAD, MATERIAL, SOIL, ENVIRONMENTAL & CALIBRATION TESTING LAB.

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BUILDING & ROAD, MATERIAL, SOIL, ENVIRONMENTAL & CALIBRATION TESTING LAB



Issued To: **M/s. Karamvir Plast Private Limited**
 Water Proof Chemical Tests

Test Report No.: **00400000**

Sample Particulars

Nature of the Sample:

Purpose of Monitoring:

Sampling Location:

Method of Sampling:

Monitoring Conducted By:

Sampling Duration (hrs.):

- 1. Ambient Air Quality Monitoring
- 2. To Check the Pollution Level
- 3. How Date
- 4. 05/11/2023 (Post 14)
- 5. Mr. Shriwan
- 6. 24 hrs

Analysis Report

Sl. No.	Date of Sampling	GUR No.	Concentration				
			Particulate Matter (PM10) (µg/m ³)	Particulate Matter (PM2.5) (µg/m ³)	Sulphate (as SO ₄) (µg/m ³)	Nitrate (as NO ₃) (µg/m ³)	Carbon Monoxide (as CO) (mg/m ³)
1	05/11/2023	TC00000000000000000000	11.20	42.40	10.30	24.10	ND
2	07/11/2023	TC00000000000000000000	14.20	51.30	11.40	27.20	ND
3	09/11/2023	TC00000000000000000000	17.40	57.40	8.90	27.40	ND
4	14/11/2023	TC00000000000000000000	18.40	66.90	10.30	18.20	ND
5	17/11/2023	TC00000000000000000000	27.70	67.70	13.80	28.70	ND
6	21/11/2023	TC00000000000000000000	19.90	55.40	10.40	28.70	ND
7	24/11/2023	TC00000000000000000000	17.90	67.20	9.70	27.40	ND
8	28/11/2023	TC00000000000000000000	21.90	61.30	11.20	27.10	ND
9	31/11/2023	TC00000000000000000000	17.90	66.40	10.70	28.40	ND
NAARM Standards			45	150	80	80	8
Test Method			IS: 5959 Appendix 1 PART 03 CPCB Guidelines	IS: 5962 Part 03	IS: 5969 Part 03	IS: 5962 Part 03	IS: 5962 Part 03

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BUILDING & ROAD, MATERIAL, SOIL, ENVIRONMENTAL & CALIBRATION TESTING LAB



Report To: M/s Karamveer Plast Trust
Vafol Post, Chhara, India

Test Report No.: JN/2022/11

Sample Particulars

Name of the Sample:

Purpose of Monitoring:

Sampling Location:

Method of Sampling:

Monitoring Conducted By:

Sampling Duration (hrs):

Ambient Air Quality Monitoring

To Check the Ambient Load

Media Type:

IS 9102 (Part 1)

01 - Sulfur

24 hrs

Analysis Report

Sl. No.	Date of Sampling	L.R. No.	Concentration	
			Microg (µg)	
1	03/01/2022	03/01/2022/1	40	
2	03/01/2022	03/01/2022/2	40	
3	10/01/2022	03/01/2022/3	40	
4	14/01/2022	03/01/2022/4	40	
5	16/01/2022	03/01/2022/5	40	
6	21/01/2022	03/01/2022/6	40	
7	28/01/2022	28/01/2022/1	40	
8	28/01/2022	28/01/2022/2	40	
9	11/02/2022	03/01/2022/9	40	
Test Method			PG Based Nephelometry	

Note: This report is valid only for the purpose mentioned in the report. It is not valid for any other purpose. The laboratory is not responsible for any damage or loss of sample or any other loss incurred by the client. The client is advised to take necessary precautions to avoid any loss or damage to the sample.



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BUILDING & ROAD, MATERIAL, SOIL, ENVIRONMENTAL & CALIBRATION TESTING LAB



Issued To: **M/s Karnataka Power Trust**
 White Fly, Chennai, India

Test Report No.: **00000000**

Sample Particulars

Nature of the Sample:

Purpose of Monitoring:

Sampling Location:

Method of Sampling:

Monitoring Conducted By:

Sampling Duration (hrs):

Ambient Air Quality Monitoring

To Check the Pollution Level

Around Building

IS:3745 (Part 1A)

At: Chennai

24 hrs

Analysis Report

Sl. No.	Date of Sampling	GPR No	Concentration	
			Microg/m ³	
1	07/07/2022	0000000011	ND	
2	07/07/2022	0000000012	ND	
3	10/07/2022	0000000013	ND	
4	14/07/2022	0000000014	ND	
5	17/07/2022	0000000015	ND	
6	21/07/2022	0000000016	ND	
7	24/07/2022	0000000017	ND	
8	28/07/2022	0000000018	ND	
9	31/07/2022	0000000019	ND	
Test Method			PM 10/2.5 Nephelometer Analyser	

NOTE: Measurement is done based on standard methods prescribed by the Government of India. The results are subject to the accuracy of the instrument used. The results are for the period specified only. The report is valid only for the period specified. The results are subject to the accuracy of the instrument used.



(AUTHORIZED SIGNATURE)
(NAME OF OFFICER)

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BUILDING & ROAD, MATERIAL, SOIL, ENVIRONMENTAL & CALIBRATION TESTING LAB

Issued To: **Ms. Ramandeep Paul Yadav**
 Water Dept, Chennai, India

Test Report No.: **10000000**



Sample Particulars

Nature of the Sample:

Purpose of Monitoring:

Sampling Location:

Method of Sampling:

Monitoring Conducted By:

Sampling Duration (If any):

Analysis for Quality Monitoring

To Check the Pollution Load

Signal Status:

IS 1502 (Part 14)

Ms. Shreeya

28 Feb

Analysis Report

Sl. No.	Date of Sampling	Location	Concentration				
			Ammonia Nitrate (ppm)	Formaldehyde (ppm)	Hydrogen Sulphide (ppm)	Nitrogen Dioxide (ppm)	Carbon Monoxide (ppm)
1	02/02/2023	Chennai, India	15.42	44.20	12.02	20.12	90
2	02/02/2023	Chennai, India	10.45	52.20	11.40	12.40	90
3	04/02/2023	Chennai, India	18.40	48.20	10.20	21.20	90
4	04/02/2023	Chennai, India	20.40	47.40	12.20	18.20	90
5	10/02/2023	Chennai, India	18.51	43.20	14.40	18.80	90
6	25/02/2023	Chennai, India	18.20	48.20	12.20	22.40	90
7	02/02/2023	Chennai, India	20.20	44.20	12.20	20.40	90
8	02/02/2023	Chennai, India	18.40	47.20	11.00	20.20	90
9	02/02/2023	Chennai, India	18.20	40.20	14.40	21.40	90
NAAC Standards			80	100	60	80	3
Test Method			HACHDREL/Ascorbic L/Free SO₂ DPD4/Chloramine	DR 2000/DP-102	DR 2000/DP-10	DR 2000/DP-40	DR 2000/DP-10

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(MINISTRY OF STEEL)

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BUILDING & ROAD, MATERIAL, SOIL, ENVIRONMENTAL & CALIBRATION TESTING LAB

1

Issued To: **M/s. Ramnagar Pulp Plant**
 Vafra Road, Chishti, India

Test Report No.: **2024/001**

Sample Particulars

Nature of the Sample:
 Purpose of Monitoring:
 Sampling Location:
 Method of Sampling:
 Monitoring Conducted By:
 Sampling Location (No.):

- Retention for Quality Monitoring
- To Check the Pollution Level
- Regulatory
- To SPC (Part 14)
- As Specified
- Other

Analysis Report

Sl. No.	Date of Sampling	G/L No.	Concentration
			Particulate (%)
1	15/01/2024	2024/001/1	40
2	16/01/2024	2024/001/2	40
3	17/01/2024	2024/001/3	40
4	18/01/2024	2024/001/4	40
5	19/01/2024	2024/001/5	40
6	20/01/2024	2024/001/6	40
7	21/01/2024	2024/001/7	40
8	22/01/2024	2024/001/8	40
9	23/01/2024	2024/001/9	40
Test Method			ISO 29541 Method Analysis

1. All the tests are done in accordance with the standards as mentioned in the report. 2. The results are subject to change if the sample is not properly preserved. 3. The results are valid for 30 days from the date of sampling. 4. The results are subject to change if the sample is not properly preserved.



(RACHINDER SHARMA IAS)
(RAVINDER MITAL)

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BUILDING & ROAD, MATERIAL, TOL, ENVIRONMENTAL & CALIBRATION TESTING LAB

11/2024

Issued To: M/s. Karamveer Plast Trust
 Water Point, Chharsar, India

Test Name (Code): (20000000)

Sample Particulars

Name of the Sample:

Purpose of Monitoring:

Sampling Location:

Method of Sampling:

Monitoring Conducted By:

Sampling Duration (hrs.):

Reference Air Quality Monitoring

To Check the Following Lead:

Frequency:

IS 11627 (Part 14)

Air Quality:

24 hrs.

Analysis Report

Sl. No.	Date of Sampling	ISRN No.	Concentration	
			Microg (µg)	
1	24/07/2024	2000000014		90
2	24/07/2024	2000000014		90
3	19/07/2024	2000000014		90
4	14/07/2024	2000000014		90
5	11/07/2024	2000000014		90
6	10/07/2024	2000000014		90
7	04/07/2024	2000000014		90
8	28/06/2024	2000000014		90
9	21/06/2024	2000000014		90

Test Method: **PM 10 Based Multiple Analyser**

NOTE: Results reported here are based on the standard method. The results are subject to the accuracy of the instrument used. The results are not to be used for legal purposes. The results are for information only. The results are not to be used for legal purposes. The results are for information only.



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BUILDING & ROAD, MATERIAL, SOIL, ENVIRONMENTAL & CALIBRATION TESTING LAB



Issued To: **M/s Ramnagar Port Trust**
Vijay Road, Chennai, India

Test Report No.: **20200000**

Sample Particulars

Nature of the Sample:

Purpose of Monitoring:

Sampling Location:

Method of Sampling:

Monitoring Conducted By:

Sampling Duration (hrs):

Ambient Air Quality Monitoring

To Check the Pollution Level

General Usage Book

IS 3102 (Part 14)

Mr. Ramnagar

09/10/20

Analysis Report

Sl. No.	Date of Sampling	G.A. No.	Concentration
			Microg/m ³
1	04/07/2020	0000702010	60
2	07/07/2020	0000703010	50
3	10/07/2020	0000704010	50
4	14/07/2020	0000705010	60
5	17/07/2020	0000706010	60
6	21/07/2020	0000707010	60
7	24/07/2020	0000708010	60
8	28/07/2020	0000709010	60
9	31/07/2020	0000710010	60

Test Method: **ND Based Nephelometry Analyser**

Report prepared based on sample received. Nitya Laboratories Pvt. Ltd. is not responsible for any errors or omissions. The Client is advised to ensure that the sample is representative of the area to be monitored. Nitya Laboratories Pvt. Ltd. is not responsible for any errors or omissions. The Client is advised to ensure that the sample is representative of the area to be monitored.



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(RAMNAGAR PORT TRUST)

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BUILDING & ROAD, MATERIAL, SOIL, ENVIRONMENTAL & CALIBRATION TESTING LAB

Issued To: **Mr. Anurag Prasad Prasad**
Water Prod. Chemist India

Test Report Date: **08/08/2024**

01

Sample Particulars

Name of the Sample:

Purpose of Monitoring:

Sampling Location:

Method of Sampling:

Monitoring Conducted By:

Sampling Duration (hrs.):

- Ambient Air Quality Monitoring
- To Check PM Pollution Level
- Car Parking
- IS 3100 (Part 1)
- MS - 1800
- IS 150

Analysis Report

Sl. No.	Date of Sampling	L&M No.	Concentration
			Microg (µg)
1	08/08/2024	00000000176	ND
2	08/08/2024	00000000176	ND
3	08/08/2024	00000000176	ND
4	08/08/2024	00000000176	ND
5	08/08/2024	00000000176	ND
6	08/08/2024	00000000176	ND
7	08/08/2024	00000000176	ND
8	08/08/2024	00000000176	ND
9	08/08/2024	00000000176	ND
Test Method			PM Based Method Analysis

NOTE: Results shown on this report are based on the sample submitted for analysis. The laboratory is not responsible for the accuracy of the results if the sample is not properly represented. The results shown on this report are based on the sample submitted for analysis. The laboratory is not responsible for the accuracy of the results if the sample is not properly represented. The results shown on this report are based on the sample submitted for analysis. The laboratory is not responsible for the accuracy of the results if the sample is not properly represented.



(REG. IN INDIA)

(REGISTERED LABORATORY)

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BUILDING & ROAD, MATERIAL, SOIL, ENVIRONMENTAL & CALIBRATION TESTING LAB

Issued To: **M/s Kamalgarh Port Trust,**
Water Port, Chennai, India.

Test Report No.: **20200101**



Sample Particulars

Nature of the Sample

Purpose of Monitoring

Sampling Location

Method of Sampling

Monitoring Conducted By

Sampling Division (Area)

- Ambient Air Quality Monitoring
- To Check the Polluted Level
- Fire Station
- IS 1500 (Part 1)
- 10: 00:00
- 20/01/20

Analysis Report

Sl. No.	Date of Sampling	Location	Concentration				
			Particulate Matter (PM ₁₀) (µg/m ³)	Particulate Matter (PM _{2.5}) (µg/m ³)	Ozone (ppb) (ppm)	Nitrogen Dioxide (ppb) (ppm)	Carbon Monoxide (ppb) (ppm)
1	20/01/20	Water Port, Chennai	25.13	24.80	18.40	21.00	ND
2	20/01/20	Water Port, Chennai	27.40	26.10	17.20	20.40	ND
3	18/01/20	Water Port, Chennai	24.10	20.40	18.70	21.00	ND
4	18/01/20	Water Port, Chennai	27.40	24.40	18.00	20.40	ND
5	17/01/20	Water Port, Chennai	21.00	20.40	18.70	20.40	ND
6	17/01/20	Water Port, Chennai	19.40	20.10	18.00	18.00	ND
7	16/01/20	Water Port, Chennai	22.40	22.10	17.00	20.00	ND
8	16/01/20	Water Port, Chennai	20.00	18.10	17.00	21.40	ND
9	15/01/20	Water Port, Chennai	21.40	18.00	18.70	20.00	ND
IS 1500 Standard			ND	ND	ND	ND	ND
Test Method			IS 1500 Part 13 CPM	IS 1500 Part 13 CPM	IS 1500 Part 13 CPM	IS 1500 Part 13 CPM	IS 1500 Part 13 CPM

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BUILDING & ROAD, MATERIAL, SOIL, ENVIRONMENTAL & CALIBRATION TESTING LAB

Issued To: M/s Raviwajr Pvt. Trust
 1011 Post, Chander, 6026

Test Report No.: 1000000000

Sample Particulars:

Nature of the Sample:

Process of Monitoring:

Sampling Location:

Method of Sampling:

Monitoring Conducted By:

Sampling Operator (If any):

- Ambient Air Quality Monitoring
- To Check the Pollution Level
- Fine Station
- SO₂ (Part 14)
- Air, Outdoor
- SO₂

Analysis Report

Sr. No.	Date of Sampling	SLR No.	Concentration
			Microg (µg)
1	04/01/2021	1000000001	ND
2	04/01/2021	1000000002	ND
3	04/01/2021	1000000003	ND
4	04/01/2021	1000000004	ND
5	04/01/2021	1000000005	ND
6	04/01/2021	1000000006	ND
7	04/01/2021	1000000007	ND
8	04/01/2021	1000000008	ND
9	04/01/2021	1000000009	ND
Test Method			FD Based Method Analyser

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Test Reports of Wastewater (STP)



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Kamarajar Port Limited

Vallur Post, Chennai-600 120, Tamil Nadu, India

Reports on Environmental Monitoring of Kamarajar Port Limited



Study Period: August 2023

Prepared By



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Issued To: Mr. Anandharaj Poojary
 Vaidya Post, Channarayana, Bellary

Test Report No.: 202400002

Sample Particulars

Name of the Sample:

Purpose of Monitoring:

Sampling Location:

Method of Sampling:

Monitoring Conducted By:

Sampling Duration (hrs.):

Analysed for Quality Monitoring:

To Check the Pollution Level:

Start Date:

15/03/2024 (08:15)

By: Anandharaj

24 hrs

Analysis Report

Sr. No.	Date of Sampling	L&R No.	Concentration
			Methane (%)
1	15/03/2024	202400004110	ND
2	17/03/2024	202400004110	ND
3	17/03/2024	202400004110	ND
4	18/03/2024	202400004110	ND
5	18/03/2024	202400004110	ND
6	20/03/2024	202400004110	ND
7	20/03/2024	202400004110	ND
8	20/03/2024	202400004110	ND
9	24/03/2024	202400004110	ND
Test Method			FID Based Methane Analyser

Notes:

1. Report is valid only for the purpose mentioned in the report. It is not valid for any other purpose.
 2. Samples must be analysed immediately after collection and should be stored in the laboratory under appropriate conditions.
 3. Samples must be analysed within the specified time period after collection. (If not specified, it is 24 hours).



CORPORATE OFFICE & CENTRAL LABORATORY :-

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Report To: Mr. Manoj Kumar Prasad
 (Chief Project Engineer, IIR)

Test Report Date: 05/06/2024

Sample Particulars

Nature of the Sample:

Purpose of Monitoring:

Sampling Location:

Method of Sampling:

Monitoring Conducted By:

Sampling Duration (hr):

Analysed Air Quality Monitoring

To Check the Pollution Level

Start Time:

End Time (hr:min):

At: (Station):

24 hrs

Analysis Report

Sl. No.	Date of Sampling	SLR No.	Concentration
			Microg (µg)
1	05/06/2024	0000000001	40
2	07/06/2024	0000000002	40
3	11/06/2024	0000000003	40
4	14/06/2024	0000000004	40
5	18/06/2024	0000000005	40
6	20/06/2024	0000000006	40
7	24/06/2024	0000000007	40
8	26/06/2024	0000000008	40
Total Method			40 (Good Method) Analyser

Note:

Sample taken under the following conditions: (Date, Time, Location, etc.) as per the report. The results are based on the test conducted at a standard method as per the relevant Indian Standard (IS) specifications. The results are subject to change depending on the test conditions. (If applicable, please mention the test conditions.)



Our services are provided to our clients on a non-exclusive basis. The results are based on the test conducted at a standard method as per the relevant Indian Standard (IS) specifications. The results are subject to change depending on the test conditions. (If applicable, please mention the test conditions.)

CORPORATE OFFICE & CENTRAL LABORATORY

Client To: M/s. Narmada Port Trust
 Jafra Port, Chennai, India

Test Report No.: NIT/00002

Sample Particulars

Name of the Sample:
 Purpose of Monitoring:
 Sampling Location:
 Method of Sampling:
 Monitoring Conducted by:
 Sampling Duration (If any):

Ambient Air Quality Monitoring
 To Check the Pollutant Load
 Name Building:
 ID Code (if any):
 No. Analytes:
 In use

Analysis Report

Sl. No.	Date of Sampling	ILR No.	Concentration
			Microg/m ³
1	14/06/2018	0000000110	60
2	00/06/2018	0000000111	60
3	14/06/2018	0000000112	60
4	14/06/2018	0000000113	60
5	14/06/2018	0000000114	60
6	00/06/2018	0000000115	60
7	00/06/2018	0000000116	60
8	00/06/2018	0000000117	60
Test Method			PM Based Methods Analyser

NOTE: All test results are subject to the accuracy of the test methods used. The laboratory is not responsible for any errors or omissions in the test results. The client is advised to verify the test results with the relevant authorities. The laboratory is not responsible for any errors or omissions in the test results. The client is advised to verify the test results with the relevant authorities.



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BUILDING & ROAD, MATERIAL, SOIL, ENVIRONMENTAL & CALIBRATION TESTING LAB



Issued To: Mr. Manoj Kumar Prasad
 Urban Dept., Chennai, India

Test Report No.: 24/00000

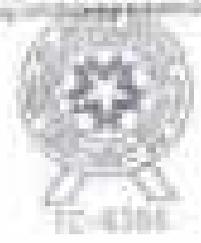
Sample Particulars
 Name of the Sample:
 Purpose of Monitoring:
 Sampling Location:
 Method of Sampling:
 Monitoring Conducted by:
 Sampling Interval (hrs.):

Ambient Air Quality Monitoring
 To Check the Pollution Level
 Signal Station:
 ID: 2402 (Plot 14)
 64 - Street
 64/10

Analysis Report

Sl. No.	Date of Sampling	L&T No.	Concentration				
			Particulate Matter (PM10) (µg/m ³)	Particulate Matter (PM2.5) (µg/m ³)	Sulphur Dioxide (SO ₂) (ppm)	Oxygen Dioxide (O ₃) (ppm)	Carbon Monoxide (CO) (ppm)
1	24/00/2024	TCMBL2400000000000000	24.41	42.22	11.2	12.19	40
2	27/00/2024	TCMBL2400000000000000	24.75	42.41	9.81	12.22	40
3	27/00/2024	TCMBL2400000000000000	18.51	47.22	11.22	12.22	40
4	27/00/2024	TCMBL2400000000000000	18.22	44.22	10.22	14.22	40
5	28/00/2024	TCMBL2400000000000000	16.72	51.22	12.22	13.22	40
6	28/00/2024	TCMBL2400000000000000	17.22	52.22	9.72	12.22	40
7	28/00/2024	TCMBL2400000000000000	20.22	47.22	11.72	14.72	40
8	28/00/2024	TCMBL2400000000000000	14.22	44.22	11.72	12.42	40
MAACM Standards			60	100	30	60	2
Test Method			IS 3106 Appendix I, Part 02 CPOB Guidelines	IS 3106 (P-25)	IS 3106 (P-2)	IS 3106 (P-4)	IS 3106 (P-05)

This report is valid only for the purpose mentioned above and is not to be used for any other purpose. The data is for information only and is not to be used for any other purpose. The data is for information only and is not to be used for any other purpose.





Send To: Mr. Kamranjhar Post Trust
 (Sector-A2, Old, Bhubaneswar, Odisha)

Test Report No.: NLY/2022

Sample Particulars

Nature of the Sample
 Purpose of Monitoring
 Sampling Location
 Method of Sampling
 Monitoring Conducted by
 Sampling Duration (hrs)

Ambient Air Quality Monitoring

To Check the Pollution Level
 Signal Station
 IS-3102 (Part 1 & 2)
 06 Months
 24 Hrs.

Analysis Report

Sl. No.	Date of Sampling	IS:3102 No	Concentration
			Microg / m ³
1	01/06/2022	01/06/2022 (1)	ND
2	02/06/2022	02/06/2022 (1)	ND
3	03/06/2022	03/06/2022 (1)	ND
4	04/06/2022	04/06/2022 (1)	ND
5	05/06/2022	05/06/2022 (1)	ND
6	06/06/2022	06/06/2022 (1)	ND
7	07/06/2022	07/06/2022 (1)	ND
8	08/06/2022	08/06/2022 (1)	ND
Total Number			ND Based Medium Analyzed

NOTE: Results are valid only for the purpose for which they are intended and are not to be used for any other purpose. The laboratory is not responsible for any damage or loss of samples or any other loss incurred by the client. The client is responsible for the safety of the samples and the laboratory is not responsible for any damage or loss of samples or any other loss incurred by the client.



COMPANY OFFICE & CENTRAL LABORATORIES :-

BUILDING & ROAD, MATERIAL, SOIL, ENVIRONMENTAL & CALIBRATION TESTING LAB

Send To: Mr. Kamanga Pratap
 Water Park, Ghaziabad, India

Test Report No.: 16-0520

Sample Particulars
 Nature of the Sample
 Purpose of Monitoring
 Sampling Location
 Method of Sampling
 Monitoring Conducted By
 Sampling Number (S/N)

Ambient Air Quality Monitoring
 To Check the Pollution Level
 General Usage Test
 IS 3102 (Part 14)
 01-05-2016
 Mr. Kamanga
 24/16

Analysis Report

Sl. No.	Date of Sampling	S/N No.	Concentration
			Microg/m ³
1	24/05/2016	20200011016	90
2	27/05/2016	20200011016	90
3	27/05/2016	20200011016	90
4	24/05/2016	20200011016	90
5	24/05/2016	20200011016	90
6	24/05/2016	20200011016	90
7	24/05/2016	20200011016	90
8	24/05/2016	20200011016	90
Test Method			ISO 3102 Method 14

Notes:
 1. This report is valid only for the purpose mentioned in the report. It is not valid for any other purpose.
 2. The results are subject to the accuracy of the test methods used and the quality of the sample.
 3. The results are subject to the accuracy of the test methods used and the quality of the sample.



BUILDING & ROAD, MATERIAL, SOIL, ENVIRONMENTAL & CALIBRATION TESTING LAB



Issued To: **M/s Karamveer Road Trust**
 Vastu No. Chandra 1004

Test Report Date: 05/05/2019

Sample Particulars
 Nature of the Sample
 Purpose of Monitoring
 Sampling Location
 Method of Sampling
 Monitoring Conducted By
 Sampling Duration (hrs.)

Ambient Air Quality Monitoring
 To Check the Pollution Level
 Car Parking
 02/05/2019 (Mon) to
 04/05/2019
 24 hrs

Analysis Report

Sr. No.	Date of Sampling	S.R. No.	Concentration
			Microg/m ³
1	05/05/2019	0000000119	60
2	05/05/2019	0000000219	60
3	05/05/2019	0000000319	60
4	05/05/2019	0000000419	60
5	05/05/2019	0000000519	60
6	05/05/2019	0000000619	60
7	05/05/2019	0000000719	60
8	05/05/2019	0000000819	60
Test Method			PM Based Multiple Sampling

NOTE: Nitya Laboratories is an ISO 9001:2015 certified organization. The test results are valid only if the sample is collected and analyzed in accordance with the standard methods. The test results are valid only if the sample is collected and analyzed in accordance with the standard methods.





Test Reports of Wastewater (STP)



NOTE: The information provided in this report is based on the test results of the samples submitted to the laboratory. The laboratory is not responsible for the accuracy of the data provided by the client. The laboratory is not responsible for the accuracy of the data provided by the client. The laboratory is not responsible for the accuracy of the data provided by the client.

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Issued To: **M/s Ramrajgar Port Trust**
 Water Pool, Chennai, India

Lab No: **TCM00000000794 (11/17)**
 Test Report Date: **07/06/2022**

Sample Particulars

Nature of the Sample
 Sample Quantity & Packaging
 Sample Received at Lab
 Test Started On
 Test Completed On
 Method of Sampling
 Date of Sampling
 Monitoring Conducted By
 Sample Description

Wastewater (BTP)
 1.0 Liter Per Bottle (Each)
 B4800000
 B4800000
 B4800000
 B4800000
 B4800000
 In: Street
 No: 1, BTP-Cell of Admin Building
 No: 2, BTP-Cell of Car Parking
Analysis Report

Sl. No.	Parameter	Unit	Result		Permissible Limits	Standard
			W-1	W-2		
1	pH	---	7.82	7.42	6.5 to 8.5	IS: 3025 (P-11)
2	Total Dissolved Solids (TDS)	mg/l	120	90	500	IS: 3025 (P-11)
3	Chemical Oxygen Demand (COD)	mg/l	80	24	100	IS: 3025 (P-50)
4	Bio-Chemical Oxygen Demand (BOD at 20°C) (5 Days)	mg/l	11	4	50	IS: 3025 (P-44)
5	Total Coliform	MPN/100 ml	400	900	<1000	IS: 1502



(Signature)
(AUTHORIZED SIGNATORY)
(RUPESH BABU)

(Signature)
(AUTHORIZED SIGNATORY)
(NITHYAN NITYA)

NOTE: The information provided herein is based on the test results of the sample submitted to the laboratory. The laboratory is not responsible for the accuracy of the information provided. The information provided herein is for informational purposes only and should not be used for any other purpose. The laboratory is not responsible for the accuracy of the information provided. The information provided herein is for informational purposes only and should not be used for any other purpose.



Kamarajar Port Limited

Vallur Post, Chennai-600 120, Tamil Nadu, India

Reports on Environmental Monitoring of Kamarajar Port Limited



Study Period: September 2023

Prepared By



NITYA LABORATORIES

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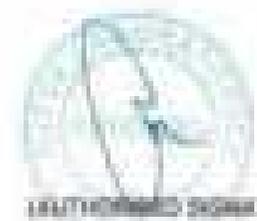
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Test Reports of Ambient Air Quality Monitoring



(AUTHENTIC SIGNATURE)
(PROVEN INTACT)

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BUILDING & ROAD, MATERIAL, SOIL, ENVIRONMENTAL & CALIBRATION TESTING LAB

Issued To: **M/s. Kalyanraj Plast. Plast.**
 (Water Proof, Chemical, India)

Test Report No.: **NTY/00002**

Sample Particulars

Nature of the Sample:

Purpose of Monitoring:

Sampling Location:

Method of Sampling:

Monitoring Conducted By:

Sampling Division (s):

- Ambient Air Quality Monitoring
- To Check the Pollution Load
- Map Data
- IS 3100 (Part 1)
- Mr. Engineer
- 24 hrs.

Analysis Report:

Sl. No.	Date of Sampling	Test Report No.	Concentration
			Within (%)
1	24/06/2021	2020000110	40
2	24/06/2021	2020000110	40
3	24/06/2021	2020000110	40
4	24/06/2021	2020000110	40
5	24/06/2021	2020000110	40
6	24/06/2021	2020000110	40
7	24/06/2021	2020000110	40
8	24/06/2021	2020000110	40
Test Method			ISO Based Wetness Analyser

NOTE: Nitya Laboratories is an ISO 9001:2015 Certified Quality Management System (QMS) and ISO 17025:2017 Certified Calibration Laboratory. We are also a member of the National Association of Testing Authorities (NATA) and the National Association of Environmental Testing Laboratories (NAETL). For more information, please contact us at info@nityalab.com or call us at 01293-240000.



(NITYA LABORATORIES HARYANA, INDIA)
RAVINDER MITTAL

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Issued To: **M/s. Ramrajgarh Port Trust**
Sector 17, Gurgaon, Haryana

Test Report No.: **NY/2024/001**

Sample Particulars

Name of the Sample:

Purpose of Monitoring:

Sampling Location:

Method of Sampling:

Monitoring Conducted By:

Sampling Duration (hrs.):

- Ambient Air Quality Monitoring
- To Check the Pollution Load
- Good House
- In Area (Near In)
- In Street
- In Area

Analysis Report

Sr. No.	Date of Sampling	Test Report No.	Concentration
			Methane (%)
1	01/01/2024	NY/2024/001	40
2	01/01/2024	NY/2024/001	40
3	01/01/2024	NY/2024/001	40
4	01/01/2024	NY/2024/001	40
5	01/01/2024	NY/2024/001	40
6	01/01/2024	NY/2024/001	40
7	01/01/2024	NY/2024/001	40
8	01/01/2024	NY/2024/001	40
Test Method			ND Based Methane Analysis

Notes:
 1. This report is valid only for the purpose mentioned in the report. It is not valid for any other purpose.
 2. The test results are based on the sample provided and are not a guarantee of the quality of the sample.
 3. The test results are based on the sample provided and are not a guarantee of the quality of the sample.



(RAJINDER MITTAL)
(RAJINDER MITTAL)

For more information, please contact us at 0122-230007 or visit our website at www.nitya.com. We are committed to providing accurate and reliable test results for our clients.

BUILDING & ROAD, MATERIAL, SOIL, ENVIRONMENTAL & CALIBRATION TESTING LAB

Issued To: **Mrs Namangal Pooj Thakur**
Vafar Road, Chandra, India

Test Report Date: 27/10/2023

Sample Particulars

Nature of the Sample:

Purpose of Monitoring:

Sampling Location:

Method of Sampling:

Monitoring Conducted By:

Sampling Duration (hrs.):

Ambient Air Quality Monitoring

To Check the Pollution Load

Admin Building

60 Area (Plot 110)

60, Gurgaon

24 hrs

Analysis Report

Sl. No.	Date of Sampling	Test Report No.	Concentration
			Methane (%)
1	26/10/2023	202306040110	40
2	26/10/2023	202306040110	40
3	26/10/2023	202306040110	40
4	12/09/2023	202301180110	40
5	12/09/2023	202301180110	40
6	27/09/2023	202301200110	40
7	20/09/2023	202301200110	40
8	20/09/2023	202301200110	40
Test Method			FTIR based Methane Analyser

Notes

All test results depend on data integrity. Samples should be stored properly for 14 days after sampling. All test results are based on the accuracy of a certified test kit. Accuracy depends upon the test methodology used. Sample collection and handling should be done properly. (info@nityalab.com, 24x7x365)



(AUTHOGRAPHED SIGNATURE)

(NAMANGAL MITTAL)

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BUILDING & ROAD, MATERIAL, SOIL, ENVIRONMENTAL & CALIBRATION TESTING LAB



Issued To: **M/s Kaverajee Feet Foot**
 Vaidya Nagar Chennai, India

Test Report Code: **ENV000001**

Sample Particulars

Reason of the Sample
 Purpose of Monitoring
 Sampling Location
 Method of Sampling
 Monitoring Conducted by
 Sampling Duration (hrs)

- ✓ Assessment of Quality Monitoring
- ✓ To Check the Pollutant Level
- ✓ Report Status
- ✓ 00.000 (Post Test)
- ✓ 00.00000
- ✓ 00.000

Analytical Report

Sr. No.	Date of Sampling	SAR No.	Concentration				
			Particulate Matter (PM ₁₀) (µg/m ³)	Particulate Matter (PM _{2.5}) (µg/m ³)	Nitrate (as NO ₃) (µg/m ³)	Sulphate (as SO ₄) (µg/m ³)	Oxide Sulphate (as SO ₂) (µg/m ³)
1	01/06/2024	TC000000000000000001	12.12	18.78	12.78	17.25	60
2	02/06/2024	TC000000000000000002	11.22	16.22	14.72	16.72	60
3	03/06/2024	TC000000000000000003	13.40	19.70	16.70	18.70	60
4	11/06/2024	TC000000000000000004	17.90	14.20	17.20	16.90	60
5	12/06/2024	TC000000000000000005	14.40	16.20	14.20	16.10	60
6	13/06/2024	TC000000000000000006	15.70	16.20	13.70	15.40	60
7	14/06/2024	TC000000000000000007	16.20	13.40	13.20	17.60	60
8	15/06/2024	TC000000000000000008	15.80	16.70	15.40	14.70	60
IS/LM Standards			60	40	60	60	0
Test Method			IS:6163 Appendix 1 Part 63.1 (PM ₁₀) Quotient	IS:6163 (PM _{2.5})	IS:6163 (P-3)	IS:6163 (P-4)	IS:6163 (P-5)

NOTE: Testing conducted under laboratory conditions. Particulate Matter (PM₁₀) and (PM_{2.5}) are reported as mass concentration. The results are not to be used for legal or regulatory purposes. The results are for information only. The results are not to be used for legal or regulatory purposes.





Issued To: **M/s. Kanchanpur Park Trust**
 Vihar Road, Ghaziabad, India

Test Report Date: **07/05/2024**

Sample Particulars

Name of the Sample:
 Purpose of Monitoring:
 Sampling Location:
 Method of Sampling:
 Monitoring Conducted by:
 Sampling Duration (HR):

- Ambient Air Quality Monitoring
- To Check the Pollution Level
- Signal Station
- In-Plant (Point 1)
- In-Stream
- In-Use

Analysis Report

Sl. No.	Date of Sampling	Test Report No.	Concentration
			Microg (µg)
1	07/05/2024	0000000111	60
2	07/05/2024	0000000111	60
3	07/05/2024	0000000111	60
4	07/05/2024	0000000111	60
5	07/05/2024	0000000111	60
6	07/05/2024	0000000111	60
7	07/05/2024	0000000111	60
8	07/05/2024	0000000111	60
Test Method			PM 2.5 Gravimetric Analysis

Notes:
 1. All test results are subject to the accuracy of the data and the quality of the sample.
 2. The results are the responsibility of the client and not the laboratory.
 3. The laboratory is not responsible for the accuracy of the data provided by the client.



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Issued To: **M/s. Kamangal Port Trust**
Vidya Road, Chennai, India

Test Report No: **0210000019**

Sample Particulars

Source of the Sample:

Purpose of Monitoring:

Sampling Location:

Method of Sampling:

Monitoring Conducted by:

Sampling Station (If Any):

Analysis of Air Quality Monitoring

To Check the Pollutant Load

From: 01/01/14

to: 31/03/14

By: Director

at: 01/14

Analysis Report

Sr. No.	Date of Sampling	Test Report No.	Concentration
			Microg/m ³
1	01/01/2014	0210000014	45
2	01/02/2014	0210000014	40
3	01/03/2014	0210000014	42
4	02/03/2014	0210001014	40
5	15/03/2014	0210001014	40
6	20/03/2014	0210001014	40
7	25/03/2014	0210001014	40
8	30/03/2014	0210001014	40
Test Method			PM 10 Based Wet/Dry Analyzer

Notes:

1. All test results are based on the test results of the sample as received. If the sample is not as received, the results may be affected. The test results are based on the test results of the sample as received. The test results are based on the test results of the sample as received. The test results are based on the test results of the sample as received.



Issued To: **M/s. Karamveer Path Trust**
Vardhola, Gurgaon, Haryana

Test Report No.: **0000000001**

Sample Particulars

Name of the Sample:

Purpose of Monitoring:

Sampling Location:

Method of Sampling:

Monitoring Conducted by:

Sampling Duration (hrs):

Assess the Quality Monitoring

To Check the Pollutant Level

General Sample from

00.000 (Part no.)

M. Sharma

24 hrs

Analysis Report

Sl. No.	Date of Sampling	Test Report No.	Concentration
			Microg / m ³
1	02/08/2018	0000000001	40
2	02/08/2018	0000000001	40
3	02/08/2018	0000000001	40
4	02/08/2018	0000010011	40
5	02/08/2018	0000010011	40
6	02/08/2018	0000010011	40
7	02/08/2018	0000010011	40
8	02/08/2018	0000010011	40
Test Method			PM 10 Based Monitor - Analyser

Notes:

1. Sample collection is done as per the standard procedure (IS: 11030) and the results are in µg/m³ and the standard.

2. Comparison and the result interpretation: It is confirmed that the results are within the standard limits and the results are within the standard limits.

3. Report is valid only for the date and time of sampling. It is a continuous monitoring report.



(AUTHORIZED SIGNATORY)

(RANDEEP MITAL)

Issued To: **M/s. Kamaljeet Port Trust**
Taha Road, Chhina, India

Test Report Date: **07/05/2023**

Sample Particulars

Nature of the Sample:

Purpose of Monitoring:

Sampling Location:

Method of Sampling:

Monitoring Conducted by:

Sampling System (If any):

Reference for Quality Monitoring:

To Check the Pollution Level

Coal Paving

IS 4302 (Part 14)

Mr. Shreshth

IS 4302

Analysis Report

Sl. No.	Date of Sampling	S.A. No.	Concentration
			Hexane (%)
1	05/05/2023	2023050114	ND
2	05/05/2023	2023050218	ND
3	05/05/2023	2023050316	ND
4	14/05/2023	2023051118	ND
5	14/05/2023	2023051218	ND
6	22/05/2023	2023051318	ND
7	22/05/2023	2023051418	ND
8	29/05/2023	2023051518	ND
Test Method			ISO 8463 Method A (Distill)

Note:

1. This report is valid only for the purpose mentioned in this report. It is not valid for any other purpose.
2. Sample size, sampling frequency, or additional parameters should be decided by the client before the start of the sampling.
3. The results of the analysis are based on the sampling of the sample as described in the report.



AUTHORIZED SIGNATURE
(RAVINDER MITTAL)

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BUILDING & ROAD, MATERIAL, SOIL, ENVIRONMENTAL & CALIBRATION TESTING LAB

Issued To: **M/s. Anandraj Park Trust**
 100/100, Chandra, Indore

Test Report Date: 07/07/2022

Sample Particulars

Nature of the Sample:

Purpose of Monitoring:

Sampling Location:

Method of Sampling:

Monitoring Conducted By:

Sampling Duration (hrs.):

Appoint Air Quality Monitoring:

To Check the Pollution Level:

For Station:

IS 3102 (Part 1A)

at: **Indore**

24 hrs.

Analysis Report

Sl. No.	Date of Sampling	Test Report No.	Concentration
			Microg/m ³
1	07/07/2022	00000000113	40
2	07/07/2022	00000000114	40
3	07/07/2022	00000000115	40
4	07/07/2022	00000000116	40
5	07/07/2022	00000000117	40
6	07/07/2022	00000000118	40
7	07/07/2022	00000000119	40
8	07/07/2022	00000000120	40
Total Method			PM₁₀ Based Method Analyze

NOTE: This report is valid only for the purpose mentioned in the report. It is not valid for any other purpose. The report is valid only for the purpose mentioned in the report. It is not valid for any other purpose. The report is valid only for the purpose mentioned in the report. It is not valid for any other purpose.



For more information, please contact us at the following details: info@nityalab.com or www.nityalab.com

COMPANY OFFICE & CENTRAL LABORATORIES -

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www.nityalab.com

Test Reports of Noise Monitoring



Issued To: **M/s. Kanchanraj Park Trust**
 Water Test - Chennai, India

CLP No: **TC202400004/TSP-41/001**
 Test Report Date: **18/06/2024**

Sample Particulars
 Name of the Sample
 Parameter Tested
 Instrument Used
 Sampling Duration (hrs.)

Analysis Name
 Water Level Log @ 0.1M
 Ground Level Meter
 @ 10m

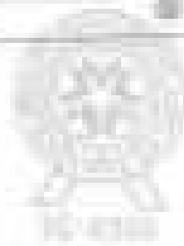
Analysis Report

Sl. No.	Location	Date of Sampling	Test Result (BGA) Day Time	Test Result (BGA) Night Time
1	Main Gate	12/06/2024	51.80	42.70
2	Guest House	12/06/2024	50.80	49.10
3	Admin Building	12/06/2024	50.80	50.00
4	Signal Station	12/06/2024	47.70	50.41
5	Prayer Area	12/06/2024	49.80	48.80
6	General Cargo Area	12/06/2024	50.14	52.50
7	Car Parking	12/06/2024	49.07	50.00
8	Fire Station	12/06/2024	50.80	50.80
Permissible Limit as per IS:15925 Long for Industrial Area			75 (BGA)	75 (BGA)

1. The data shown in this report is based on the test results as per the test method specified in the report. Nitya Laboratories is not responsible for any errors or omissions.

Note: The Name Address for Quality Statements are given for reference.

Area Code	Category of Area	Limits (BGA) Limit	
		Day Time (8AM - 6PM)	Night Time (6PM - 8AM)
A	Industrial Area	75	75
B	Commercial Area	65	65
C	Residential Area	55	45
D	Source Zone	50	40



CORPORATE OFFICE & CENTRAL LABORATORIES :-

Test Reports of Wastewater (STP)



(AUTHORISED SIGNATORY)

(NAME OF OFFICER)

CORPORATE OFFICE & CENTRAL LABORATORIES

Plot No. 133, Church Road, Behind Kallan Nitya, Bagalur 560075, Bellary District, Karnataka, India

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Issued To: Mrs Kamanga Post Trust
 Gurgaon Post, Gurgaon, India

L&R No.: T20240000000001111-0001
Test Report Date: 20240220

Sample Particulars

Nature of the Sample:
Sample Quantity & Packaging:
Sample Received at Lab:
Test Requested On:
Test Completed On:
Method of Sampling:
Date of Sampling:
Monitoring Conducted By:
Remarks/Description:

Workorder (W/O)

- 1. 1 Lit. for Pet Investigation
- 16200000
- 16200000
- 20240220
- 20240220
- 20240220
- W-1
- W-1: 010 Cell at Petrol Station
- W-2: 010 Cell at Car Parking

Analysis Report

Sr. No.	Parameter	Unit	Result		Regulatory Limits	Remarks
			W-1	W-2		
1	pH	-	6.70	7.20	6.5 to 8.5	IS:3025 (P-11)
2	Total Suspended Solids (TSS)	mg/l	80	80	50	IS:3025 (P-11)
3	Chemical Oxygen Demand (COD)	mg/l	20	21	100	IS:3025 (P-11)
4	Bio Chemical Oxygen Demand (BOD at 20°C) (BOD ₅)	mg/l	5	6	30	IS:3025 (P-11)
5	Fecal Coliform	MPN/100 ml	More than 1000	More than 1000	<1000	IS:1502



(Signature)
 (AUTHORIZED SIGNATURE)
 (NITYA GARGAN)

(AUTHORIZED SIGNATURE)
 (SARVJIT NITYA)

CORPORATE OFFICE & CENTRAL LABORATORIES :-

W-1E, PLOT NO. 112, DURGAM CHOWK, SECTOR 41, GURGAON, HARYANA, INDIA. NEAR DURGAM CHOWK, SECTOR 41, GURGAON, HARYANA, INDIA. NEAR DURGAM CHOWK, SECTOR 41, GURGAON, HARYANA, INDIA.

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Test Reports of Surface Water



(NITYA LABORATORIES)

(RAVINDER MITTAL)

BUILDING & ROAD, MATERIAL, SOIL, ENVIRONMENTAL & CALIBRATION TESTING LAB

Issued To: **Mrs. Manojkumar Poon Thani**
Address: **Plot, Gurgaon, India**

SLP No.: **NCMB/2008/0001/1999-19/199**
Test Report Date: **28/04/2008**

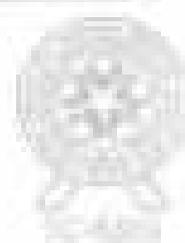
Sample Particulars

Nature of the Sample
Sample Quantity & Packaging
Sample Received at Lab
Test Started On
Test Completed On
Method of Sampling
Date of Sampling
Monitoring Conducted By
Sample Description

Surface Water
S.L.L.No. **Standard Test Name (Date)**
1999/0001
1999/0002
2000/0003
2001/0004
1999/0005
Mr. **Shivinder**
DWC, **Green Mouth**
DWC, **Opp. to Main Gate**
DWC, **Opp. to West Gate**
Analysis Report

Sr. No.	Parameters	Unit	Test Results			Protocol
			Run-1	Run-2	Run-3	
1	pH		7.26	7.26	7.26	IS:3025 (P-1)
2	Temperature	°C	26.1	26.2	26	IS:3025 (P-2)
3	Electrical Conductivity	µmhos	2010	2020	1920	IS:3025 (P-3)
4	Total Solids	mg/l	41	41	41	APHA 2170A
5	Total Dissolved Solids	mg/l	2400	2400	2100	IS:3025 (P-4)
6	Sulphate as SO ₄	mg/l	21	20	19	APHA 2170A
7	Nitrate as NO ₃	mg/l	0.35	4.37	4.35	IS:3025 (P-5)
8	Total Ammonia	mg/l	0.28	ND	0.28	IS:3025 (P-6)
9	Total Suspended Solids	mg/l	25	19	20	IS:3025 (P-7)
10	Dissolved Oxygen as DO	mg/l	4.1	3.8	3.8	IS:3025 (P-8)
11	Biological Oxygen Demand	mg/l	25	5	5	IS:3025 (P-9)
12	Chemical Oxygen Demand	mg/l	119	12	11	IS:3025 (P-10)
13	Copper as Cu	mg/l	0.08	0.08	0.08	APHA 2170A
14	Iron as Fe	mg/l	25.18	ND	0.04	APHA 2170A
15	Zinc as Zn	mg/l	0.08	ND	ND	APHA 2170A
16	Mercury as Hg	mg/l	ND (DL-0.001)	ND (DL-0.001)	ND (DL-0.001)	APHA 2170A
17	Arsenic as As	mg/l	ND (DL-0.01)	ND (DL-0.01)	ND (DL-0.01)	APHA 2170A
18	Cadmium as Cd	mg/l	ND (DL-0.01)	ND (DL-0.01)	ND (DL-0.01)	APHA 2170A
19	Lead as Pb	mg/l	ND	ND	ND	APHA 2170A
20	Fluoride as F	MPM (ppm)	172	169	175	IS:1502

Notes: 1. As per IS:3025 (P-1)



 (AUTHORIZED SIGNATORY)
 (JYOTHA BASON)


 (AUTHORIZED SIGNATORY)
 (RAVINDER NITYA)

BUILDING & ROAD, MATERIAL, SOIL, ENVIRONMENTAL & CALIBRATION TESTING LAB



Issued To: **Ms. Manojee Puri Trust**
 Vohla Road, Chhara, India

Test Report No.: **20200100129-110**
 Test Report Date: **23/06/2021**

Sample Particulars:

- 1. Nature of the Sample
- 2. Sample Quantity & Packaging
- 3. Sample Received at Lab
- 4. Test Requested On
- 5. Test Completed On
- 6. Method of Sampling
- 7. Date of Sampling
- 8. Monitoring Conducted by
- 9. Sample Description

- 1. **Surface Water**
- 2. 50 Liter, Described Polythene Drum
- 3. HINDON
- 4. HINDON
- 5. HINDON
- 6. HINDON
- 7. HINDON
- 8. Mr. Manojee
- 9. 001 - Fresh Water
- 10. 001 - 10 Meter Tube
- 11. 001 - 10 Meter Tube

Analysis Report

Sl. No.	Parameters	Unit	Test Results			Remark
			Run 1	Run 2	Run 3	
1	Hardness (mg/L)	mg/L	187.24 (0.01)	187.24 (0.01)	187.24 (0.01)	APHA 20°E
2	Chlorophyll A	mg/l	1.10	0.891	0.980	APHA 20°E
3	Phosphate	mg/l	18.30	18.08	18.80	APHA 20°E
4	Salinity	PPT	27.9	1.208	1.200	EC Meter
5	Mineral NO_3^-	mg/l	187.24 (0.01)	187.24 (0.01)	187.24 (0.01)	0.0002 (P-04)
6	Total Nitrogen as N	mg/l	2.70	4.00	4.00	0.0002 (P-04)
7	Inorganic Phosphate	mg/l	0.22	0.20	0.18	0.0002 (P-01)
8	Total Phosphate as P	mg/l	0.20	0.20	0.20	0.0002 (P-01)

Method: IS:3980/2018

(Signature)
(AUTHORIZED SIGNATURE)
(NITYA LABS)



(AUTHORIZED SIGNATURE)
(RANJEET MITTAL)



Test Reports of Marine Water



Blank space for test report details.

CORPORATE OFFICE & CENTRAL LABORATORIES :-

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info@nityalab.com

www.nityalab.com

Issued To: **M/s. Namangal Port Trust**
 Water Test: **Chemical Tests**

Test Report No.: **NDL/WT/2024/102**
 Test Report Date: **05/08/2024**

Sample Particulars:

Nature of the Sample:
 Sample Quantity & Packaging:
 Sample Received at Lab:
 Test Requested On:
 Test Completed On:
 Method of Sampling:
 Date of Sampling:
 Monitoring Conducted By:
 Sample Transporter:

Marine Water
 1 Liter (Filtered For BOD & DO)
 1000003
 1000003
 1000003
 1000003
 1000003
 Mr. Sharma
 05/07/2024 Near SCS (Surface)
 05/07/2024 Near SCS (Depth 1.5 m)

Analysis Report

Sl. No.	Parameters	Test Results		Remark
		Std. I	Std. II	
1	Physicochemical (PH as mark)			
	BOD ₅	0.0	0.0	APHA 2017E
	DO	0.0	0.0	
	pH	Percentage oxygen Transferred potential		
Salinity	Subsidiary standard, Salinity potential			
2	Biological (BOD as mark)			
	BOD ₅	0.00	0.00	APHA 2017E
	DO	0.0	0.0	
	pH	Hygiene Indexes: Hygiene Index, Large Intestinal Index		
Salinity	Hygiene Indexes: Substrate Index, Coliform Index			
3	Residual			
	Salinity	Hygiene Indexes: Chloride Residual		APHA 2017E

(Signature)
(AUTHORISED SIGNATORY)
(NITYA LABS)


(AUTHORISED SIGNATORY)
(NAVNEET MITAL)



Issued To: **M/s. Kaveripati Port Trust**
Water Dept. Chennai, India

Test Report No.: **20220420100-024**
Test Report Date: **20/04/2022**

Sample Particulars

Nature of the Sample
Sample Quantity & Packaging
Sample Received at Lab
Test Started On
Test Completed On
Method of Sampling
Date of Sampling
Workshop Conducted By
Sample Description

Sample Water

1.2 Ltr. Sealed Poly Bottle (Dist)
16/04/2022
16/04/2022
16/04/2022
20/04/2022
16/04/2022
16/04/2022
M. Srinivas
MYS - Near P.T. Dept. (Surface)
MYS - Near P.T. Dept. (Bottom 1.5 m)
Analysis Report

Sr. No.	Parameters	Unit	Test Results		Procedure	IS/Class II Permissible Limits
			MS-1	MS-2		
1	pH	---	8.08	7.38	IS:3025 (P-11)	6.5-8.5
2	Temperature	°C	28.7	28.4	IS:3025 (P-05)	---
3	Electrical Conductivity	µmhos/cm	4000	4100	IS:3025 (P-18)	---
4	Turbidity	NTU	1	1	APHA 2170A	---
5	Total Dissolved Solids	mg/l	2800	2800	IS:3025 (P-10)	---
6	Iron as Fe	mg/l	0.05	0.05	APHA 2170A	---
7	Manganese as Mn	mg/l	0.2	0.14	IS:3025 (P-34)	---
8	Total Hardness	mg/l	8.18	8.0	IS:3025 (P-30)	---
9	Total Suspended Solids	mg/l	12	12	IS:3025 (P-17)	---
10	Dissolved Oxygen as O ₂	mg/l	8.4	8.4	IS:3025 (P-08)	5.0
11	Mineral Oxygen Demand	mg/l	18	8	IS:3025 (P-44)	5.0
12	Chemical Oxygen Demand	mg/l	30	40	IS:3025 (P-19)	---
13	Copper as Cu	mg/l	0.05	0.05	APHA 2170A	---
14	Iron as Fe	mg/l	0.12	0.12	APHA 2170A	---
15	Zinc as Zn	mg/l	0.05	0.05	APHA 2170A	---
16	Mercury as Hg	mg/l	ND (DL: 0.01)	ND (DL: 0.01)	APHA 2170A	---
17	Lead as Pb	mg/l	ND (DL: 0.01)	ND (DL: 0.01)	APHA 2170A	---
18	Cadmium as Cd	mg/l	ND (DL: 0.01)	ND (DL: 0.01)	APHA 2170A	---
19	Chromium as Cr	mg/l	ND	ND	APHA 2170A	---
20	Perchlorate as ClO ₄	mg/l	ND (DL: 0.01)	ND (DL: 0.01)	APHA 2170A	---
21	Chlorophyll a	µg/l	1	1	APHA 2170A	---
22	Phosphite	mg/l	16.8	17.8	APHA 2170A	---
23	Silica	mg/l	11.0	11.00	IS: 3025	---
24	Ammonia as NH ₃	mg/l	0.05	0.05	IS:3025 (P-36)	---
25	Total Nitrogen as N	mg/l	0.50	11.16	IS:3025 (P-38)	---
26	Inorganic Phosphorus	mg/l	0.05	0.40	IS:3025 (P-31)	---
27	Total Phosphorus as P	mg/l	0.40	0.05	IS:3025 (P-35)	---
28	Total Calcium	mg/l (DL: 10)	100	100	IS:3025	100 (DL: 10)

Notes:

[Signature]

(NITYA DASOBY)

(NITYA DASOBY)

[Signature]

(RANJITH KUMAR)

(RANJITH KUMAR)

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Issued To: **M/s. Nanyang Portland Cement**
 Your Ref. Number: **1000**

Test Report No.: **20000120020-100**
 Test Report Date: **20000000**

Sample Particulars

Name of the Sample
 Sample Quantity & Packaging
 Sample Received at Lab
 Test Started On
 Test Completed On
 Method of Sampling
 Date of Sampling
 Monitoring Conducted By
 Sample Description

Master Slabs

1.0 Lit. Standard Polystyrene (ASTM)
 10000023
 10000023
 10000023
 10000023
 10000023
 M. Shetty
 Nitya, Near M.T. Bank, Sakinaka
 Nitya, Near M.T. Bank, Sakinaka (1 Lit)

Analysis Method

Sr. No.	Parameter	Test Results		Remarks
		Std. I	Std. II	
1	Polystyrene (200 gm mass)			
	Moisture	4.2	4.2	APPROX 10%
	Density	1.2	1.0	
	Specimen	Polystyrene (High purity) Residue particles Fluorescence content	Commercial Polystyrene Polystyrene (High purity)	
2	Polystyrene (200 gm mass)			
	Moisture	0.05	0.04	APPROX 10%
	Density	1.2	1	
	Specimen	Commercial polystyrene (High purity) Residue particles	Polystyrene (High purity) Residue particles	
3	Moisture			
	Specimen	Commercial Polystyrene Residue particles	Commercial Polystyrene Residue particles	APPROX 10%

(Signature)
 (AUTHORIZED SIGNATORY)
 NITYA LABS

(Signature)
 (AUTHORIZED SIGNATORY)
 NITYA LABS



Issued To: **M/s. Haryana Power Trans.**
 (Water Dept., Chandigarh, India)

Test Report No.: **202004/2020/129**
 Test Report Date: **20/04/2020**

Sample Particulars

Name of the Sample
 Sample Quantity & Packaging
 Sample Reference/Lot
 Test Started On
 Test Completed On
 Method of Sampling
 Date of Sampling
 Analyzing Conducted By
 Sample Description

Master Water

T.E. Lab / Verified For Surface Water
 16040000
 16040020
 20190020
 20190020
 20190020
 20190020
 M. Sharma
 MVA, New Fager, Jaly (Surface)
 MVA, New Fager, Jaly (Bottom) (1 & 2)
Analyse Report

Sr. No.	Parameters	Unit	Test Results		Protocol	IS: Code of Indian Standards
			Obs'd	Std'd		
1	pH	-	8.26	7.01	IS: 3025 (P-17)	5.0 to 9.0
2	Temperature	°C	26	25.1	IS: 3025 (P-14)	-
3	Electrical Conductivity	µmhos	1640	1660	IS: 3025 (P-14)	-
4	Turbidity	NTU	1	1	APHA 2170D	-
5	Total Dissolved Solids	mg/l	2110	2400	IS: 3025 (P-16)	-
6	Calcium as Ca	mg/l	170	174	APHA 2171D	-
7	Magnesium as Mg	mg/l	11.36	8.28	IS: 3025 (P-34)	-
8	Total Hardness	mg/l	8.16	8.28	IS: 3025 (P-34)	-
9	Total Suspended Solids	mg/l	16	1	IS: 3025 (P-17)	-
10	Dissolved Oxygen as O ₂	mg/l	8.8	8.8	IS: 3025 (P-36)	7.0
11	Biological Oxygen Demand	mg/l	16	12	IS: 3025 (P-40)	3.0
12	Chemical Oxygen Demand	mg/l	40	40	IS: 3025 (P-40)	-
13	Copper as Cu	mg/l	0.16	0.05	APHA 2170B	-
14	Iron as Fe	mg/l	0.26	0.20	APHA 2171D	-
15	Zinc as Zn	mg/l	0.26	0.20	APHA 2171D	-
16	Mercury as Hg	mg/l	ND (DL-0.01)	ND (DL-0.01)	APHA 2171D	1
17	Lead as Pb	mg/l	ND (DL-0.01)	ND (DL-0.01)	APHA 2171D	-
18	Cadmium as Cd	mg/l	ND (DL-0.01)	ND (DL-0.01)	APHA 2171D	-
19	Cobalt as Co	mg/l	40	40	APHA 2171D	-
20	Potassium Hydroxide	mg/l	ND (DL-0.01)	ND (DL-0.01)	APHA 2171D	-
21	Chlorophyll A	mg/l	1.4	1.1	APHA 2171D	-
22	Phosphate	mg/l	17.1	17.2	APHA 2171D	-
23	Sulphate	mg/l	26.4	26.3	IS: 3025	-
24	Nitrite as NO ₂	mg/l	0.26	ND (DL-0.01)	IS: 3025 (P-38)	-
25	Total Nitrogen as N	mg/l	11.30	6.60	IS: 3025 (P-38)	-
26	Organic Phosphate	mg/l	0.26	0.20	IS: 3025 (P-38)	-
27	Total Phosphate as P	mg/l	0.41	0.41	IS: 3025 (P-38)	-
28	Total Chloride	mg/l (ISO 1031)	271	278	IS: 3025	250 (ISO)

Result:

(ANSHU BHATNAGAR)
(ANSHU BHATNAGAR)

(RAJESH BHATTAR)
(RAJESH BHATTAR)

NOTE: The results are based on the test performed on the sample as received. The results are not valid if the sample is not properly preserved and stored. The results are not valid if the sample is not properly labeled and identified. The results are not valid if the sample is not properly sealed and protected. The results are not valid if the sample is not properly handled and transported. The results are not valid if the sample is not properly analyzed and reported. The results are not valid if the sample is not properly reviewed and approved. The results are not valid if the sample is not properly stored and archived. The results are not valid if the sample is not properly disposed of and recycled. The results are not valid if the sample is not properly documented and tracked. The results are not valid if the sample is not properly audited and verified. The results are not valid if the sample is not properly certified and accredited. The results are not valid if the sample is not properly calibrated and validated. The results are not valid if the sample is not properly controlled and managed. The results are not valid if the sample is not properly maintained and updated. The results are not valid if the sample is not properly reviewed and approved. The results are not valid if the sample is not properly stored and archived. The results are not valid if the sample is not properly disposed of and recycled. The results are not valid if the sample is not properly documented and tracked. The results are not valid if the sample is not properly audited and verified. The results are not valid if the sample is not properly certified and accredited. The results are not valid if the sample is not properly calibrated and validated. The results are not valid if the sample is not properly controlled and managed. The results are not valid if the sample is not properly maintained and updated. The results are not valid if the sample is not properly reviewed and approved.



Issued To: **M/s. Kanyasulkam Pvt. Trust**
Address: **Plot No. 1, Chander Prasth, Ghaziabad**

Test Report No.: **2024/18725-18**
Test Report Date: **20/09/2024**

Sample Particulars

Name of the Sample
Sample Quantity & Packaging
Sample Received at Lab
Test Started On
Test Completed On
Method of Sampling
Date of Sampling
Monitoring Conducted By
Sample Description

Master Water

10 Litre, Distilled Per Bottle (Each)
MSD-0021
MSD-0021
2024-09-20
SDPMS-0
000000
M: Dhanraj
MSD: New Finger-Jerry (Surface)
MSD: New Finger-Jerry (Bottom 1.0 m)

Analysis Report

Sl. No.	Parameter	Test Results		Method
		Obs	SPM	
1	Physicochemical (for all tests)			
	pH	7.8	7.8	APHA 2570 E
	Hardness	81	81	
	Specific Conductance	140000µmhos/cm	140000µmhos/cm	
Chloride	100	100		
2	Heavy Metals (for all tests)			
	Iron	0.02	0.02	APHA 2001 G
	Cadmium	0.0	0.0	
	Lead	0.0000	0.0000	
Copper	0.0000	0.0000		
3	Residual Chlorine		APHA 2001 B	
	Free Residual Chlorine	0.0	0.0	

AUTHORIZED SIGNATURE
DHANYA SARDONI

AUTHORIZED SIGNATORY
RAJINDER MITTAL

For more information, please visit our website: www.nityalab.com or contact us at info@nityalab.com or [+91 122 2442297](tel:+911222442297)

COMPONENTS OFFICE & CENTRAL LABORATORIES :-

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BUILDING & ROAD, MATERIAL, SOIL, ENVIRONMENTAL & CALIBRATION TESTING LAB



Issued To: **M/s. Navneet Plast Trade**
 (Water Plant, Chhina, India)

Test Report No.: **2023070001729**
 Test Report Date: **23/07/2023**

Sample Particulars

Nature of the Sample
 Sample Quantity & Packaging
 Sample Preservation of Lab
 Test Started On
 Test Completed On
 Method of Sampling
 Date of Sampling
 Monitoring Executed By
 Sample Description

Source Water

1.5 Ltr. (Filtered for BOD) (Dist)
 1000000
 1000000
 1000000
 2018-0-0
 1000000
 M. Ghoshal
 1000000 (Over South West Road Water Surface)
 1000000 (Over South West Road Water Station 1.5 Ltr)

Analysis Report

Sr. No.	Parameters	Unit	Test Results		Standard	ISIRI Class W/ the Test Parameter
			MP-1	MP-2		
1	pH	-	7.28	7.20	IS 3025 (P-11)	-
2	Temperature	°C	28.4	27.8	IS 3025 (P-12)	-
3	Electrical Conductivity	µmhos	2600	2600	IS 3025 (P-13)	-
4	Turbidity	NTU	1	1	IS 3025 (P-14)	-
5	Total Dissolved Solids	mg/l	2850	2860	IS 3025 (P-15)	-
6	Sulphate as SO ₄	mg/l	2140	2130	IS 3025 (P-16)	-
7	Chloride as Cl ₂	mg/l	140	140	IS 3025 (P-17)	-
8	Total Hardness	mg/l	2140	2130	IS 3025 (P-18)	-
9	Total Suspended Solids	mg/l	18	12	IS 3025 (P-19)	-
10	Dissolved Oxygen as DO	mg/l	8.8	8.4	IS 3025 (P-20)	5.0
11	Biological Oxygen Demand	mg/l	18	14	IS 3025 (P-21)	5.0
12	Chemical Oxygen Demand	mg/l	60	60	IS 3025 (P-22)	-
13	Copper as Cu	mg/l	0.04	0.03	IS 3025 (P-23)	-
14	Nickel as Ni	mg/l	0.04	0.03	IS 3025 (P-24)	-
15	Zinc as Zn	mg/l	0.40	0.20	IS 3025 (P-25)	-
16	Mercury as Hg	mg/l	ND (DL 0.01)	ND (DL 0.01)	IS 3025 (P-26)	-
17	Arsenic as As	mg/l	ND (DL 0.01)	ND (DL 0.01)	IS 3025 (P-27)	-
18	Lead as Pb	mg/l	ND (DL 0.01)	ND (DL 0.01)	IS 3025 (P-28)	-
19	Calcium as Ca	mg/l	60	60	IS 3025 (P-29)	-
20	Iron as Fe	mg/l	ND (DL 0.01)	ND (DL 0.01)	IS 3025 (P-30)	-
21	Cyanide as C ₂	mg/l	1.2	1.2	IS 3025 (P-31)	-
22	Fluoride	mg/l	18	17.44	IS 3025 (P-32)	-
23	Hardy	mm	26.5	26.2	IS 3025 (P-33)	-
24	Barium as Ba	mg/l	ND (DL 0.01)	ND (DL 0.01)	IS 3025 (P-34)	-
25	Total Nitrogen as N	mg/l	4.10	3.70	IS 3025 (P-35)	-
26	Organic Phosphorus	mg/l	0.80	0.70	IS 3025 (P-36)	-
27	Total Phosphorus as P	mg/l	0.80	0.80	IS 3025 (P-37)	-
28	Total Solids	MPN/100 ml	115	115	IS 3025 (P-38)	100

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(AUTHORIZED SIGNATORY)
 (ANSHU MITTAL)



Issued To: **Mr. Ranjeet Paul Singh**
Vaha Road, Chennai, India

Test Report No: **20200102127-128**
Test Report Date: **20200202**

Sample Particulars

Reason of the Sample
Sample Quantity & Packaging
Duration Received at Lab
Test Started On
Test Completed On
Method of Sampling
Date of Sampling
Monitoring Conducted By
Sample Description

Water Source

1. T.T. Line - Shastri Nagar Water (T.T. Line)
2. T.T. Line - Shastri Nagar Water (T.T. Line)
3. T.T. Line - Shastri Nagar Water (T.T. Line)
4. T.T. Line - Shastri Nagar Water (T.T. Line)
5. T.T. Line - Shastri Nagar Water (T.T. Line)
6. T.T. Line - Shastri Nagar Water (T.T. Line)
7. T.T. Line - Shastri Nagar Water (T.T. Line)
8. T.T. Line - Shastri Nagar Water (T.T. Line)
9. T.T. Line - Shastri Nagar Water (T.T. Line)
10. T.T. Line - Shastri Nagar Water (T.T. Line)

Analysis Report

Sl. No.	Parameters	Test Results		Remark
		SIU-I	SIU-II	
1	Physicochemical (50 ml sample)			
	Colour	42	67	APHA 20°C
	Turbidity	24	19	
	TSS	Fogging test, Turbidity test, Phosphate test, Nitrate test		
Hardness	Total Hardness, Chloride, Sulphate, Fluoride			
2	Zooplankton (200 ml sample)			
	Colour	100	100	APHA 20°C
	Turbidity	20	21	
	Hardness	Total Hardness, Chloride, Sulphate, Fluoride		
Hardness	Total Hardness, Chloride, Sulphate, Fluoride			
3	Water			
	Hardness	Total Hardness, Chloride, Sulphate, Fluoride	Hardness test, Free Chlorine	APHA 20°C



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BUILDING & ROAD, MATERIAL, SOIL, ENVIRONMENTAL & CALIBRATION TESTING LAB



Issued To: **Mr. Kameshwar Prasad Tripathi**
 Nitya Road, Gurgaon, Haryana

Test Report No: **20220501026 LAB**
 Test Report Code: **220501026**

Sample Particulars

Name of the Sample:
 Sample Quantity & Packaging:
 Sample Received at Lab:
 Test Standard(s):
 Test Completed On:
 Method of Sampling:
 Date of Sampling:
 Monitoring Conducted By:
 Sample Description:

Matrix Water

1.0 Ltr. Tapwater Per Bottle (Each)
 10000002
 10000003
 20000002
 20000003
 30000002
 30000003
 Mr. Dinesh
 MMSD: Clear Mouth-Fast Flow Water (Surface)
 MMSD: Clear Mouth-Fast Flow Water (Bottom) (1.0 Ltr)

Analysis Report

Sl. No.	Parameters	Unit	Test Results		Protocol	IS 15026:19 (H) Standard
			MSD-0	MSD-10		
1	pH	-	7.50	7.50	IS 15026:19 (H)	6.5-8.5
2	Temperature	°C	26	26.7	IS 15026:19 (H)	-
3	Dissolved Oxygen	mg/L	24.90	23.06	IS 15026:19 (H)	-
4	Turbidity	NTU	11	11	IS 15026:19 (H)	-
5	Total Dissolved Solids	mg/L	2230	2436	IS 15026:19 (H)	-
6	Hardness as CaCO ₃	mg/L	1836	1814	IS 15026:19 (H)	-
7	Chloride as Cl ⁻	mg/L	4.41	3.98	IS 15026:19 (H)	-
8	Total Ammonia	mg/L	60	60	IS 15026:19 (H)	-
9	Total Suspended Solids	mg/L	8	17	IS 15026:19 (H)	-
10	Dissolved Oxygen as O ₂	mg/L	8.8	8.8	IS 15026:19 (H)	8.0
11	Biological Oxygen Demand	mg/L	12	12	IS 15026:19 (H)	5.0
12	Chemical Oxygen Demand	mg/L	60	60	IS 15026:19 (H)	-
13	Calcium as Ca	mg/L	8.96	8.96	IS 15026:19 (H)	-
14	Magnesium as Mg	mg/L	2.28	2.28	IS 15026:19 (H)	-
15	Sulfate as SO ₄	mg/L	2.90	2.70	IS 15026:19 (H)	-
16	Melting as Pb	NO/20 (0.05)	NO/20 (0.05)	NO/20 (0.05)	IS 15026:19 (H)	-
17	Mercury as Hg	NO/20 (0.01)	NO/20 (0.01)	NO/20 (0.01)	IS 15026:19 (H)	-
18	Lead as Pb	NO/20 (0.01)	NO/20 (0.01)	NO/20 (0.01)	IS 15026:19 (H)	-
19	Cadmium as Cd	NO	NO	NO	IS 15026:19 (H)	-
20	Iron as Fe	NO/20 (0.01)	NO/20 (0.01)	NO/20 (0.01)	IS 15026:19 (H)	-
21	Copper as Cu	NO/20 (0.01)	NO/20 (0.01)	NO/20 (0.01)	IS 15026:19 (H)	-
22	Zinc as Zn	NO/20 (0.01)	NO/20 (0.01)	NO/20 (0.01)	IS 15026:19 (H)	-
23	Fluoride as F ⁻	mg/L	0.41	0.38	IS 15026:19 (H)	-
24	Barium as Ba	mg/L	0.1	0.8	IS 15026:19 (H)	-
25	Silica as SiO ₂	mg/L	0.20	NO/20 (0.01)	IS 15026:19 (H)	-
26	Total Nitrogen as N	mg/L	0.20	0.20	IS 15026:19 (H)	-
27	Total Phosphate as P	mg/L	0.08	0.08	IS 15026:19 (H)	-
28	Total Hardness as CaCO ₃	mg/L	177	180	IS 15026:19 (H)	180-200 (H)

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Issued To: **Mrs. Namender Paul Trest**
Vaidh Post (Chennai, India)

Test Report No: **200001/2024/101**
Test Report Date: **20/09/2024**

Sample Particulars

Name of the Sample
Sample Quantity & Packaging
Sample Received at Lab
Year Analyzed On
Year Collected On
Method of Sampling
Type of Sampling
Analyzing Conducted By
Sample Description

Matrix Water

100% (Standard For Soils (Soils))
10000000
10000000
20100000
20100000
10000000
M. Srinivas
MMS - Quality Control - Civil Test Room (Gurgaon)
MMS - Quality Control - Civil Test Room (Sector 43 G)

Analysis Report

Sl. No.	Particulars	Test Results		Protocol
		SW 4	SW 15	
1	Hygroscopicity (44 cm depth)			IS 2714
	Moisture	24	48	
	Shrinkage	24	28	
	Species	<i>Neurospora sitophila</i> , <i>Aspergillus penicillatus</i>	<i>Aspergillus niger</i> , <i>Aspergillus terreus</i> , <i>Aspergillus fumigatus</i>	
2	Impurities (20 cm depth)			IS 2714
	Moisture	100	100	
	Shrinkage	15	22	
	Species	<i>Trichoderma reesei</i> , <i>Aspergillus niger</i> , <i>Aspergillus</i>	<i>Aspergillus niger</i> , <i>Aspergillus niger</i> , <i>Trichoderma reesei</i>	
3	Moisture			IS 2714
	Species	<i>Aspergillus niger</i> , <i>Trichoderma reesei</i>	<i>Aspergillus niger</i> , <i>Trichoderma reesei</i>	


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(NAGENDR MITTAL)



Issued To: **Ms. Rajashree Patel Trust**
Vidya Park, Chembur, Mumbai

Test Report No: **20230100121-122**
Test Report Date: **20000000**

Sample Particulars

Nature of the Sample
Sample Quantity & Packaging
Sample Received at Lab
Test Standard(s)
Test Completed On
Method of Sampling
Date of Sampling
Monitoring Conducted By
Sample Description

Water Sample
1.2 Liter (Surface Water Sample)
10000000
10000000
10000000
10000000
10000000
No. of Tests:
MVT1: Outer South-East Drain Water (Surface)
MVT2: Outer South-East Drain Water (Below 1.5 m)

Analysis Report

Sl. No.	Parameter	Test Results		Remark
		SI-11	SI-12	
1	Hydrocarbon* (as per method)			APHA 201'04
	Hexane	0.4	0.1	
	Heptane	0.2	0.0	
	Notes:	Control procedure, Standard method	Reference method, Standard procedure	
2	Ammonia* (as per method)			APHA 201'04
	Hexane	0.00	0.00	
	Heptane	0.1	0.0	
	Notes:	Control procedure, Standard method	Reference method, Standard procedure	
3	Barium*			APHA 201'04
	Hexane	Proper procedure, Standard method	Reference method, Standard procedure	

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Test Reports of Marine Sediment





Issued To: **M/s. Mansarovar Port Trust**
Water Front, Okhla, India

Test Order No: **20202700100101**
Test Report Date: **23/06/2020**

Sample Particulars

- ✓ Name of the Sample
- ✓ Sample Quantity & Packaging
- ✓ Sample Received at Lab
- ✓ Test Started On
- ✓ Test Completed On
- ✓ Method of Sampling
- ✓ Date of Sampling
- ✓ Monitoring Conducted By
- ✓ Sample Description

Material Requisition Details

- ✓ 10 kg. (for bottle check)
- ✓ 1000/2000
- ✓ 1000/2000
- ✓ 2000/2000
- ✓ NCP16/D-0
- ✓ 1000/2000
- ✓ M. Stone
- ✓ 01. New Project Job
- ✓ 02. New Machine Liquid Terminal (M.T)
- ✓ 03. New General Cargo Berth
- ✓ 04. Check Month

Analysis Report

Sl. No.	Parameter	Unit	Test Results			
			SI	IS	IS	IS
1	Moisture (%)	mm	0.05	0.07	0.25	0.24
2	Organic Carbon (%)	%	22.50	22.8	18.4	18.6
3	Organic Nitrogen (%)	%	60.20	70.4	66.20	76.20
4	Copper as Cu (ppm)	ppm	4.50	6.50	2.90	6.0
5	Lead as Pb (ppm)	ppm	1.20	2.10	2.90	1.80
6	Cadmium as Cd (ppm)	ppm	60	60	60	60
7	Mercury (ppm)	ppm	60	60	60	60
8	Arsenic (ppm)	ppm	60	60	60	60





Kamarajar Port Limited

Vallur Post, Chennai-600 120, Tamil Nadu, India

Reports on Environmental Monitoring of Kamarajar Port Limited



Study Period: October 2023

Prepared By



NITYA LABORATORIES

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Test Reports of Ambient Air Quality Monitoring



(AUTHORISED SIGNATORY)

(SIGNER'S INITIAL)

NOTE: This report is prepared by Nitya Laboratories Pvt. Ltd. based on the test results obtained from the test conducted on the date mentioned above. The report is valid only for the purpose mentioned above. The report is not valid for any other purpose. The report is not valid for any other purpose. The report is not valid for any other purpose.

BUILDING & ROAD, MATERIAL, SOIL, ENVIRONMENTAL & CALIBRATION TESTING LAB

Issued To: **Mr. Manoj Kumar Puri Trust**
Vafar Post, Charrat, India

Test Report No.: **001110023**



Sample Particulars

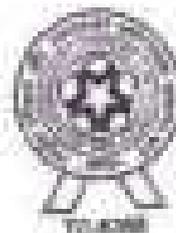
Nature of the Sample
Purpose of Monitoring
Sampling Location
Method of Sampling
Monitoring Conducted By
Sampling Duration (Mts.)

Applicant: **20 Quality Monitoring**
To Check the Pollution Level
Admin Building
IS 3102 (Part-1a)
Mr. Manoj
28 Mts.

Analysis Report

Sl. No.	Date of Sampling	ICR No.	Concentration				
			Particulate Matter (PM10) (µg/m³)	Particulate Matter (PM2.5) (µg/m³)	Sulphur Dioxide (as SO2) (µg/m³)	Nitrogen Dioxide (as NO2) (µg/m³)	Carbon Monoxide (as CO) (mg/m³)
1	02/10/2023	TC000023000004780P	28.76	42.30	12.50	23.40	ND
2	09/10/2023	TC000023000004900P	30.18	52.20	14.80	27.20	ND
3	09/10/2023	TC000023000005100P	23.00	41.30	10.00	26.90	ND
4	12/10/2023	TC000023000005180P	25.40	43.20	15.20	18.20	ND
5	16/10/2023	TC000023000005300P	20.20	38.20	12.40	18.20	ND
6	20/10/2023	TC000023000005410P	27.30	50.00	13.40	26.40	ND
7	24/10/2023	TC000023000005480P	27.00	54.20	17.00	28.00	ND
8	27/10/2023	TC000023000005600P	30.61	54.80	17.40	27.00	ND
MAQOM Standards			80	100	80	80	1
Test Method			49CFR, Appendix L, Part 63 GPCB Subpart 63.110	IS-3102 (P-2)	IS-3102 (P-3)	IS-3102 (P-4)	IS-3102 (P-11)

NOTE: Results are based on sample standard deviation (SD) & (CV) values. For all test results, the standard deviation (SD) & (CV) values are provided. The results are based on the test of sampling. If you have any queries, please contact us at info@nityalab.com



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BUILDING & ROAD, MATERIAL, SOIL, ENVIRONMENTAL & CALIBRATION TESTING LAB

Send To: **M/s Kamranagar Port Trust**
 Gurgaon Port, Gurgaon, India

Test Report No: **QNT100028**

Sample Particulars

Nature of the Sample:

Purpose of Monitoring:

Sampling Location:

Method of Sampling:

Monitoring Conducted At:

Sampling Duration (hrs.):

Ambient Air Quality Monitoring

To Check the Pollution Load

Address: Gurgaon

IS 3100 (Part 14)

No. of Sample:

28 Nos.

Analysis Report

Sr. No.	Date of Sampling	ILR No.	Concentration
			Methane (%)
1	02/10/2024	202410020112	ND
2	06/10/2024	202410060112	ND
3	08/10/2024	202410080112	ND
4	12/10/2024	202410120112	ND
5	16/10/2024	202410160112	ND
6	20/10/2024	202410200112	ND
7	24/10/2024	202410240112	ND
8	27/10/2024	202410270112	ND
Test Method			ND Based Methane Analyser

Notes:

- ND (Not Detected) means the level of the pollutant is below the limit specified in the relevant standard.
- ND (Not Detected) does not mean zero concentration. It's a measure that can be statistically determined when the measurement conditions are not adequate to detect the pollutant.



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Issued To: **M/s. Kambhampati Park Trust**
Gurgaon Road, Ghaziabad, India

Test Report Date: **08/11/2023**

08/11/2023

Sample Particulars

Nature of the Sample:

Purpose of Monitoring:

Sampling Location:

Method of Sampling:

Monitoring Conducted By:

Sampling Duration (hrs.):

1. Ambient Air Quality Monitoring

2. To Check the Pollution Load

3. Signal Station

4. IS 1182 (Part 1)

5. In-situ

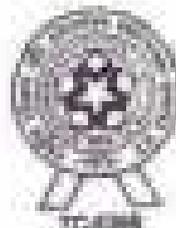
24 hrs

Analysis Report

Sl. No.	Date of Sampling	ULN No.	Concentration				
			Particulate Matter (PM ₁₀) (µg/m ³)	Particulate Matter (PM _{2.5}) (µg/m ³)	Sulphur Dioxide (as SO ₂) (µg/m ³)	Nitrogen Dioxide (as NO ₂) (µg/m ³)	Carbon Monoxide (as CO) (µg/m ³)
1	08/11/2023	YCD08020000000001P	21.20	44.30	12.50	27.50	ND
2	08/11/2023	YCD08020000000002P	21.40	47.20	11.20	17.30	ND
3	08/11/2023	YCD08020000000003P	21.50	48.20	13.40	27.20	ND
4	12/11/2023	YCD08020000000004P	20.40	47.10	12.80	17.20	ND
5	14/11/2023	YCD08020000000005P	17.30	22.40	15.20	16.30	ND
6	20/11/2023	YCD08020000000006P	15.40	34.30	11.20	25.40	ND
7	20/11/2023	YCD08020000000007P	21.50	43.20	13.50	27.20	ND
8	27/11/2023	YCD08020000000008P	16.40	47.30	17.20	27.30	ND
NARCM Standards			60	100	60	60	1
Test Method			40CFR Appendix L Part 85 CPCB Guidelines	IS-1182 (PM₁₀)	IS-1182 (PM_{2.5})	IS-1182 (SO₂)	IS-1182 (NO₂)

Notes:

1. All test results are subject to the standard methods used. (Refer to the relevant standard for details.)
2. The test results are subject to the standard methods used. (Refer to the relevant standard for details.)
3. The test results are subject to the standard methods used. (Refer to the relevant standard for details.)



1. The test results are subject to the standard methods used. (Refer to the relevant standard for details.)
2. The test results are subject to the standard methods used. (Refer to the relevant standard for details.)
3. The test results are subject to the standard methods used. (Refer to the relevant standard for details.)

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Issued To: **M/s Kamrajgar Post Trust**
Vastu No. **Chennai, India**

Test Report Date: **03/11/2023**



Sample Particulars

Nature of the Sample

Purpose of Monitoring

Sampling Location

Method of Sampling

Monitoring Instrument No.

Sampling Duration (hrs)

1. **Ambient Air Quality Monitoring**

2. **To Check the Pollution Level**

3. **Frugal Jobs**

4. **IS 3102 (Part 14)**

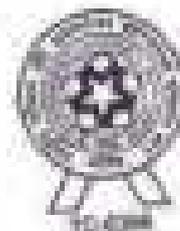
5. **IS 5178**

6. **IS 116**

Analysis Report

Sl. No.	Date of Sampling	SLP No.	Concentration				
			Particulate Matter (PM ₁₀) $\mu\text{g}/\text{m}^3$	Particulate Matter (PM _{2.5}) $\mu\text{g}/\text{m}^3$	Sulphur Dioxide (as SO ₂) $\mu\text{g}/\text{m}^3$	Nitrogen Dioxide (as NO ₂) $\mu\text{g}/\text{m}^3$	Carbon Monoxide (as CO) mg/m^3
1	03/11/2023	TC00001300000004181P	24.21	21.40	18.20	25.20	ND
2	03/11/2023	TC00001300000004182P	26.50	25.20	21.10	18.80	ND
3	03/11/2023	TC00001300000004183P	18.20	15.40	18.20	18.20	ND
4	12/11/2023	TC00001300000004184P	18.20	14.20	18.20	18.10	ND
5	14/11/2023	TC00001300000004185P	20.20	18.20	20.20	25.40	ND
6	20/11/2023	TC00001300000004186P	28.20	14.20	23.10	21.80	ND
7	24/11/2023	TC00001300000004187P	22.40	11.80	21.10	20.40	ND
8	27/11/2023	TC00001300000004188P	23.50	21.80	18.20	20.20	ND
ISPM Standards			48	100	48	38	3
Test Method			ISPM Appendix 1 Part 12 CPCal Optical	IS 3102 (P-23)	IS 5182 (P-2)	IS 5182 (P-4)	IS 5182 (P-10)

ISO 9001:2015 Certified by Bureau Veritas, Maharashtra (Date: 15/05/2023) Registration No: 10214/17, 1800, Mumbai, India.
 ISO 17025:2017, Part 3102, CPCal, India. It is a voluntary first-party conformity assessment used to demonstrate compliance with
 specific national and/or international standards from the point of view of a laboratory. It is not a certification process.



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17

Issued To: **Mr. Kamaljeet Paul Triani**
Vafar Trust, Chennai, India

Test Report Date: 02/14/2023

Sample Particulars

Source of the Sample:

Purpose of Monitoring:

Sampling Location:

Method of Sampling:

Monitoring Conducted By:

Sampling Duration (hrs):

Address: Air Quality Monitoring

To Check the Pollution Level

Finger 4th

IS 3102 (Part 14)

Mr. Shekhar

20 hrs

Analysis Report

Sl. No.	Date of Sampling	LQR No.	Concentration
			Method (%)
1	26/10/2022	20221026/14	ND
2	26/10/2022	20221026/14	ND
3	26/10/2022	20221026/14	ND
4	12/10/2022	20221012/14	ND
5	16/10/2022	20221016/14	ND
6	20/10/2022	20221020/14	ND
7	24/10/2022	20221024/14	ND
8	27/10/2022	20221027/14	ND
Test Method			FD Based Nephelometer Analyser

Notes:

1. Nitya Laboratories is a Quality Monitoring Laboratory that provides analytical services to its clients.

2. The laboratory is not responsible for any results that may be obtained if the sample is not properly collected, stored, handled, transported, or if the sample is not properly labeled.

3. Sample transport and storage time for the test of sampling of PM based Pollution Control.



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Test Reports of Wastewater (STP)



AUTHENTICATORY

(RAVINDER MITAL)

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Kamarajar Port Limited
Water Front, Chennai-600 120, Tamil Nadu, India

Reports on Environmental Monitoring of Kamarajar Port Limited



Study Period: November 2023

Prepared By



NITYA LABORATORIES

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BUILDING & ROAD, MATERIAL, SOIL, ENVIRONMENTAL & CALIBRATION TESTING LAB

Introduction

Kemang Port Trust is the first Corporatized Port in India and the 12th Major Port. It Works on the model of 'Learning School'. KPT's policy is to manage the port in a proactive manner to minimize any impacts from port operations or new developments. Kemang port handles coal for Tamil Nadu Electric Board, PCL products and export of automobiles. Data generation on environmental quality constitute the basis for environmental appraisal of the project. Thus, data on environmental quality has to be periodically monitored and also to comply with the TNPCD / MCRP conditions.

With this background and need Kemang Port Limited has appointed M/s. Nitya Laboratories to undertake the same. KPL has awarded the work to M/s. Nitya Laboratories vide work order No. KPL/AM/HR/EM/CR/0003 dated 10.07.2023.

Accordingly, environmental quality data on Ambient Air and Effluent (Sewage) for the month of October 2023 is presented in this report.

2.0 Scope and Methodology

The scope of work, works carried out and methodology adopted for the survey are described below.

2.1 Ambient Air Quality

As a part of study, Ambient Air Quality Parameters were measured during the monitoring days date of PM₁₀, PM_{2.5}, SO₂, NO₂, Methane and CO were monitored.



BUILDING & ROAD, MATERIAL, SOIL, ENVIRONMENTAL & CALIBRATION TESTING LAB

AMBIENT AIR QUALITY MONITORING:

Ambient air quality was monitored at different locations inside the port. The study area covers the periphery of Port and different parts of the port. A Total of 8 Ambient Air Quality Monitoring Stations covering both upwind and downwind were installed during November 2023.

Table) Detail of Ambient Air Quality Monitoring Locations

Sr. No	Station Code	Sampling Locations
1	AACM-1	Security Main Gate
2	AACM-2	Inside Port Administrative Building
3	AACM-3	Signal Station
4	AACM-4	Finger Jetty
5	AACM-5	At Car Parking Yard
6	AACM-6	At General Cargo Berth
7	AACM-7	At Fire Station
8	AACM-8	Quar House

Ambient Air Quality Monitoring was carried out with a frequency of two samples per week i.e. at 8 Locations. A Total of 32 Samples each of PM₁₀, PM_{2.5}, Samples of SO₂, NO₂, Methane and CO each were monitored by using Respirable Dust sampler, Fine Particulate Sampler, Methane & CO Analyser



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Test Reports of Ambient Air Quality Monitoring



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BUILDING & ROAD, MATERIAL, SOIL, ENVIRONMENTAL & CALIBRATION TESTING LAB

Issued To: Shri Kankaraj Patel Trust
1001 Patel, Chennai 600028

Test Report Date: 04/02/2025

Sample Particulars

Address of the Sample

Purpose of Monitoring

Sampling Location

Method of Sampling

Monitoring Conducted By

Sampling Duration (hrs.)

- ☐ Ambient Air Quality Monitoring
- ☐ To Check the Pollution Load
- ☐ Max. Date
- ☐ 24 Hr. (Start to)
- ☐ Mr. Sankar
- ☐ 24 Hrs.

Analysis Report

Sr. No.	Date of Sampling	Project No.	Concentration
			Methane (%)
1	04/02/2025	0027100110	ND
2	04/02/2025	0027100110	ND
3	04/02/2025	0027100110	ND
4	04/02/2025	0027100110	ND
Test Method			FID Based Methane Analyser

Notes:

1. All test results are subject to the accuracy of the test methods used and the quality of the samples. 2. The laboratory is not responsible for the accuracy of the test results if the samples are not properly labeled and the test results are not used for the purpose of the test. 3. The laboratory is not responsible for the accuracy of the test results if the samples are not properly labeled and the test results are not used for the purpose of the test.



MAITRAJI ENGINEERING

CHENNAI, INDIA

DISCLAIMER: The information provided in this report is based on the test results obtained from the samples submitted to the laboratory. The laboratory is not responsible for the accuracy of the test results if the samples are not properly labeled and the test results are not used for the purpose of the test. The laboratory is not responsible for the accuracy of the test results if the samples are not properly labeled and the test results are not used for the purpose of the test.

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BUILDING & ROAD, MATERIAL, SOIL, ENVIRONMENTAL & CALIBRATION TESTING LAB

Issued To: Mr. Ranveer Pratap
 (Civil Engg., Chemical, India)

Issue Report Date: 18/11/2023

Sample Particulars

Nature of the Sample:

Purpose of Monitoring:

Sampling Location:

Method of Sampling:

Monitoring Conducted by:

Sampling Duration (hrs.):

Ambient Air Quality Monitoring

To Check the Pollution Level

Water Building

IS 1585 (Part 1)

10, Working

24 Hrs.

Analysis Report

Sl. No.	Date of Sampling	Appar. No.	Concentration
			Microg (µg)
1	07/11/2023	2023106010	62
2	10/11/2023	2023106010	62
3	17/11/2023	2023106010	62
4	24/11/2023	2023106010	62
Test Method			PM10 Based Method Analysis

Notes:

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BUILDING & ROAD, MATERIAL, SOIL, ENVIRONMENTAL & CALIBRATION TESTING LAB

Issued To: **M/s. Hinmatagar Post Trust**
Hinmat Post, Jammu, India

Total Report Date: 18/10/2023

Sample Particulars

Name of the Sample:

Purpose of Monitoring:

Sampling Location:

Method of Sampling:

Monitoring Conducted By:

Sampling Duration (hrs.):

Ambient Air Quality Monitoring

To Check the Pollution Level

Signal Station

IS 3103 (Part 1a)

At: Jammu

24 hrs

Analysis Report

Sl. No.	Date of Sampling	Signal No.	Concentration
			Method (µg)
1	18/10/2023	0001/0001/23	NO
2	18/10/2023	0001/0001/23	NO
3	18/10/2023	0001/0001/23	NO
4	18/10/2023	0001/0001/23	NO
Test Method			FD Based Machine Analyser

Note:

These reports are for the only reference purpose and they are not to be used for any legal purpose. The laboratory is not responsible for any loss or damage to the samples or any other property. The laboratory is not responsible for any loss or damage to the samples or any other property.



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BUILDING & ROAD, MATERIAL, SOE, ENVIRONMENTAL & CALIBRATION TESTING LAB

Request To: **Mr. Manoj Kumar Prasad**
Water Plant, Chemical Plant

Test Report Date: **04/11/2020**

12/10/20

Sample Particulars

Name of the Sample:

Purpose of Monitoring:

Sampling Location:

Method of Sampling:

Monitoring Conducted By:

Sampling Duration (hrs.):

Ambient Air Quality Monitoring

To Check the Pollution Level

Project Name:

IS 3100 (Part 14)

Mr. Gopal

24 hrs.

Analysis Report

Sl. No.	Date of Sampling	Site/Point No.	Concentration
			Metres (µg)
1	04/11/2020	001/0001/14	ND
2	10/11/2020	002/0001/14	ND
3	13/11/2020	003/0001/14	ND
4	20/11/2020	004/0001/14	ND
Test Method			PE Based Method Analyzer

Note:

Report generated by Nitya Laboratories, Faridkot. All the data are recorded in our data capture system. In compliance with ISO 9001:2015, we have implemented a comprehensive quality management system. For more information, please visit our website: www.nityalab.com or contact us at: +91-129-2451187.



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(MANOJ MITAL)

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BUILDING & ROAD, MATERIAL, SOIL, ENVIRONMENTAL & CALIBRATION TESTING LAB

Referred To: **Mr. Kanchanpal Patel Trust**
Vastu Free Chemicals

Test Report Date: **04/11/2020**

Sample Particulars

Name of the Sample:

Purpose of Monitoring:

Sampling Location:

Method of Sampling:

Monitoring Conducted By:

Sampling Duration (hrs.):

Ambient Air Quality Monitoring

To Check the Pollution Level

General Category: **Soil**

IS 5182 (Part 14)

Mr. Sindhu

24 hrs.

Analytical Report

Sl. No.	Date of Sampling	Sample No.	Concentration
			Method (%)
1	04/11/2020	002011000115	ND
2	04/11/2020	002011000215	ND
3	04/11/2020	002011000315	ND
4	04/11/2020	002011000415	ND
Test Method			PA Head Mettler Analyser

Quality Management System Certified by ISO 9001:2015 (Version 001) by BUREAU VERITAS
ISO 17025:2017 (for testing of concrete) by BUREAU VERITAS
ISO 17025:2017 (for testing of soil) by BUREAU VERITAS
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Issued To: **M/s Ramrajgarh Port Trust**
Water Poll. Chemist, 1998

Test Report Date: 04/10/2024

Sample Particulars

Nature of the Sample

Purpose of Monitoring

Sampling Location

Method of Sampling

Monitoring Conducted by

Sampling Division (No.)

Subject: Air Quality Monitoring

To Check the Pollution Level

Car Parking

04/10/2024

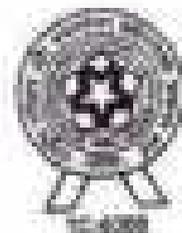
04/10/2024

24 hrs

Analysis Report

Sl. No.	Date of Sampling	Location	Concentration				
			Particulate Matter (PM ₁₀) (µg/m ³)	Particulate Matter (PM _{2.5}) (µg/m ³)	Sulphur Dioxide (SO ₂) (µg/m ³)	Nitrogen Dioxide (NO ₂) (µg/m ³)	Carbon Monoxide (CO) (ppm)
1	04/10/2024	04/10/2024	24.20	22.12	21.20	22.20	40
2	04/10/2024	04/10/2024	27.10	20.00	21.40	22.40	42
3	04/10/2024	04/10/2024	24.40	22.00	19.00	22.10	40
4	04/10/2024	04/10/2024	22.20	24.20	19.00	19.00	40
NAAQM Standards			40	40/50/60	80	80	2
Test Method			IS 5959 Appendix L Part 43-SPCB Circular	IS 5959 Part 43	IS 5959 Part 43	IS 5959 Part 43	IS 5959 Part 43

NOTE: Results subject to such factors as standard deviation, range of data, etc. and may vary from time to time. The results are for information only and are not intended to be used for legal or other purposes. The results are for information only and are not intended to be used for legal or other purposes. The results are for information only and are not intended to be used for legal or other purposes.



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BUILDING & ROAD, MATERIAL, SOIL, ENVIRONMENTAL & CALIBRATION TESTING LAB

Issued To: **Shri Hanumanth Path Trust**
Vidya Path, Chennai, India

Test Report No: **NA/10002**

Sample Particulars

Name of the Sample:

Purpose of Monitoring:

Sampling Location:

Method of Sampling:

Monitoring Conducted By:

Sampling Duration (hrs):

Ambient Air Quality Monitoring

To Check the Pollution Load

Car Parking

IS 1162 (Part III)

05 - Diesel

24 hrs

Analysis Report

Sl. No.	Date of Sampling	Point No.	Concentration
			Metres (%)
1	05/11/2024	0001/0001A	ND
1	12/11/2024	0001/0001B	ND
1	19/11/2024	0001/0001C	ND
4	26/11/2024	0001/0001D	ND
Test Method			ISO 15087 Method Analysis

Notes:

1. All test results are subject to the accuracy of the test methods used and the quality of the samples. The laboratory is not responsible for the accuracy of the test results if the samples are not properly prepared or if the test methods are not followed. The laboratory is not responsible for the accuracy of the test results if the samples are not properly prepared or if the test methods are not followed.



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BUILDING & ROAD, MATERIAL, SOIL, ENVIRONMENTAL & CALIBRATION TESTING LAB

Address To: **M/s Kamalgar Post Trust**
Vardh Pura, Charnok, India

Test Report No.: **NR/120222**

Sample Particulars

Name of the Sample:

Purpose of Monitoring:

Sampling Location:

Method of Sampling:

Monitoring Conducted By:

Sampling Duration (Days):

1. Ambient Air Quality Monitoring

2. To Check the Pollution Level

3. For Status

4. @ 0800 (per day)

5. Mr. Sindhu

6. 24 Hrs.

Analysis Report

Sr. No.	Date of Sampling	Expn. No.	Concentration
			Method (%)
1	08/11/2022	0808/11/2022/1	ND
2	08/11/2022	0808/11/2022/2	ND
3	08/11/2022	0808/11/2022/3	ND
4	08/11/2022	0808/11/2022/4	ND
Test Method			PM 10/2.5 Wet/Dry Analyser

NOTE: Nitya Lab follows the Quality Standard, ISO 9001:2015, ISO 14001:2015 and ISO 17025:2017 respectively.
 (a) Dependability: The Nitya Laboratories at Gurgaon, Haryana has been successfully operating under ISO 9001:2015, ISO 14001:2015 and ISO 17025:2017 since its inception in the year 2009. (b) Dependability: ISO 9001:2015, ISO 14001:2015 and ISO 17025:2017.



NOTE: The information provided in this report is based on the samples received and tested as per the test method specified. The Nitya Laboratories is not responsible for the accuracy of the results if the samples are not properly prepared and labeled. The Nitya Laboratories is not responsible for the results if the samples are not properly prepared and labeled. The Nitya Laboratories is not responsible for the results if the samples are not properly prepared and labeled.

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Test Reports of Wastewater (STP)



NOTE: The information provided in this report is based on the test results obtained from the samples submitted to Nitya Laboratories. The information is provided for the use of the client and is not intended to be used for any other purpose. The information is provided as a service to the client and is not intended to be used for any other purpose. The information is provided as a service to the client and is not intended to be used for any other purpose.

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Kamarajar Port Limited
Vellore Port, Chennai-600 121, Tamil Nadu, India

Report on Environmental Monitoring of Kamarajar Port Limited



Study Period: December 2023

Prepared By:



NITYA LABORATORIES

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BUILDING & ROAD, MATERIAL, SOIL, ENVIRONMENTAL & CALIBRATION TESTING LAB

Introduction

Kamandi Port Trust is the First Corporatized Port in India and the 12th Major Port. It Works on the model of "Land-use" concept. KPTA wishes to manage the port in a pro-active manner to minimize any impacts from port operations or new developments. However port handles coal for Tamil Nadu Electric Board, PG, petroleum and waste of automobiles. Data generation on environmental quality constitute the basis for environmental appraisal of the project. Thus, data on environmental quality has to be periodically monitored and also to comply with the TPCB / MOEF norms.

With this background and need Kamandi Port Limited has appointed M/s. Nitya Laboratories to undertake the same. KPL has awarded the work to M/s. Nitya Laboratories vide work order No. KPL/NOA/0000000000000001 dated 11.01.2023.

Accordingly, environmental quality data on Ambient Air and Effluent (Storage) for the month of October 2023 is presented in this report.

2.0 Scope and Methodology

The scope of work, areas covered and methodology adopted for the survey are described below:

2.1 Ambient Air Quality

As a part of study, Ambient Air Quality Parameters were measured during the monitoring days 2000 of PM₁₀, PM_{2.5}, SO₂, NO₂, Methane and CO were monitored.



BUILDING & ROAD, MATERIAL, SOIL, ENVIRONMENTAL & CALIBRATION TESTING LAB

AMBIENT AIR QUALITY MONITORING:

Ambient air quality was monitored at different locations inside the port. The study area covers the periphery of Port and different parts of the port. A Total of 8 Ambient Air Quality Monitoring Stations covering South coastal and Eastern were monitored during November 2023.

Table: Detail of Ambient Air Quality Monitoring Locations

Sr. No	Station Code	Sampling Locations
1	AADM-1	Security Main Gate
2	AADM-2	Inside Port Administrative Building
3	AADM-3	Signal Station
4	AADM-4	Finger Jetty
5	AADM-5	At Car Parking Yard
6	AADM-6	At General Cargo Ramp
7	AADM-7	At Pier Station
8	AADM-8	Crane House

Ambient Air Quality Monitoring was carried out with a frequency of two samples per week i.e. at 8 Locations. A Total of 16 Samples each of PM₁₀ & PM_{2.5}, Samples of SO₂, NO₂, Methane and CO each were monitored by using respective dual sampler. Fine Particulate Sampler, Methane & CO Analyser.



Test Reports of Ambient Air Quality Monitoring



ALL THE TESTS REPORTS GENERATED BY NITYA LABORATORIES ARE VALID AND ACCURATE. THE REPORTS ARE VALID ONLY IF THE TESTS WERE PERFORMED IN ACCORDANCE WITH THE TEST METHODS AND STANDARDS SPECIFIED IN THE REPORTS. THE REPORTS ARE VALID ONLY IF THE TESTS WERE PERFORMED IN ACCORDANCE WITH THE TEST METHODS AND STANDARDS SPECIFIED IN THE REPORTS. THE REPORTS ARE VALID ONLY IF THE TESTS WERE PERFORMED IN ACCORDANCE WITH THE TEST METHODS AND STANDARDS SPECIFIED IN THE REPORTS.

CORPORATE OFFICE & CENTRAL LABORATORIES :-

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BUILDING & ROAD, MATERIAL, SOIL, ENVIRONMENTAL & CALIBRATION TESTING LAB

Forward To: **Mr. Kanchanpreet Singh**
Senior Proc. Chemist, IISD

Field Report Date: 18/07/2024

Sample Particulars

- Name of the Sample
- Purpose of Monitoring
- Sampling Location
- Method of Sampling
- Monitoring Conducted by
- Sampling Location (Pin)

Ambient Air Quality Monitoring

- To Check the Pollution Level
- Check House
- N 5102 (near to)
- Mr. Sharma
- 24 Hrs.

Analysis Report

Sl. No.	Date of Sampling	Test Report No.	Concentration
			Method (%)
1	07/07/2024	00270000111	ND
2	11/07/2024	00270000111	ND
3	15/07/2024	00270000111	ND
4	18/07/2024	00270000111	ND
5	20/07/2024	00270000111	ND
6	24/07/2024	00270000111	ND
7	26/07/2024	00270000111	ND
Test Method			FD Direct Method Analyzer

NOTE: The concentration of each parameter is reported as per the method used. The concentration is reported as a percentage of the maximum permissible limit (MPL) of the parameter. The concentration is reported as ND (Not Detected) if the concentration is below the detection limit of the method used.



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BUILDING & ROAD, MATERIAL, SOIL, ENVIRONMENTAL & CALIBRATION TESTING LAB

Issued To: **M/s. Karamveer Puri Trust**
Villar Puri, Chennai, India

Test Report Date: 26/11/2024

Sample Particulars

Name of the Sample
Purpose of Monitoring
Sampling Location
Method of Sampling
Monitoring Conducted by
Sampling Division (If any)

Ambient Air Quality Monitoring
To Check the Pollution Level
Signal Station
IS 1888 (Part 1)
IS - 3043
IS 1888
IS 1888

Analysis Report

Sl. No.	Date of Sampling	Test Report No.	Concentration
			Method (µg)
1	07/12/2023	0011000113	ND
2	10/12/2023	0011000113	ND
3	16/12/2023	0011000113	ND
4	18/12/2023	0011000113	ND
5	20/12/2023	0011000113	ND
6	26/12/2023	0011000113	ND
7	28/12/2023	0011000113	ND
Test Method			ISO 18888 Method Analyzer

NOTE: Nitya Laboratories is an ISO 9001:2015 Certified Company. All our Test Reports are issued as per ISO 17025:2017 clause 7.6. The results of the test are provided as a reference only and do not constitute any warranty or liability. The results are subject to the accuracy of the data provided and the quality of the sample. The results are valid only for the purpose for which they are intended. For more information, please contact us at info@nityalab.com.



(AUTHORIZED SIGNATORY)

(NAME OF OFFICER)

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BUILDING & ROAD, MATERIAL, SOIL, ENVIRONMENTAL & CALIBRATION TESTING LAB

Client To: Shri Maheshwar Park Trust
Village Panch, Gurgaon, India

Test Report Date: 26/11/2019

Sample Particulars

Name of the Sample:
Purpose of Monitoring:
Sampling Location:
Method of Sampling:
Monitoring Conducted By:
Sampling Interval (Min.):

Subject: Air Quality Monitoring
To Check the Pollution Level
Frequency:
12 Hrs (Over 1st)
No. Analyser:
24 No.

Analysis Report

Sr. No.	Date of Sampling	Test Report No.	Concentration
			Microg (µg)
1	26/11/2019	20210000114	ND
2	27/11/2019	20210000114	ND
3	28/11/2019	20210000114	ND
4	29/11/2019	20210000114	ND
5	30/11/2019	20210000114	ND
6	01/12/2019	20210000114	ND
7	02/12/2019	20210000114	ND
Test Method			ND Based Monitor Analyser

NOTE: Nitya Laboratories (Pvt) Limited, Gurgaon, India, ISO 9001:2015 Certified, Accredited by NABL (No. 1201) for Calibration of a wide range of instruments used in analytical laboratories. Nitya Laboratories (Pvt) Limited, Gurgaon, India, ISO 17025:2017 Certified, Accredited by NABL (No. 1201) for Calibration of a wide range of instruments used in analytical laboratories.



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BUILDING & ROAD, MATERIAL, SOIL, ENVIRONMENTAL & CALIBRATION TESTING LAB

Issued To: **M/s. Kamrajal Port Trust**
Water Test, Chennai, India

Test Report Date: 06/01/2024

Sample Particulars

Nature of the Sample

Purpose of Monitoring

Sampling Location

Method of Sampling

Monitoring Conducted by

Sampling Duration (s)

• Ambient Air Quality Monitoring

• To Check the Pollution Load

• General Cargo Term

• IS 3180 (Part 14)

• M. Shripar

• 24 hrs.

Analysis Report

Sl. No.	Date of Sampling	Test Report No.	Concentration
			Microg (µg)
1	07/12/2023	00215002119	ND
2	17/12/2023	00215002119	ND
3	18/12/2023	00215002119	ND
4	18/12/2023	00215002119	ND
5	20/12/2023	00215002119	ND
6	28/12/2023	00215002119	ND
7	28/12/2023	00215002119	ND
Test Method			FD Based Nephelometry

NOTE: Responsibility for data integrity, accuracy, and validity of test results rests with the client. Nitya Laboratories is not responsible for any errors or omissions in the data provided. The client is responsible for providing accurate and complete information regarding the sample and the test method. Nitya Laboratories is not responsible for any damage to the sample or the equipment used during the test.



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Test Reports of Wastewater (STP)



CORPORATE OFFICE & CENTRAL LABORATORIES :-

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BUILDING & ROAD, MATERIAL, SOIL, ENVIRONMENTAL & CALIBRATION TESTING LAB

Send To: Mr. Rameshwar Prasad
Vijaya Park, Chennai, India

SLP No.: TCE/SL/2008/0194
Test Report Date: 04/05/2008

Sample Particulars

Nature of the Sample:

Sample Quantity & Packaging:

Sample Received At Lab:

Test Started On:

Test Completed On:

Method of Sampling:

Date of Sampling:

Monitoring Conducted By:

Sample Description:

Wastewater (STP)

1.0 Liter, Pet Bottle (Clean)

01/01/2008

01/01/2008

05/01/2008

IS 15913-3

05/01/2008

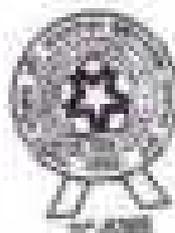
Mr. Rameshwar

W-1: STP-Cell of Aseem Building

W-2: STP-Cell of Car Parking

Analysis Report

Sr. No.	Parameter	Unit	Result		Permissible Limits	Procedure
			W-1	W-2		
1	pH	---	7.62	7.15	6.5 to 8.5	IS 15913-3 (11)
2	Total Suspended Solids (TSS)	mg/l	12	25	50	IS 15913-3 (11)
3	Chemical Oxygen Demand (COD)	mg/l	42	38	100	IS 15913-3 (12)
4	Bio-Chemical Oxygen Demand (BOD) at 20°C (500)	mg/l	8	7	30	IS 15913-3 (14)
5	Fecal Coliform	MPN/100 ml	400	500	<1000	IS 15913



(ANALYST SIGNATURE)
RISHYAM BANSAL

(MANAGER SIGNATURE)
RAMESH KATTA

NOTE: The information given in this report is based on the test results of the sample submitted to the laboratory. The laboratory is not responsible for the accuracy of the data provided in this report. The laboratory is not responsible for the accuracy of the data provided in this report. The laboratory is not responsible for the accuracy of the data provided in this report.

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KAMARAJAR PORT LIMITED



Compliance Report

On

Ministry's guidelines for

**“EXPANSION AND MODERNIZATION OF EXISTING HANDLING
OF MULTICARGO CONTAINER TERMINAL AT KAMARAJAR
PORT, TAMIL NADU”**

Expansion and modernization of existing handling of Multicargo container terminal at Kamarajar Port, Tamil Nadu by M/s. Kamarajar Port Limited- Environmental and CRZ Clearance.

Ref: MoEF's Notification No. 10-28/2005-IA-III dated 24.12.2014

KPL has awarded the development of Multi Cargo Terminal on DBFOT basis for a capacity of 2MTPA with an estimated cost of Rs.151 crores to M/s Chettinad International Bulk Terminal Pvt. Ltd. Concession agreement was signed on 28.03.2014. Award of Concession was granted to the Concessionaire from 27.02.2015. The Concessionaire has completed the berth construction, utility, back yard etc. and started operation.

Cargoes to be handled

Development of multi cargo container terminal is to handle Project clean cargoes like Granite, timber logs, Grains, bagged cargoes including sugar, cobble stone, steel cargoes, project cargo and small quantity of containers of about 2 Million tonnes per annum.

Development of Container Terminal at KPL on DBFOT basis was awarded to M/s. Adani Ennore Container Terminal Private Limited (AECTPL). The quantity handled will be 11.68 MTPA.

S.No	Specific Conditions	Compliance Status
1	"Consent for Establishment" for the present project, shall be obtained from State Pollution Control Board under Air (Prevention and Control of Pollution) Act, 1981 and Water (Prevention and Control of Pollution) Act, 1974.	<p>Kamarajar Port has obtained "Consent to Establish" from Tamilnadu Pollution Control Board (TNPCCB) for handling container cargo of 16.8 MMTPA vide consent order No. 170126235691 (Air Act) and 170116235691 (Water Act) dated 21.04.2017 valid till 31.03.2024.</p> <p>TNPCCB has accorded renewal of Consent To Operate for the terminal vide their orders nos. 2108136876855 & 2108236876855 under Water and Air Acts., vide till 31.03.2026.</p> <p>With regard to M/s Ennore Bulk Terminal (EBTPL), TNPCCB accorded Consent To Establish vide order No. 15012566008 & 15011566008, dated 25.05.2015 and Consent to operate vide Order No.1808212438509 (Air) and 1808112438509 (Water) dtd 19.06.2023, valid upto 31.03.2028.</p>

2	Quantity of cargo should be handled in accordance with the details provided in the Form-1	Complied with.
3	All the recommendations and conditions stipulated by Tamil Nadu Coastal Zone Management Authority (TNCZMA) No. 30060/EC.3/2005-1 dated 06.12.2005, shall be complied with.	Complied with.
4	All the conditions as prescribed in the earlier Clearance letter no. 10-28/2005-IA-III dated 19.05.2006 and 10.09.2007, shall be complied.	Complied with.
5	All the recommendation of the EIA/EMP & Risk Assessment and Disaster Management Report shall be complied with letter and spirit. All the mitigation measures submitted in the EIA report shall be prepared in a matrix format and the compliance for each mitigation submitted in the EIA report shall be submitted to MoEF&CC along with half yearly compliance report to MoEF&CC-RO	EIA/EMP report in a matrix format is enclosed as Annexure -I.
6	The commitment made by the Proponent to the issue raised during Public Hearing shall be implemented by the Proponent.	No direction was given to conduct public hearing for the project.
7	<p>Corporate Environment Responsibility:</p> <p>a) The Company shall have a well laid down Environment Policy approved by the Board of Directors.</p> <p>b) The Environment Policy shall prescribe for standard operating</p>	<p>With regard to M/s. AECTPL, the firm is having approved QHSE policy.</p> <p>With regard to M/s EBTPL, the firm is in the process of deriving the Environmental Policy. However, the firm has Group Environmental Policy.</p> <p>M/s. AECTPL is having approved SOPs.</p>

	<p>process/producers to bring into focus any infringements/deviation/violation of the environmental or forest norms/conditions.</p> <p>c) The hierarchical system or Administrative Order of the company to deal with environmental issues and for ensuring compliance with the environmental clearance conditions shall be furnished.</p> <p>d) To have proper checks and balances, the company shall have a well laid down system of reporting of non-compliances/violations of environmental norms to the Board of Directors of the company and/or shareholders or stakeholders at large.</p>	<p>With regard to M/s EBTPL, the firm is in the process of deriving the Environmental Policy.</p> <p>Noted.</p> <p>M/s. AECTPL is having Standard procedures to address corrective, preventive, deviations and violations.</p>
--	--	---

General Conditions

S.No	Environmental Clearance Conditions	Compliance Status
(i)	Appropriate measures must be taken while understanding digging activities to avoid any likely degradation of water quality.	<p>Complied with.</p> <p>Construction completed and the project is under operation.</p>
(ii)	Full support shall be extended to the officers of this Ministry/Regional Office at Chennai by the project proponent during inspection of the project for monitoring purposes by furnishing full details and action plan including action taken reports in respect of mitigation measures and other environmental protection activities.	<p>Noted for compliance.</p> <p>Full supported is being extended to the officers of IRO, MoEF & CC, Chennai, CPCB & TNPCB during their inspection and site visits. During the compliance period, monthly visits were made by TNPCB officials and all necessary support were extended.</p>

(iii)	A six-monthly monitoring report shall need to be submitted by the project proponent to the Regional Office of this Ministry at Chennai regarding the implementation of the stipulated conditions.	Complied with. The six-monthly compliance status report on the conditions stipulated vide Environmental clearance letters is being sent to Regional Office of MoEF & CC and Tamilnadu Pollution Control Board.
(iv)	Ministry of Environment, Forest & Climate Change or any other competent authority may stipulate any additional conditions or modify the existing ones, if necessary in the interest of environment and the same shall be complied with.	Noted for compliance.
(v)	The Ministry reserves the right to revoke this clearance if any of the condition stipulated are not complied with the satisfaction of the Ministry.	Noted.
(vi)	In the event of a change in project profile or change in the implementation agency, a fresh reference shall be made to the Ministry of Environment, Forest & Climate Change.	Noted.
(vii)	The project proponent shall inform the Regional Office 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.	Noted.
(viii)	A copy of the clearance letter shall be marked to concern Panchayat/local NGO, if any, from whom any suggestion/representation has been made received while processing the proposal.	No suggestion / representation were received from the Panchayat/NGO while processing the proposal. However a copy of the clearance letter was forwarded to local Panchayat.
(ix)	The project proponent shall set up separate environmental management cell for effective implementation of the stipulated environmental safeguards under the supervision of a Senior	Complied with. With regard to M/s AECTPL, a separate EMC with suitable qualified staff has been put in place by AECTPL

	Executive.	<p>for taking care of various day to day environmental monitoring compliance and allied activities. Environmental Department headed by Senior Manager-Environment, who is well supported by Environmental Management Team at H.O.</p> <p>With regard to M/s. EBTP, a separate environmental team at HO is taking care of all environmental activities.</p>																					
(x)	The funds earmarked for environment management plan shall be included in the budget and this shall not be diverted for any purposes.	<p>Complied with.</p> <p>The environmental expenditure carried out by M/s AECP during the compliance period is Rs. 15.66 Lakhs. The breakup details are as follows.</p> <table border="1" data-bbox="899 953 1451 1247"> <thead> <tr> <th>S. No</th> <th>Description</th> <th>Amount (Rs. in Lakhs)</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Environmental Monitoring</td> <td>3.76</td> </tr> <tr> <td>2</td> <td>Greenbelt</td> <td>3.02</td> </tr> <tr> <td>3</td> <td>STP-O&M</td> <td>2.86</td> </tr> <tr> <td>4</td> <td>Housekeeping</td> <td>4.22</td> </tr> <tr> <td>5</td> <td>IWMS</td> <td>1.80</td> </tr> <tr> <td colspan="2" style="text-align: right;">Total</td> <td>15.66</td> </tr> </tbody> </table> <p>Environmental Expenditure carried out by M/s EBTP during the 2023 is Rs.6,07,961/-.</p>	S. No	Description	Amount (Rs. in Lakhs)	1	Environmental Monitoring	3.76	2	Greenbelt	3.02	3	STP-O&M	2.86	4	Housekeeping	4.22	5	IWMS	1.80	Total		15.66
S. No	Description	Amount (Rs. in Lakhs)																					
1	Environmental Monitoring	3.76																					
2	Greenbelt	3.02																					
3	STP-O&M	2.86																					
4	Housekeeping	4.22																					
5	IWMS	1.80																					
Total		15.66																					
5	These stipulations would be enforced among others under the provisions of Water (Prevention and Control of Pollution) Act 1974, the Air (Prevention and Control of Pollution) Act 1981, the Environment (Protection) Act, 1986, the Public Liability (Insurance) Act, 1991 and EIA Notification 1994, including the amendments and rules made thereafter.	Noted.																					

6	All other statutory clearances such as the approvals for storage of diesel 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 authority.	<p>Noted.</p> <p>Approvals shall be obtained as applicable.</p> <p>M/s EBTPPL has obtained Fire Service License from Tamil Nadu Fire & Rescue Service under Section 13 of the Tamil Nadu Fire Services Act 1985 and in accordance with Tamil Nadu Fire service Rules 1990 Appendix III) Lic.No.3589/2019 dtd.30.10.2019.</p>
7	The project proponent shall advertise in atleast two local Newspaper widely circulated in the region, one of which shall be in the vernacular language informing that the project has been accorded Environmental and CRZ clearance and copies of clearance letters are available with the Tamil Nadu State Pollution Control Board and may also be seen on the website of the Ministry of Environment, Forest & Climate Change at http://www.envfor.nic.in . The advertisement should be made within Seven 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.	The advertisement was given in the local Tamil newspaper Dinamani & New Indian Express paper on 04.02.2015 intimating the accordance of Environmental & CRZ clearance for the project. The copy of the same was forwarded to MoEF&CC.
8	This clearance is subject to final order of the Hon'ble Supreme court of India in the matter of Goa Foundation Vs. Union of India in Writ Petition (Civil) No.460 of 2004 as may be applicable to this project.	Noted.
9	Any appeal against this clearance shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.	Noted.

10	Status of compliance to the various stipulated environmental conditions and environment safeguards will be uploaded by the project proponent in its website.	M/s AECTPL has uploaded the status of compliance in its website.
11	A copy of the clearance letter shall be sent by the proponent to concerned Panchayat, Zilla Parisad /Municipal Corporation, Urban Local Body and the Local NGO, if any, from whom suggestions/representations, if any, were received while processing the proposal. The clearance letter shall also be put on the website of the company by the proponent.	Complied with. The copy of the clearance letter was forwarded to local Panchayat.
12	The proponent shall upload the status of compliance of the stipulated Clearance conditions, including results of monitored data on their website and shall update the same periodically. It shall simultaneously be sent to the regional Office of MoEF, the respective Zonal Office of CPCB and the SPCB.	Complied with.
13	The project proponent shall also submit six monthly reports on the status of compliance of the stipulated Clearance conditions including results of monitored data (both in hard copies as well as by e-mail) to the respective Regional Office of MoEF, the respect Zonal of CPCB and SPCB.	Port is submitting the bi-annual compliance report to Regional Office of MoEF & CC.
14	The environment statement for each financial year ending 31st March in Form-V as is mandated to be submitted by the project proponent to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be put on the website of the company along with the status of compliance of Clearance conditions and shall be sent to the respective Regional Office of MoEF&CC by e-mail.	Noted and will be complied with. The environmental statements of M/s.AECTPL and M/s.EBTPL are enclosed herewith.

Annexure -I**Environmental Mitigation Measures in Matrix format**

S.No	Component	Impact	Mitigation Measures
Construction Phase			
1.	Land	<ul style="list-style-type: none">• Change in topography of inner dock basin, which will be dredged and converted into marine berthing area.• Land pollution due to discharge of sewage and solid waste onto land.	<ul style="list-style-type: none">• Use of removed soil (top soil only) for green belt development.• No change in land use land cover as the proposed project site is located within the existing break waters.• Disposal of solid waste through authorized recyclers/contractors.• Local labours are engaged.
2.	Water	<ul style="list-style-type: none">• Water pollution due to disposal of sewage and construction waste into water body.	<ul style="list-style-type: none">• No construction waste is disposed off into the water body.
3.	Air	<ul style="list-style-type: none">• Generation of PM2.5, PM10, CO, SO2, NO2	<ul style="list-style-type: none">• Raw materials for construction will be brought inside the port in trucks with proper covers.• Regular servicing of vehicles and DG sets.• Compulsory wearing of Personal Protective Equipment (PPE) like dust mask etc by workers.
4.	Noise and Vibration	<ul style="list-style-type: none">• Increase in the noise level due to movement of vehicles and construction activities.• Vibration due to movement of vehicles and construction activities.	<ul style="list-style-type: none">• Regular servicing and maintenance of construction Machineries, equipments and vehicles is carried out to control noise.• Compulsory wearing of Personal Protective Equipment (PPE) like ear plugs or ear muff by workers.• The impact due to vibration from vehicular movement is insignificant.
5.	Marine	<ul style="list-style-type: none">• Increase in suspended solid	<ul style="list-style-type: none">• Usage of silt curtains to

	Environment	<p>concentration due to dredging in the marine water body.</p> <ul style="list-style-type: none"> • Change in shoreline. 	<p>contain spread of suspended sediment in marine water body.</p> <ul style="list-style-type: none"> • Since, the construction of the berth is inside the breakwaters hence no changes in shoreline.
6.	Biological <ul style="list-style-type: none"> • Flora • Fauna 	<ul style="list-style-type: none"> • Site clearance. • Disturbance due to increase in noise. 	<ul style="list-style-type: none"> • The activities do not create any disturbance to flora and fauna. • No operations of heavy machinery.
7.	Socio-Economic	<ul style="list-style-type: none"> • Employment generation. 	<ul style="list-style-type: none"> • Local people were engaged by the contractors during construction.
Operation Phase			
8.	Land	<ul style="list-style-type: none"> • Pollution due to discharge of sewage. • Generation of ship and port generated solid wastes 	<ul style="list-style-type: none"> • Sanitation facilities were provided. • Sewage will be collected in septic tank, which will be emptied regularly by contractor. • Port has facilitated the ships with reception facilities for the disposal of solid wastes as required under MARPOL regulations.
9.	Water	<ul style="list-style-type: none"> • Consumption of water. • Contamination of water body by discharge of untreated sewage. • Contamination of water body due to discharge of contaminated storm water runoff. 	<ul style="list-style-type: none"> • Water consumption is only for domestic purpose. No process or manufacturing is taking place. • Sewage will be collected in septic tank, which will be emptied regularly by contractor. • Storm water drainage system.
10.	Air	<ul style="list-style-type: none"> • Emission of air pollutants like CO, SO₂, NO_x from vehicles, heavy machineries and DG sets. 	<ul style="list-style-type: none"> • Cargo is handled in closed containers. In the Multi cargo berth only green cargo are handled.

			<ul style="list-style-type: none"> • Regular servicing and maintenance of DG set and vehicles are carried out. • Air quality is regularly monitored.
11.	Noise and Vibration	<ul style="list-style-type: none"> • Operation of heavy machineries will result in generation of noise and vibration. 	<ul style="list-style-type: none"> • Ear muffs are provided for workers.
12.	Marine Environment	<ul style="list-style-type: none"> • Contamination of marine water and bottom sediment due to discharge/disposal of untreated sewage/garbage from the ships/port area into the marine environment. 	<ul style="list-style-type: none"> • No garbage is disposed off into the sea. The same is collected by the port and disposed off.
13.	Biological <ul style="list-style-type: none"> • Flora • Fauna 	<ul style="list-style-type: none"> • Disturbance due to increase in noise. 	<ul style="list-style-type: none"> • The activities do not create any disturbance to flora and fauna. • No operations of heavy machinery.
14.	Socio-Economic	<ul style="list-style-type: none"> • Employment opportunity. 	<ul style="list-style-type: none"> • Generation of Employment opportunity.
15.	Occupational Health and Safety	<ul style="list-style-type: none"> • Storage of materials and handling. 	<ul style="list-style-type: none"> • Materials are stored in either closed shed or in closed containers. • Usage of personal protective equipment like dust mask and safety goggle. • Safety training.



TAMIL NADU POLLUTION CONTROL BOARD
District Environmental Laboratory, Manali

From:

Dr.P. Vijayalakshmi, M.Sc., Ph.D.,
Deputy Chief Scientific Officer (A/C)
District Environmental Laboratory, Manali
Tamil Nadu Pollution Control Board,
9503, Poonamallee High Road,
Arumbakkam,
Chennai-108

To:

Ms.Emore Bulk Terminal Pvt Ltd.,
Formerly M/s. Chemical International Bulk
Terminal Pvt. Ltd.,
SI No. 46 Parthivakkam Village,
Ponneri Taluk, Thiruvallur Dt.,
Chennai - 606 120.

L.No.TSPC.DDEL-MNL/Air Survey T. No.DWA/23-24, Dt. 12.01.2024

Re:

Furnishing of Report of Analysis of Ambient Air Quality /
Stack Monitoring / Ambient Noise Level Survey - Reg.

- Ref: 1. This office L.No. TNPUBDL/MNL/AQS/SMT/ST.No.10-A/2023-24 dt. 08.12.2023
2. Your L.No.ER/PL/108 dt. ADMIN/TNPUB/23-24 dt. 16.12.2023
3. Cash Receipt No. 17200 dt. 02.11.2024 Rs.61,100/-

Enclosed herewith sending the Report of Analysis of Ambient Air Quality / Stack Monitoring / Ambient
Noise Level Survey conducted in the vicinity of your industry Ms.Emore Bulk Terminal Pvt Ltd.,
Ponneri Taluk, Thiruvallur Dt., Chennai - 120 on 26.12.2023 with an invoice for a sum of Rs. 61,100/-
(Rupees Sixty One Thousand One Hundred and Fifty only) towards the above survey / analytical charges,
and the same has been adjusted vide reference (3) cited.

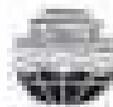
Kindly acknowledge the receipt of the above without fail.


Deputy Chief Scientific Officer (A/C)
District Environmental Laboratory
Tamil Nadu Pollution Control Board
Manali

Encl: As above

Copy submitted to:

1. The District Environmental Engineer, TNPC Bd, Guindy/Secy for favour of kind information please.
2. Copy to file.

**TAMIL NADU POLLUTION CONTROL BOARD**

District Environmental Laboratory, Manali

AMBIENT AIR QUALITY SURVEY – Report of Analysis

Report No.54 /AQS/2023-24

Date: 17.01.2024

1. Name of the Industry	Ms. Essore Bulk Terminal Pvt Ltd.
2. Address of the Industry	Ponneri Taluk, Thiruvellar (S., Chennai) – 600 126.
3. Date of Survey	26.12.2023
4. Duration of Survey	8 Hours / 24 hours
5. Category	Bad / Orange / Green – Large / Medium / Small
6. Land use classification	Industrial / Commercial / Residential / Semi-urban

Meteorological Conditions

Ambient Temperature (°C)	Min: 28 Max: 28	Relative Humidity (%)	Min: 70 Max: 80
Weather Condition	Partially Cloudy	Rain Fall (mm)	Nil
Preferential Wind Direction	SE – SW	Mean Wind Speed (km/hr)	16.7

Ambient Air Quality Survey Results

S. No.	Location	Direction	Distance (m)	Height from G.L. (m)	Pollutants Concentration (microgram / m ³)			
					PM 2.5	PM 10	SO ₂	NO ₂
1	On top of platform near Himat No. I	SE	100	3.0	19	18	11	18
2	On top of platform near Himat No. III	SE	100	3.0	–	62	13	22
3	On top of platform near Admin.	SW	100	3.0	24	68	16	24
4	On top of platform near Himat No. VII	SW	100	3.0	–	65	14	22

Note: * With respect to major emission sources. The analytical results are restricted to the sampling period of 8 hrs/24hrs

[Signature]
Deputy Chief Scientific Officer (A/C)
District Environmental Laboratory
Tamil Nadu Pollution Control Board
Manali

Test Performed	Test Method
PM10	IS 5182 – (Part 2) – 2006
SO ₂	Modified West-Gaeke / IS 5182 – (Part 2) – 2006 (A) 2012
NO ₂	Jacobs – Doehmer / IS 5182 – (Part 6) – 2006 (A) 2012



TAMIL NADU POLLUTION CONTROL BOARD
District Environmental Laboratory, Mandi

AMBIENT AIR QUALITY SURVEY
Schematic Diagram Showing Location of Sampling

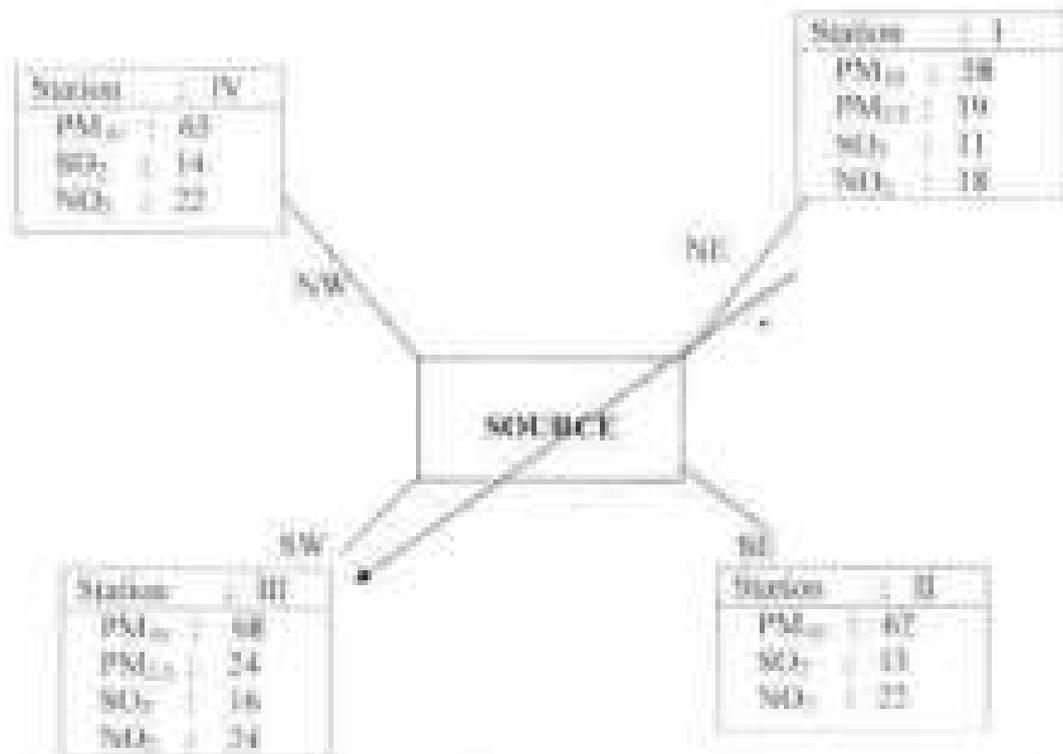
Report No.: SA/AQ/DM/2023-24

Name and Address of the Industry

M/S. Essare Bulk Terminal Pvt Ltd,
Ponner Taluk, Tiruvallur Dt., Chennai - 600 126

Date of Survey

26.12.2023

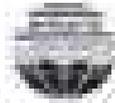


Note: * With respect to major emission sources. The analytical results are restricted to the sampling period of 3 hrs/3 days

Meteorological Conditions	
Predominant Wind Direction	SE - SW
Wind Speed (Km/hr)	16.7
Weather Condition	Partly Cloudy
Rainfall	No

Ramkumar
T. K. G. 148

Deputy Chief Scientific Officer (A/C)
District Environmental Laboratory
Tamil Nadu Pollution Control Board
Mandi



TAMIL NADU POLLUTION CONTROL BOARD
District Environmental Laboratory, Marudh

STACK MONITORING SURVEY – Report of Analysis

Report No. 24/SM/2023-24

Date: 12.01.2024

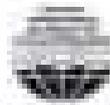
1. Name of the Industry : **MA.Emore Bulk Terminal Pvt Ltd,**
2. Address of the Industry : **Perumal Taluk, Thiruvallur Dt., Chennai – 600 120.**
3. Date of Survey : **26.11.2023**
4. Type of Industry : **Coal/Chemical/Sugar/Paper & Pulp/
Power plant / Textile Processing/ Multi cargo container terminal**

Stack Monitoring Survey Results

Sl. No.	Stack attached to	Fuel used	Stack Temp. °C	Velocity in (m/ sec)	Discharge rate in (m ³ /hr)	Pollutants (mg/ Nm ³)		
						PM ₁₀	SO ₂	NO _x
1	DG - 500KVA	Oil	448	22.33	1726	18	16	192

Test Performed	Test Method
PM ₁₀	IS 5182 (Part 2) - 2006
SO ₂	Modified West - Gaeke / IS 5182 (Part 2) - 2006 I.A. 2012
NO _x	Jacobs - Hochstar / IS 5182 (Part 2) - 2006 I.A. 2012


Deputy Chief Scientific Officer (AC)
District Environmental Laboratory
Tamil Nadu Pollution Control Board
Marudh



TAMIL NADU POLLUTION CONTROL BOARD
District Environmental Laboratory, Madurai

Stack Details

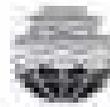
Report No. TNSA/DO/SSC/2023/24

1. Name and Address of the Industry : M/S. Eanare Hub, Terminal Pvt Ltd,
Panner Taluk, Tiruvallur Dt., Chennai - 600 120.

2. Date of Survey 26.11.2023

Sl. No.	Particulars	
1.	Stack attached to	DG
2.	Details of process stack	DG - 500 KVA
3.	Height from G Level in (m)	8.7
4.	Diameter in (m)	0.2
5.	Port hole height from Ground Level or bench or duct in (m)	7
6.	Fuel Used (with % Sulphur content)	Liquid
7.	Fuel Consumption rate per hr (metric) (mt/hr)	-
8.	Type of Stack and capacity	Round
9.	Production on 26.11.2023	Soil Screen: 6,218 MT
10.	APC Measures provided	-
11.	APC functional status	-
12.	Moisture content in %	-
13.	Ambient temp in °K	311
14.	Temp of flue gas in °K	448
15.	Velocity of flue gas in m/sec	22.73
16.	Volume of flue gas sampled in m ³	1.01
17.	Gaseous Discharge rate per day in Nm ³ /day	1726
18.	Combustion efficiency %	-

Deputy Chief Scientific Officer (A/C)
District Environmental Laboratory
Tamil Nadu Pollution Control Board
Madurai



TAMILNADU POLLUTION CONTROL BOARD
District Environmental Laboratory, Marath

STACK MONITORING SURVEY – Additional details

Report No. 54/SM/2023-24 _____ Date: 12.01.2024

1. Name of the Industry : M/Emmore Bulk Terminal Pvt Ltd,
2. Address of the Industry : Peruvai Taluk, Tiruvallur Dist., Chennai – 600 128.
3. Date of Survey : 28.12.2023
4. Type of Industry : Coal/Chemical/Sugar/Paper & Pulp/
Power plant/ Textile Processing/ Multi cargo container terminal

Stack Monitoring Additional details

Sl. No.	Details of stack mentioned in the Air Consent order	Details of stack available and in working condition	Details of stack for which stack Emission sampling have been done	Justification for the left out of stack Emission Sampling
1.	DC - 300 KVA	Working	Sampling Done	-


Deputy Chief Scientific Officer, (A/C)
District Environmental Laboratory
Tamil Nadu Pollution Control Board
Marath



TAMIL NADU POLLUTION CONTROL BOARD
District Environmental Laboratory, Mandai

AMBIENT SOURCE NOISE LEVEL SURVEY - Report of Analysis

Report No. 34 / NLS/2023-24

Date: 12.01.2024

1.	Name of the Industry	M/s. Emory Bulk Terminal Pvt Ltd.,	
2.	Address of the Industry	Pranav Taluk, Thiruvallur Dist., Chennai - 600 120.	
3.	Date of Survey	26.12.2023	
Category	RI	Land use Classification	Industrial
Type of Survey	Ambient/Source	Time of Survey	Day
Meteorological conditions		Clear/Windy/Rainy	Windy

Logging Parameters

Instrument Used	CESVA Model 26310		Serial No	1243103	
Logging Interval	10 Minutes each point		Measuring Range	50-130 dB(A)	
Weighting	"A"	Peak Weighting	"C"	Time Weighting	FAST
Sound Indicator	HANDLED		Time in hrs	14.00 - 15.00	

Report of Noise Level Monitoring

Sl. No	Location	Duration (min)	Distance (m)	Direction	Sound Level -dB(A)		
					L_{eq}	Min	Max
1	Near High Mast No. I	10	100	NE	64.8	61.8	67.0
2	Near High Mast No. III	10	100	SE	62.5	60.0	65.8
3	Near Admin	10	100	SW	59.2	57.2	63.5
4	Near Main Gate	10	100	SW	56.4	53.1	61.4
5	Near Ware House	10	100	N	58.2	56.2	62.2

Note: L_{eq} value is the average energy for the measured period.

Deputy Chief Scientific Officer (A/C)
District Environmental Laboratory
Tamil Nadu Pollution Control Board
Mandai



TAMIL NADU POLLUTION CONTROL BOARD
District Environmental Laboratory, Madurai

INFERENCE REPORT ON A.A.Q.S/ S.M.

1. Name of Industry : Ms.Emore Bulk Terminal Pvt Ltd,
Ponner Taluk, Thiruvallur Dt., Chennai - 600 120
2. Pollution Category : Red Large
3. Date of A.A.Q. Survey : 26.12.2023
4. Predominant Wind Direction : SE - SW
5. Weather condition : Partially Cloudy

STATUS OF POLLUTANTS LEVEL

I. AMBIENT AIR QUALITY:

1. Total No. of A.A.Q. stations monitored : 4
2. No. of A.A.Q. stations in which Pollutants Level exceeded the Boards standards : Nil

Maximum and Minimum values of Pollutants Level observed

Sl No	POLLUTANT	Values in microgram/m ³		BOARD'S STANDARDS (As per consent order)
		Maximum	Minimum	
1.	PM ₁₀	68	38	100
	PM _{2.5}	24	19	50
2.	GASEOUS POLLUTANTS:			
	(i) SO ₂	16	11	80
	(ii) NO _x	24	18	80

II. STACK MONITORING:

1. Total No. of Stacks Monitored : 1
2. No. of Stacks in which Pollutants level Exceeded the Boards standards : Nil

[Signature]
T. G. J. S.

Deputy Chief Scientific Officer (A/C)
District Environmental Laboratory
Tamil Nadu Pollution Control Board
Madurai



TAMIL NADU POLLUTION CONTROL BOARD
District Environmental Laboratory, Mannar
BILL

Report No. 54/AD/SM/2023-24

Bill No.	54/2023-24
Date	12.01.2024

To
M/s. Chemical International Bulk Terminal Pvt. Ltd.,
Pattarai Taluk, Thiruvallur Dist., Chennai - 600 120.

- Ref: 1. B.PMA/No.6 Dt.31.03.2009
2. This office Lr.No. TNPCB/DIL/SM/AADP/SM/NG/SP No.10-A/2023-24 dt. 08.11.2023
3. Your Lr.No.HTPL/HR & ADMIN/TNPCB/23-24 dt. 16.12.2023
4. Cash Receipt No. 177202 dt. 02.11.2024 dt. 01.2024

Sl. No.	Description	Rate (Rs.)	No. of Samples/Stacks	Amount (Rs.)
1.	SAMPLING CHARGES:			
	(i) Ambient Air Quality monitoring PM ₁₀	3500	4	14,000
	(ii) Source Emission Monitoring (PM, SO ₂ , NO _x , etc.,)	13100	1	13,100
	(iii) Ambient Air Quality monitoring PM _{2.5}	3500	2	7,000
2.	ANALYTICAL CHARGES:			
	(i) Ambient Air Samples PM ₁₀ , SO ₂ , NO _x (each Rs. 3000/-)	3150	4	12,600
	(ii) Ambient Air Samples PM _{2.5}	1800	2	3,600
	(iii) Source Emission Samples PM, SO ₂ , NO _x (each Rs.1050/-)	3150	1	3,150
3.	AMBIENT NOISE MONITORING CHARGES:			
	(i) For 5 stations	1400	5	7,000
Transportation charges				900
Total				61,350
Received Vale R/SC/ Bank D/O No.162771 dated:15.12.2023				
Our CR No. 177202 dated: 02.11.2024				61,350
Balance				

Deputy Chief Scientific Officer (A/C)
District Environmental Laboratory
Tamil Nadu Pollution Control Board
Mannar

**REPORT ON
COMPREHENSIVE ENVIRONMENTAL MONITORING
FOR**

**ADANI ENNORE CONTAINER TERMINAL CONTAINER PRIVATE LIMITED
(AECTPL)
(WITHIN KAMARAJAR PORT LIMITED)
VALLUR POST, PONNERI TALUK, CHENNAI - 600 056.**

JULY 2023 - DECEMBER 2023



PREPARED BY:

**M/S. SV ENVIRO LABS & CONSULTANTS,
(MoEF & CC Recognized, NABL & NABET Accredited,
ISO 9001 & 45001 Certified Laboratory),
B1, Block-B, IDA, Autonagar,
Visakhapatnam - 530012.**

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1.0 INTRODUCTION

M/s. Adani Ennore Container Terminal Pvt Ltd (AECTPL) located inside Kamarajar Port, Ennore is operating container berth and handling containerized Import/Export cargoes.

AECTPL have engaged M/s. SV ENVIRO LABS AND CONSULTANTS, an Accredited Consultant by NABL to carry out the Comprehensive Environmental monitoring studies in AECTPL continuously as per the Statuary Requirement. This report covers the monitored environmental data for the Period of July 2023 to December 2023.

1.1 LOCATION OF THE PROJECT

The Project site is located at Port area inside the Kamarajar Port Limited.

The location map is shown in Fig - 1

Fig – 1 – Location Map



2.0 SCOPE OF WORK

The scope of Comprehensive Environmental monitoring includes the following environmental components;

1. Meteorological data
2. Ambient Air Quality
3. Ambient Noise Level
4. Marine Sampling
5. Treated STP / ETP Water.
6. Potable water
7. DG Set Emission

The parameters covered under the scope for each of the above attributes are given below:

SCOPE OF WORK

S.No	Attribute	Scope	Frequency
1.	Meteorological Data	Collection of micrometeorological data on hourly basis by installing an auto weather monitoring station at plant site covering the following parameters: <ul style="list-style-type: none"> • Wind speed • Wind direction • Rainfall • Relative Humidity • Temperature • Barometric pressure • Solar Radiation 	Daily
2.	Ambient Air Quality	Sampling of ambient air at 03 stations for analysing the following parameters: <ul style="list-style-type: none"> • PM10 • PM2.5 • SO₂ • NO₂ • CO • Lead • Ozone • Ammonia • Benzene • Benzo Pyrene • Arsenic • Nickel 	Weekly Twice
3.	Ambient Noise	Collection of Noise levels on hourly basis at 3 locations <ul style="list-style-type: none"> • L_{eq} – Day (Max and Min) • L_{eq} – Night (Max and Min) 	Monthly Once

4.			
4a.	Surface and Bottom Water	<p>Collection of Surface and Bottom Water analysed for -1location</p> <ul style="list-style-type: none"> • Temperature • pH @ 25°C • Total Suspended Solids • BOD at 27 °C for 3 days • Dissolved oxygen • Salinity at 25 °C • Oil & Grease • Nitrate as NO₃ • Nitrite as NO₂ • Ammoniacal Nitrogen as N • Total phosphates as PO₄ • Total Nitrogen, • COD • Turbidity • Total Iron as Fe • Colour • Odour • Mercury as Hg • Cadmium as Cd • Total Chromium as Cr • Copper as Cu • Lead as Pb • Nickel as Ni • Iron • Zinc • Particulate Organic Carbon • Petroleum Hydrocarbons 	Monthly Once
4b.	Marine Sediment	<p>Collection of Marine sediment analyzedfor-1 location</p> <ul style="list-style-type: none"> • pH • Organic Matter • Moisture Content • Conductivity • Iron • Sodium • Copper • Nickel • Zinc • Manganese • Lead • Boron • Phosphate • Chloride • Sulphate • Sulphide • Pesticide • Potassium • Total Chromium • Petroleum Hydrocarbon • Aluminium • Total Nitrogen • Organic Nitrogen • Phosphorus 	Monthly Once

		<ul style="list-style-type: none"> • Texture 	
4c.	Phytoplankton Monitoring	<ul style="list-style-type: none"> • Total Count • No. of species • Major Species 	Monthly Once
4d.	Zooplankton Monitoring	<ul style="list-style-type: none"> • Total Count • No. of species • Major 	Monthly Once
4e.	Microbiological Monitoring	<ul style="list-style-type: none"> • Pseudomonas aeruginosa • Streptococcus Faecalis • Total Coliform • Faecal Coliform • E.Coli • Total viable count • Salmonella • Shigella • Vibrio Cholera • Vibrio Parahaemolyticus 	Monthly Once
4f.	Biological Monitoring	<ul style="list-style-type: none"> • primary productivity • Chlorophyll-a • Phaeopigment • Total Biomass 	Monthly Once
4g.	Phytobenthos Monitoring data	<ul style="list-style-type: none"> • Fungus • Total Count • No. of species • Diversity Index • Major species 	Monthly Once
4h.	Total Fauna Monitoring	<ul style="list-style-type: none"> • Name of phylum • Class • Number of Individuals encountered • Total no. of species encountered • Total fauna 	Monthly Once
5.	STP Treated Water	<p>Collection of STP Inlet and Treated water analysed for – 11location</p> <ul style="list-style-type: none"> • pH • TSS • BOD • Faecal Coliforms • COD • TDS • Oil & Grease • Cl • SO₄ 	Monthly Once
6.	Potable Water analysis	<p>Collection of Drinking water sample at 01 location. Analysing As per IS 10500: 2012 – 36 Parameters</p>	Monthly Once
7.	DG Set Emissions	<p>Sampling of Emission at 02 stations for analysing the following parameters:</p> <ul style="list-style-type: none"> • PM • Carbon Monoxide • NO_x – NO₂ • SO₂ 	Monthly Once

3. METHODOLOGY

Methodologies adopted for sampling and analysis for each of the above parameters are detailed below

1	Meteorological parameters	
	Online Met station	
2	Ambient Air Quality	
	Parameters	Method
	Respirable Suspended Particulate Matter (PM10)	IS5182Part23:2006(Reaff.2017)
	Particulate Matter PM2.5	IS5182Part24:2019
	Sulphur dioxide as SO ₂	IS5182 Part02:2001(Reaff.2017)
	Oxides of Nitrogen as NO ₂	IS5182 Part06:2006(Reaff.2017)
	Lead as Pb	IS5182 Part22:2004(Reaff.2019)
	Arsenic as As	CPCB Guidelines
	Nickel as Ni	IS5182Part26:2020
	Carbon monoxide as CO	IS5182Part10:1999(Reaff.2019)
	Ozone as O ₃	IS5182Part09:1974(Reaff.2017)
	Ammonia as NH ₃	IS5182Part25:2018
	Benzene (α) pyrene	IS5182 Part12: 2004 (Reaff.2017)
	Benzene as C ₆ H ₆	IS5182Part11:2006(Reaff.2019)
3	Ambient Noise Monitoring	
	L _{eq} Day& Night	Instrument Manual, SV/LAB/SOP/Noise/001
4	Marine Sampling	
	Surface and Bottom Water	APHA Methods 23 rd Edition, 2017 Standard Methods for examination of Water and Wastewater and IS 3025 & USEPA Test Methods
	Sea Sediment	
	Phytoplankton Monitoring	
	Zooplankton Monitoring	
	Microbiological Monitoring	
	Primary Productivity Monitoring	
	Phytobenthos Monitoring data	
Total Fauna Monitoring		
5	STP Water Analysis	
	pH, TSS, BOD, Faecal Coliforms	APHA Methods 23 rd Edition, 2017 Standard Methods for examination of Water and Wastewater and IS 3025
6	Emission Monitoring	
	PM, Carbon Monoxide, NO _x – NO ₂ , SO ₂	IS 11255 Methods of measurement of emissions from Stationary source
7	New Water Analysis	
	As per IS 10500 : 2012–36 Parameters	APHA Methods 23 rd Edition, 2017 Standard Methods for examination of Water and Waste water and IS 3025

4. ENVIRONMENTAL STUDIES – JULY 2023 – DECEMBER 2023.

S.No	ATTRIBUTE	STUDIES CARRIED OUT
1.	Meteorological parameters	Collection of micrometeorological data at project site on daily basis with hourly frequency
2.	Ambient Air Quality	Collection of ambient air at 4 locations.
3.	STP water	Collection of STP outlet water at two locations
4.	Ambient Noise	Collection of Ambient noise levels for day and night at 4 locations
5.	Drinking Water	Collection of Drinking water at Canteen Building
6.	Marine Water and Marine Sediments	Collection of Marine water and Marine Sediments at Three locations
7.	DG Set Emissions	Collection of DG Set Emissions.

1. METEOROLOGICAL DATA

Meteorological data was collected on hourly basis by installing an auto weather monitoring station at Plant site. The report depicted here under presents the data for July 2023 – December 2023.

The following parameters were recorded

- Wind speed
- Wind direction
- Temperature
- Pressure
- Relative humidity
- Rainfall



ANNEXURE - 1 MICROMETEOROLOGY DATA

JULY - 2023

Marine Infrastructure Developer Private Ltd

Report Type: Average Report

From: 01-07-2023 0:00:00 Hrs To: 31-07-2023 23:59:59 Hrs

Created by Adani. Created at 01-08-2023 9:22:46 AM

Date	AQMS-Wind_Speed (km/h)	AQMS-Wind_Direction(Degree)	AQMS-RH (%)	AQMS Total Rain Fall (mm)	AQMS-Atm. Pressure (mBar)	AQMS-Atm. Temperature (Degree)	AQMS-Solar_Radiation (w/m2)
Avg	5.5	237	89	0.0	1003.1	31.9	197.8
Min	3.8	206	76.7	-	996.1	28.6	98.1
Max	8.2	262	99.8	-	1008.4	33.8	282.5
01-07-2023	4.8	221.3	88.6	0.0	999.0	33.3	255.9
02-07-2023	4.4	232.9	94.5	0.0	998.6	31.5	98.3
03-07-2023	4.8	234.4	96.1	0.0	997.3	31.0	117.2
04-07-2023	5.0	231.3	93.9	0.0	995.8	31.3	202.3
05-07-2023	5.7	250.0	91.2	0.0	994.4	31.4	169.8
06-07-2023	6.9	241.8	82.0	0.0	996.8	32.9	186.0
07-07-2023	6.5	234.8	83.8	0.0	999.2	33.1	274.8
08-07-2023	6.2	243.3	84.0	0.0	1000.0	33.1	211.2
09-07-2023	5.1	206.0	89.6	0.0	999.3	32.0	266.8
10-07-2023	5.0	226.3	97.5	0.0	999.1	30.6	139.1
11-07-2023	6.3	228.5	96.8	0.0	998.2	31.0	178.2
12-07-2023	3.8	244.1	94.5	0.0	998.2	31.3	143.7
13-07-2023	5.2	230.7	96.3	0.0	998.8	30.6	208.2
14-07-2023	3.8	241.2	93.3	0.0	999.2	31.8	240.6
15-07-2023	4.8	219.6	90.2	0.0	998.4	32.9	280.6
16-07-2023	4.0	235.7	92.0	0.0	998.2	32.3	162.8
17-07-2023	5.6	231.0	85.4	0.0	997.2	33.1	253.3
18-07-2023	5.6	240.9	83.2	0.0	996.1	33.5	258.8
19-07-2023	7.2	253.0	83.9	0.0	995.1	32.5	246.9
20-07-2023	7.6	228.6	81.9	0.0	994.6	33.1	207.0
21-07-2023	6.6	251.5	76.7	0.0	995.5	33.5	192.0
22-07-2023	7.3	246.7	85.1	0.0	997.6	31.6	117.2
23-07-2023	4.3	238.0	98.7	0.0	998.6	29.7	103.8
24-07-2023	5.5	240.0	97.9	0.0	997.8	29.4	110.5
25-07-2023	4.9	243.9	99.8	0.0	997.9	28.6	98.1
26-07-2023	6.4	245.0	95.9	0.0	998.1	29.7	133.9
27-07-2023	8.2	240.0	84.3	0.0	998.4	32.2	268.2
28-07-2023	4.5	229.1	87.2	0.0	998.0	32.2	240.4
29-07-2023	5.2	254.4	80.5	0.0	997.7	33.4	237.1
30-07-2023	5.8	262.4	79.9	0.0	997.2	33.8	282.5
31-07-2023	4.1	218.8	86.2	0.0	996.9	33.1	247.3

Remarks: -

AUG - 2023

Marine Infrastructure Developer Private Ltd

Report Type: Average Report

From: 01-08-2023 0:00:00 Hrs To: 31-08-2023 23:59:59 Hrs

Created by Adani. Created at 01-09-2023 9:36:35 AM

Date	AQMS-Wind Speed (km/h)	AQMS-Wind_Direction (Degree)	AQMS-RH (%)	AQMS Total Rain Fall (mm)	AQMS-Atm. Pressure (mBar)	AQMS-Atm. Temperature (Degree)	AQMS-Solar_Radiation (w/m2)
Avg	4.3	218	93	62.0	1003.1	31.8	249.5
Min	2.4	182	75.9	-	996.1	30.0	176.0
Max	6.7	243	99.2	-	1008.4	33.8	299.1
01-08-2023	4.6	214.1	84.21	0.0	996.9	33.2	176.0
02-08-2023	6.7	242.6	75.87	0.0	997.6	33.8	248.0
03-08-2023	6.0	223.8	81.75	0.0	997.5	33.1	276.4
04-08-2023	4.5	221.6	88.01	0.0	999.5	32.7	270.2
05-08-2023	4.8	216.8	89.07	0.0	1000.7	32.7	291.7
06-08-2023	4.4	219.5	90.3	0.0	999.8	33.0	299.1
07-08-2023	4.6	199.1	92.61	0.0	998.3	32.5	266.6
08-08-2023	4.2	191.4	91.31	0.0	998.9	32.5	208.6
09-08-2023	4.5	202.7	92.16	0.0	1000.3	32.4	275.7
10-08-2023	6.7	234.4	89.07	0.0	1000.5	32.0	239.3
11-08-2023	4.5	201.5	93.19	0.0	1000.1	31.1	222.6
12-08-2023	5.4	209.6	94.81	0.0	999.4	31.1	193.1
13-08-2023	5.4	198.9	93	0.0	998.8	31.5	206.7
14-08-2023	4.1	228.1	96.75	6.0	999.6	30.3	194.1
15-08-2023	2.9	224.2	97.95	0.0	999.7	30.9	275.8
16-08-2023	3.5	217.6	96.53	16.0	999.7	30.8	258.8
17-08-2023	4.2	237.5	93.43	11.5	998.6	31.5	269.8
18-08-2023	3.8	225.5	92.1	0.0	997.3	31.7	237.5
19-08-2023	4.9	230.6	90.04	0.0	996.8	31.7	246.8
20-08-2023	3.4	210.6	91.42	0.0	997.3	31.6	260.5
21-08-2023	4.1	182.0	95.72	0.0	997.3	31.9	298.4
22-08-2023	2.6	227.8	95.29	0.0	997.3	31.9	232.0
23-08-2023	4.4	222.9	95.34	0.5	997.6	31.3	271.0
24-08-2023	4.1	229.3	97.44	6.5	997.5	30.7	265.2
25-08-2023	2.5	217.4	96.95	0.0	997.5	31.8	265.0
26-08-2023	3.0	217.3	97.8	9.0	998.7	31.2	239.7
27-08-2023	2.4	228.6	99.2	12.5	999.5	30.0	200.8
28-08-2023	4.9	219.7	94.43	0.0	998.0	32.1	288.5
29-08-2023	4.1	227.6	95.75	0.0	997.7	31.3	210.3
30-08-2023	3.8	202.3	92.48	0.0	997.8	32.0	277.4
31-08-2023	5.0	218.9	94.88	0.0	997.8	31.3	268.7

Remarks: -

SEPTEMBER - 2023

Marine Infrastructure Developer Private Ltd							
Report Type: Average Report							
From: 01-09-2023		0:00:00 Hrs		To: 30-09-2023		23:59:59 Hrs	
Created by Adani.			Created at 01-10-2023 9:40:35 AM				
Date	AQMS-Wind_Speed (km/h)	AQMS-Wind_Direction (Degree)	AQMS-RH (%)	AQMS Total Rain Fall (mm)	AQMS-Atm. Pressure (mBar)	AQMS-Atm. Temperature (Degree)	AQMS-Solar_Radiation (w/m2)
<i>Avg</i>	5.0	231	94	90.0	1003.1	31.2	240.4
<i>Min</i>	2.8	210	85.9	-	996.1	29.6	92.9
<i>Max</i>	7.6	251	97.8	-	1008.4	33.1	308.1
01-09-2023	4.3	210.4	94.9	14.2	998.0	31.7	307.7
02-09-2023	4.5	232.4	95.5	0.2	997.2	31.7	308.1
03-09-2023	3.8	227.8	96.7	0.0	996.2	30.3	254.3
04-09-2023	4.1	250.8	96.1	0.0	994.2	30.3	132.4
05-09-2023	5.6	249.7	95.5	0.0	994.4	29.6	92.9
06-09-2023	5.8	232.9	92.0	0.0	994.8	31.5	206.2
07-09-2023	7.6	234.2	92.3	5.5	995.8	31.3	269.0
08-09-2023	4.9	231.4	93.6	0.0	996.9	31.1	263.3
09-09-2023	5.6	227.7	92.2	0.0	996.0	32.0	289.4
10-09-2023	5.0	241.1	92.0	0.0	995.5	31.7	166.5
11-09-2023	4.2	223.1	91.7	0.0	995.6	32.0	207.3
12-09-2023	4.8	234.4	85.9	0.0	995.9	32.7	245.9
13-09-2023	6.3	219.4	91.3	0.0	996.0	31.8	243.8
14-09-2023	5.1	229.6	91.7	0.0	996.0	31.6	231.7
15-09-2023	6.4	211.0	92.9	38.0	996.6	31.3	240.2
16-09-2023	3.2	222.5	96.6	0.0	997.3	29.8	231.5
17-09-2023	6.7	231.2	97.8	16.0	996.5	30.2	235.9
18-09-2023	6.2	238.4	93.7	3.0	996.1	31.0	262.2
19-09-2023	4.6	234.6	95.5	0.0	997.4	30.8	260.1
20-09-2023	4.5	227.4	95.2	0.0	997.6	31.9	256.2
21-09-2023	4.6	241.1	96.4	0.0	998.4	31.0	176.3
22-09-2023	3.9	226.1	97.0	0.0	998.3	31.8	240.5
23-09-2023	2.8	241.7	96.9	0.0	998.3	31.4	257.8
24-09-2023	5.0	232.1	94.9	0.0	997.5	30.9	266.1
25-09-2023	5.4	224.7	96.0	13.1	996.6	31.0	260.8
26-09-2023	5.8	237.2	96.4	0.0	996.5	30.9	271.5
27-09-2023	4.5	222.8	96.4	0.0	996.4	30.8	263.9
28-09-2023	5.5	238.6	93.7	0.0	995.9	31.6	253.7
29-09-2023	6.5	236.8	91.6	0.0	996.2	31.0	256.2
30-09-2023	3.9	235.8	95.2	0.0	996.9	31.1	253.3
Remarks:	-						

OCTOBER - 2023

MARINE INFRASTRUCTURE DEVELOPER PVT LTD							
AVERAGE REPORT							
FACTORY: 21.10.2023 to 31.10.2023							
Date	Atms. Temp. (°C)	Relative Humidity (%)	Rainfall (mm)	Wind Speed (km/hr)	Wind Direction (Degrees)	Atms. Pressure (mmHg)	Solar Radiation (kwh/m ²)
Aug	28.8	74.7	4.3	25.8	147.8	1010.7	245.6
Min	28.3	69.6	0.1	14.8	18.4	1009.1	60.1
Max	29.7	84.8	16.9	43.8	211.8	1012.0	291.1
2023-10-01	28.6	75.5	0.3	54	211.8	1009.1	167.5
2023-10-02	29.0	75.3	0.323	43.1	204.4	1009.3	187.3
2023-10-03	28.8	77.8	0.3	48.8	201	1009.7	208.7
2023-10-04	29.0	76.8	0.1	48	202.8	1009.7	201.3
2023-10-05	29.2	76.4	0.3	37.1	203.4	1008.8	207.0
2023-10-06	29.6	74.5	1.3	38.1	197.8	1008.3	179
2023-10-07	29.7	71.1	0.6	27.4	190.4	1008.1	178.1
2023-10-08	29.2	76.5	0.5	31	193.5	1009.8	181
2023-10-09	29.3	76.4	1	28.4	198.7	1011.3	271.7
2023-10-10	29.4	74.8	0.1	25.8	197.1	1010.8	208.5
2023-10-11	29.5	74	0.081	30.2	202.3	1010.4	274.9
2023-10-12	29.8	75.5	0.7	28.4	204	1011.1	257
2023-10-13	29.9	75.1	?	30.5	185.2	1011.9	268
2023-10-14	29.5	75.8	2.212	22.7	198	1011.3	155.7
2023-10-15	29.8	74.5	0.7	25.6	192.8	1010.6	241.8
2023-10-16	29.9	78	26.888	20.5	221.3	1011.4	262.2
2023-10-17	29.1	75.8	0.4	32.4	41.2	1011.1	217.4
2023-10-18	29.5	71.4	1.192	21.5	57.9	1011.7	255.7
2023-10-19	29.7	72.8	0.738	25.3	41.6	1011.6	258.4
2023-10-20	29.8	71.1	0.8	18	113.2	1011.8	253.8
2023-10-21	29.9	73.4	0.358	33.1	126.2	1011.7	265.0
2023-10-22	29.6	71.4	0.551	17.3	113.2	1011.8	240.2
2023-10-23	29.5	72.7	3.1	22.8	124.2	1011.9	262.4
2023-10-24	29.9	72.5	2.7	33.4	125.2	1011.8	271.1
2023-10-25	29.9	73.1	12.484	34.8	125.2	1012	286.7
2023-10-26	29.1	69.0	0.7	22.8	107.8	1011.3	243.3
2023-10-27	29.4	69.4	1.6	24	61.2	1011.8	258.6
2023-10-28	29.0	71.7	0.6	38.2	88.8	1011.8	260.2
2023-10-29	29.6	73.4	5.886	18	62	1011.6	236.4
2023-10-30	29.1	81.8	12.671	22	10.4	1011.8	62.1
2023-10-31	29.7	69.2	4.173	20.5	24.5	1011	247.6

NOVEMBER - 2023

MARINE INFRASTRUCTURE DEVELOPER LTD							
AVERAGE REPORT							
FROM 01.11.2023 TO 30.11.2023							
Date	Abs. Temp (°C)	Relative Humidity (%)	Rainfall (mm)	Wind Speed (km/hr)	Wind Direction (degrees)	Abs. Pressure (mb)	Solar Radiation (kJ/m ²)
Avg	27.3	80.4	14.4	21.0	94.7	1010.8	204.3
Min	25.8	74	0	11.9	4.2	1009	95.2
Max	28.7	88.8	71.2	76	203.2	1012.4	254.3
2023-11-01	28.7	78.4	22.5	21.4	37.9	1010.9	242.8
2023-11-02	28.1	79.5	0	20.9	49	1010.1	199.7
2023-11-03	27.6	81.8	18.2	18.7	83.6	1009	142.4
2023-11-04	26.9	82.9	36.1	16.6	203.2	1009.3	95.2
2023-11-05	27.9	78.7	0	21.8	199.9	1010.5	219.1
2023-11-06	28.7	74.9	0	15.1	84.2	1011.8	204.2
2023-11-07	28.1	77.7	7.8	23	34.6	1011.6	192.0
2023-11-08	27.8	79.9	2.2	15.5	98.1	1011	181.0
2023-11-09	27.5	79.6	23.9	16.9	51.6	1011.4	147.2
2023-11-10	27.6	81	0	20.9	40	1012.3	217.9
2023-11-11	27.4	82.7	0	27.4	21.8	1012.4	242.2
2023-11-12	27.0	74	0	26.0	10.8	1012.4	199.4
2023-11-13	27.1	76.9	0	27	18.2	1011.7	210.1
2023-11-14	26.4	81.1	49.5	36	4.9	1011	136.6
2023 11 15	26.2	77.6	58.5	27.4	4.2	1010.2	224.6
2023 11 15	27.5	78.6	0	21.6	23.5	1011.3	238.9
2023 11 17	28.3	78.8	0	22.3	33	1011.3	243.3
2023 11 18	27.5	83.2	0	22.3	24.5	1010.8	185.1
2023-11-19	28.1	88.8	0	22.7	96.4	1011.1	110.8
2023-11-20	27.4	80.3	8.8	21.2	22.1	1011	207.5
2023-11-21	28.1	80.7	71.2	19.8	75.8	1010	223.3
2023-11-22	27.5	82.0	25.7	11.9	144.2	1009.9	111.4
2023-11-23	27.1	80.0	4.4	22.7	144.9	1009.9	224.7
2023-11-24	27.9	79.4	7.1	19.8	82.0	1009.9	290.7
2023-11-25	27.4	81.9	3.9	22.7	39.7	1010.9	210.7
2023-11-26	27.5	79.9	1.5	25.2	96.3	1011.5	238.4
2023 11 27	27.4	82.6	12.2	25.2	37.4	1010.3	242.3
2023 11 28	27.7	80.4	9.2	23.4	98.7	1009.6	237.7
2023 11 29	27.2	81.3	65.3	22.3	33.4	1009.7	133.3
2023 11 30	28.6	85.0	3.5	20.5	70.6	1010.7	254.3

DECEMBER - 2023

MARINE INFRASTRUCTURE DEVELOPER LTD							
AVERAGE REPORT							
FROM 01.12.2023 TO 31.12.2023							
Date	Air Temp (°C)	Relative Humidity (%)	Rainfall (mm)	Wind Speed (km/hr)	Wind Direction (degrees)	Air Pressure (mbars)	Solar Radiation (w/m ²)
Avg	26.9	79.6	8.2	27.5	72.8	1011.2	200.0
Min	25.1	73.8	0	13.3	14.8	1006.9	25.1
Max	28.9	88.9	40.700	34.9	107.5	1018.2	300
01-12-2023	26.1	81	1.3	27	34.8	1009.8	81
02-12-2023	27.1	77.9	0.138	16.6	107.1	1008	118
03-12-2023	28.1	74.7	0.288	13.3	125.4	1007.6	101.8
04-12-2023	28.9	77.5	1.3	18.7	109.2	1006.9	134.8
05-12-2023	28.9	78.8	2.4	22	208.8	1007	259
06-12-2023	28.8	79.2	2.4	21.8	107.5	1008.8	227.1
07-12-2023	28.6	76.6	0	19.1	188	1009.7	296.3
08-12-2023	28.7	75.9	0.379	15.5	121.1	1010.4	286.7
09-12-2023	28.4	78.5	18.372	22	45.4	1011.2	248
10-12-2023	27.7	80.3	31.588	28.8	38.2	1010.6	291.8
11-12-2023	27.9	79.6	41.881	18.8	88.6	1011.1	301.1
12-12-2023	27.1	76.7	0	28.7	32.2	1010.6	123.2
13-12-2023	26.4	76.9	0	41.1	44.1	1011.1	42.9
14-12-2023	26.5	77.1	2.896	32.2	32.2	1012	217.1
15-12-2023	26.9	80.2	5.6	21.6	11.4	1012	278.2
16-12-2023	27.3	86.5	11.021	11.2	12.9	1011.1	171
17-12-2023	28.7	87.5	46.725	22.1	25	1009.5	22
18-12-2023	27.1	80.6	27.722	14.2	4.7	1011.6	25.2
19-12-2023	28.5	84	15.07	22	21.7	1012.7	131.5
20-12-2023	27.4	82.4	0	42.4	14.6	1012.8	212.8
21-12-2023	26	85.4	17.122	32.6	32.5	1012.7	215.8
22-12-2023	26.4	80.1	0	25.6	25.7	1012.7	224
23-12-2023	26.7	79.4	0	24.6	7.4	1012.6	240.6
24-12-2023	28.7	79.5	2.896	25.4	25.5	1012.2	225.7
25-12-2023	26.1	80.3	0	11.2	14.6	1012.6	212
26-12-2023	28.1	77.1	0	22.7	22.2	1012.7	221.4
27-12-2023	26.8	82.8	0	44.6	22.6	1012.1	221
28-12-2023	26.9	80.2	12.153	24.5	32.2	1012.6	232.7
29-12-2023	26.8	77.9	0	42.8	44.6	1012.8	227.4
30-12-2023	26.5	77	0	22.7	32.7	1012.6	231
31-12-2023	28.4	77.4	0	22.5	25	1012.5	248.5

i. AMBIENT AIR QUALITY

Ambient air quality monitoring is required to determine the existing quality of air, evaluation of the effectiveness of control system and to identify areas in need of restoration and their prioritization. In order to generate background data, air quality monitoring is conducted to assess existing level of contamination and to assess possible effects of air contamination occurring in future.

Frequency of Monitoring

The frequency of monitoring that has been followed for sampling of ambient air quality is that one sample per weekly twice at three locations.

DETAILS OF AMBIENT AIR QUALITY MONITORING LOCATIONS

Station code	Location	Geographical location	Environmental setting
AAQ1	Port operating building	13.270444° N 80.334657° E	Industrial
AAQ2	RMU Building	13.273412° N 80.337600° E	Industrial
AAQ3	In Terminal Gate	13.273715° N 80.333810° E	Village

Fig - 2. AMBIENT AIR SAMPLING STATIONS LOCATION MAP



Fig.3.AMBIENT AIR SAMPLINGS STATIONS WITH RESPECT TO WIND



TECHNIQUES USED FOR AMBIENT AIR QUALITY MONITORING

S.No	Parameter	Technique	Unit	Minimum Detectable Limit
1	PM ₁₀	Respirable Dust Sampler (Gravimetric method)	µg/m ³	1.0
2	PM _{2.5}	Fine particle Sampler (Gravimetric method)	µg/m ³	5.0
3	Sulphur Dioxide	Modified West and Gaeke method	µg/m ³	4.0
4	Nitrogen Oxide	Jacob & Hochheiser method	µg/m ³	6.0
5	Lead	Atomic Absorption Spectrometry	µg/m ³	0.5
6	Carbon Monoxide	Draggers Tube	mg/m ³	0.1
7	Ozone	UV Photometric	µg/m ³	2.0
8	Ammonia	Indophenol blue method	µg/m ³	2.0
9	Benzene	Gas Chromatography	µg/m ³	1.0
10	Benzene (α) pyrene	Gas Chromatography	ng/m ³	0.1
11	Arsenic	Atomic Absorption Spectrometry	ng/m ³	1.0
12	Nickel	Atomic Absorption Spectrometry	ng/m ³	5.0

Results and Discussion

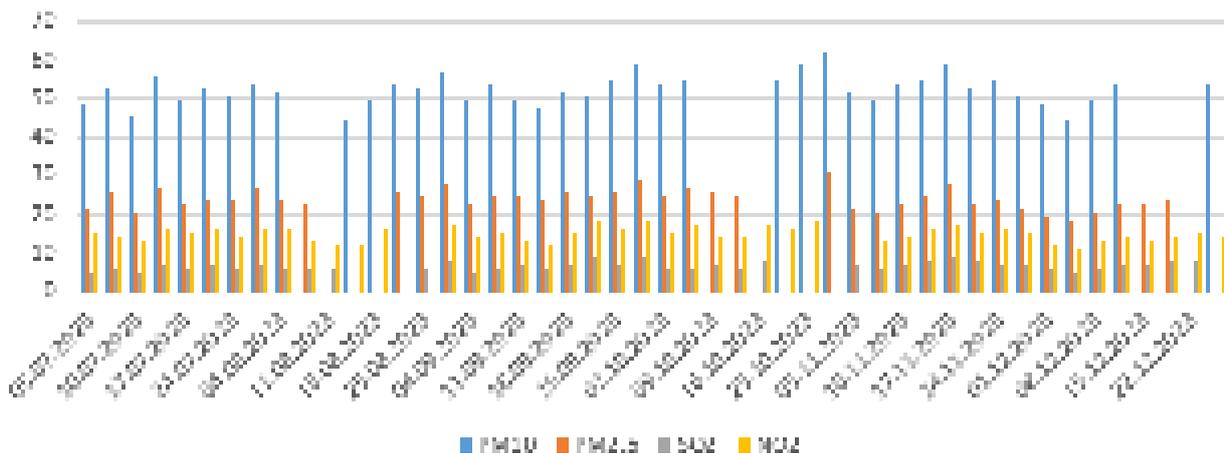
The results of the ambient air quality for the study period are submitted. The minimum, maximum 98th percentile and average values have been computed from the observed raw data for all the AAQ monitoring stations. The summary of these results for all the locations is presented in the Table and the detailed analytical results are shown in Annexure - 2. These are compared with the standards prescribed by Central Pollution Control Board (CPCB) for "Industrial, Rural, Residential and other areas"

ANNEXURE - 2 RESULTS OF AMBIENT AIR QUALITY MONITORING DATA

PORT OPERATING BUILDING - (AAQ1)

Parameters		Particular matter PM10	Particular matter PM2.5	Sulphur dioxide as SO2	Nitrogen dioxide as NO2	Lead as Pb	Carbon monoxide as CO	Ozone as O3	Ammonia as NH3	Arsenic as As	Nickel as Ni	Benzene as C6H6	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												
1	03.07.2023	48.5	22.1	5.5	15.6	<0.1	<1	<10	<2	<2	<2	<1	<0.1
2	07.07.2023	52.6	25.3	6.2	14.9	<0.1	<1	<10	<2	<2	<2	<1	<0.1
3	10.07.2023	45.1	20.8	5	13	<0.1	<1	<10	<2	<2	<2	<1	<0.1
4	14.07.2023	55.7	27	7.3	16.1	<0.1	<1	<10	<2	<2	<2	<1	<0.1
5	17.07.2023	49.4	22.8	6	15.7	<0.1	<1	<10	<2	<2	<2	<1	<0.1
6	21.07.2023	52.6	24	7.1	16.7	<0.1	<1	<10	<2	<2	<2	<1	<0.1
7	24.07.2023	50.3	23.4	5.8	14.6	<0.1	<1	<10	<2	<2	<2	<1	<0.1
8	28.07.2023	54.2	26.8	7.1	16.3	<0.1	<1	<10	<2	<2	<2	<1	<0.1
9	04.08.2023	51.4	24.1	6.2	16.3	<0.1	<1	<10	<2	<2	<2	<1	<0.1
10	07.08.2023	49.8	23	5.6	13.8	<0.1	<1	<10	<2	<2	<2	<1	<0.1
11	11.08.2023	47.3	22.4	5.9	12.7	<0.1	<1	<10	<2	<2	<2	<1	<0.1
12	14.08.2023	44.8	21.6	5.3	11.9	<0.1	<1	<10	<2	<2	<2	<1	<0.1
13	18.08.2023	50.2	23.7	6.7	16.3	<0.1	<1	<10	<2	<2	<2	<1	<0.1
14	21.08.2023	54.3	25.9	8	17.1	<0.1	<1	<10	<2	<2	<2	<1	<0.1
15	25.08.2023	52.8	24.3	6.4	15.9	<0.1	<1	<10	<2	<2	<2	<1	<0.1
16	28.08.2023	56.9	27.9	8.2	17.6	<0.1	<1	<10	<2	<2	<2	<1	<0.1
17	04.09.2023	49.5	22.6	5.5	14.8	<0.1	<1	<10	<2	<2	<2	<1	<0.1
18	08.09.2023	53.6	25.1	6.3	15.2	<0.1	<1	<10	<2	<2	<2	<1	<0.1
19	11.09.2023	50.1	24.3	6.7	13.4	<0.1	<1	<10	<2	<2	<2	<1	<0.1
20	15.09.2023	47.6	23.9	5.8	12.7	<0.1	<1	<10	<2	<2	<2	<1	<0.1
21	18.09.2023	52.1	25.6	7.4	15.5	<0.1	<1	<10	<2	<2	<2	<1	<0.1
22	22.09.2023	50.8	24.9	8.7	18.2	<0.1	<1	<10	<2	<2	<2	<1	<0.1
23	25.09.2023	55.3	26.1	7.3	16.7	<0.1	<1	<10	<2	<2	<2	<1	<0.1
24	29.09.2023	58.6	28.7	9	18.5	<0.1	<1	<10	<2	<2	<2	<1	<0.1
25	02.10.2023	53.8	24.3	6.1	15.6	<0.1	<1	<10	<2	<2	<2	<1	<0.1
26	06.10.2023	55.4	27.2	6.3	17.1	<0.1	<1	<10	<2	<2	<2	<1	<0.1
27	09.10.2023	52.8	25.4	7.5	14.8	<0.1	<1	<10	<2	<2	<2	<1	<0.1
28	13.10.2023	50.4	24.7	6.4	13.9	<0.1	<1	<10	<2	<2	<2	<1	<0.1
29	16.10.2023	56.8	27.5	8.5	17.6	<0.1	<1	<10	<2	<2	<2	<1	<0.1
30	20.10.2023	54.9	26.3	9.6	16.4	<0.1	<1	<10	<2	<2	<2	<1	<0.1
31	23.10.2023	58.6	27.8	8.1	18.2	<0.1	<1	<10	<2	<2	<2	<1	<0.1
32	27.10.2023	62.1	30.6	10.2	19.3	<0.1	<1	<10	<2	<2	<2	<1	<0.1
33	03.11.2023	51.3	21.2	6.7	14.5	<0.1	<1	<10	<2	<2	<2	<1	<0.1
34	06.11.2023	49.6	20.4	5.6	13.6	<0.1	<1	<10	<2	<2	<2	<1	<0.1
35	10.11.2023	53.9	22.9	7.1	14.9	<0.1	<1	<10	<2	<2	<2	<1	<0.1
36	13.11.2023	55.2	24.6	7.8	16.1	<0.1	<1	<10	<2	<2	<2	<1	<0.1
37	17.11.2023	58.6	28.4	9.1	17.2	<0.1	<1	<10	<2	<2	<2	<1	<0.1
38	20.11.2023	52.4	22.5	8.6	15.3	<0.1	<1	<10	<2	<2	<2	<1	<0.1
39	24.11.2023	54.7	24.1	7.5	16.4	<0.1	<1	<10	<2	<2	<2	<1	<0.1
40	27.11.2023	50.4	21.6	7.3	15.8	<0.1	<1	<10	<2	<2	<2	<1	<0.1
41	01.12.2023	48.3	19.6	5.9	12.4	<0.1	<1	<10	<2	<2	<2	<1	<0.1
42	04.12.2023	44.8	18.1	5.2	11.3	<0.1	<1	<10	<2	<2	<2	<1	<0.1
43	08.12.2023	49.5	20.4	6.5	13.1	<0.1	<1	<10	<2	<2	<2	<1	<0.1
44	11.12.2023	53.8	23.1	7.4	14.5	<0.1	<1	<10	<2	<2	<2	<1	<0.1
45	15.12.2023	51.5	22.3	6.9	13.7	<0.1	<1	<10	<2	<2	<2	<1	<0.1
46	18.12.2023	54.2	24.1	7.8	14.6	<0.1	<1	<10	<2	<2	<2	<1	<0.1
47	22.12.2023	56.1	25.7	8.1	15.6	<0.1	<1	<10	<2	<2	<2	<1	<0.1
48	25.12.2023	53.4	23.2	7.7	14.3	<0.1	<1	<10	<2	<2	<2	<1	<0.1

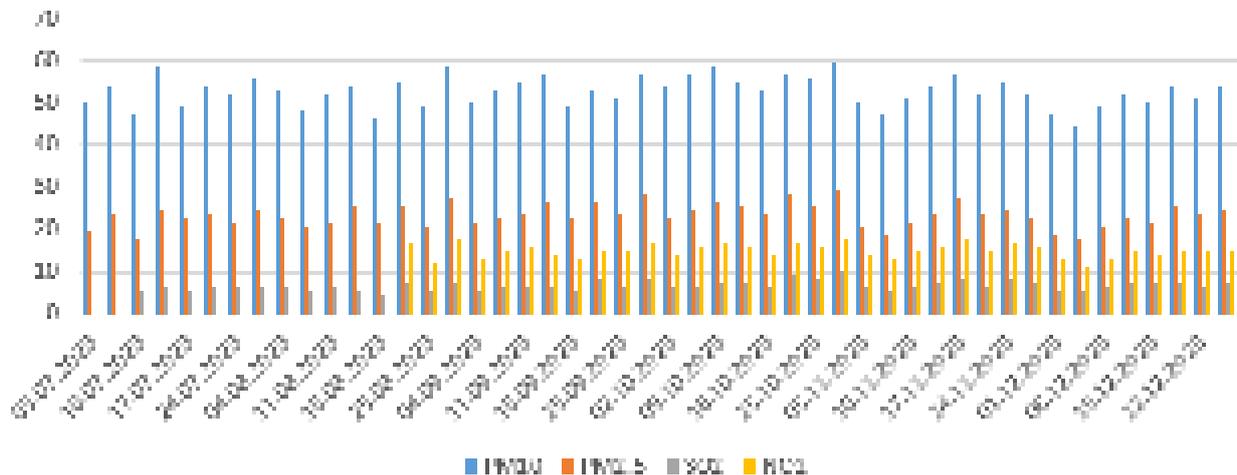
PORT OPERATING BUILDING (AAQ 1)



RMU BUILDING - (AAQ2)

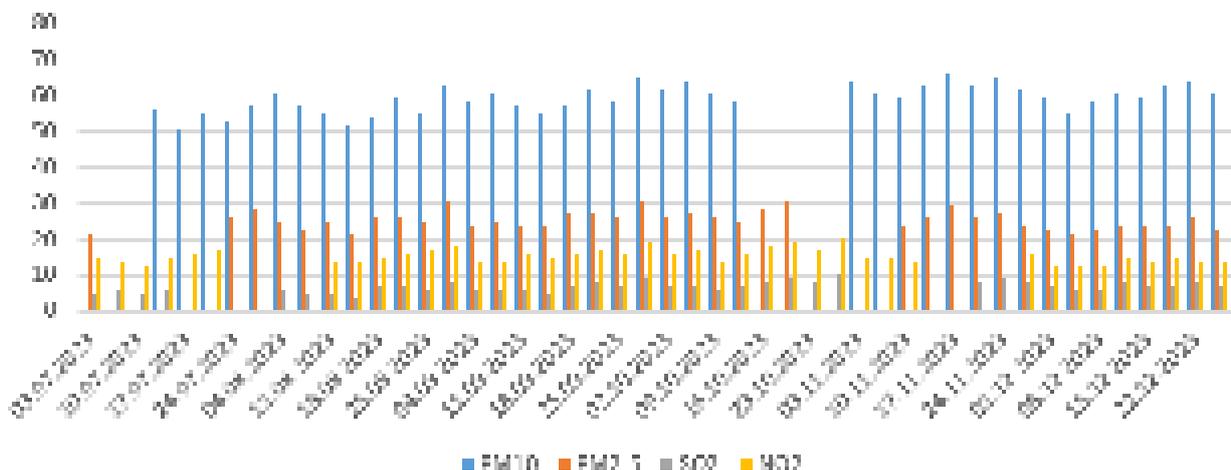
Parameters		Particular matter PM10	Particular matter PM2.5	Sulphur dioxide as SO2	Nitrogen dioxide as NO2	Lead as Pb	Carbon monoxide as CO	Ozone as O3	Ammonia as NH3	Arsenic as As	Nickel as Ni	Benzene as C6H6	Benzo (a) pyrene as BaP
Unit		µg/m3	µg/m3	µg/m3	µg/m3	µg/m3	mg/m3	µg/m3	µg/m3	ng/m3	ng/m3	µg/m3	ng/m3
National AAQM Standard		100	60	80	80	1	4	180	400	6	20	5	1
S.No.	Sampling Date												
1	03.07.2023	50.2	20.1	5.7	13.4	<0.1	<1	<10	<2	<2	<2	<1	<0.1
2	07.07.2023	53.9	23.4	6.5	14.3	<0.1	<1	<10	<2	<2	<2	<1	<0.1
3	10.07.2023	47.5	18.2	5.4	13	<0.1	<1	<10	<2	<2	<2	<1	<0.1
4	14.07.2023	58.3	24.6	6.9	14.8	<0.1	<1	<10	<2	<2	<2	<1	<0.1
5	17.07.2023	49.2	22.9	5.4	14.8	<0.1	<1	<10	<2	<2	<2	<1	<0.1
6	21.07.2023	54.3	23.8	6.5	15.9	<0.1	<1	<10	<2	<2	<2	<1	<0.1
7	24.07.2023	51.7	21.4	6.2	13.7	<0.1	<1	<10	<2	<2	<2	<1	<0.1
8	28.07.2023	56.1	24.5	6.7	16.4	<0.1	<1	<10	<2	<2	<2	<1	<0.1
9	04.08.2023	52.6	22.9	6.4	14.2	<0.1	<1	<10	<2	<2	<2	<1	<0.1
10	07.08.2023	48.6	20.3	5.9	13.1	<0.1	<1	<10	<2	<2	<2	<1	<0.1
11	11.08.2023	51.6	21.5	6.1	13.9	<0.1	<1	<10	<2	<2	<2	<1	<0.1
12	14.08.2023	54.3	25.2	5.8	15.1	<0.1	<1	<10	<2	<2	<2	<1	<0.1
13	18.08.2023	46.5	21.4	5	13.6	<0.1	<1	<10	<2	<2	<2	<1	<0.1
14	21.08.2023	55.2	25.6	7.3	16.7	<0.1	<1	<10	<2	<2	<2	<1	<0.1
15	25.08.2023	49.3	20.6	5.8	12.5	<0.1	<1	<10	<2	<2	<2	<1	<0.1
16	28.08.2023	59.1	27.8	7.7	17.8	<0.1	<1	<10	<2	<2	<2	<1	<0.1
17	04.09.2023	50.3	21.5	5.8	13	<0.1	<1	<10	<2	<2	<2	<1	<0.1
18	08.09.2023	52.7	22.4	6.5	14.6	<0.1	<1	<10	<2	<2	<2	<1	<0.1
19	11.09.2023	55.2	23.5	6.8	15.7	<0.1	<1	<10	<2	<2	<2	<1	<0.1
20	15.09.2023	56.7	26.4	6.4	14.3	<0.1	<1	<10	<2	<2	<2	<1	<0.1
21	18.09.2023	49.3	22.7	5.9	12.8	<0.1	<1	<10	<2	<2	<2	<1	<0.1
22	22.09.2023	53.1	26.8	8.2	15.4	<0.1	<1	<10	<2	<2	<2	<1	<0.1
23	25.09.2023	51.4	23.5	6.7	14.8	<0.1	<1	<10	<2	<2	<2	<1	<0.1
24	29.09.2023	56.3	28.1	8.5	16.9	<0.1	<1	<10	<2	<2	<2	<1	<0.1
25	02.10.2023	54.2	22.8	6.4	14.3	<0.1	<1	<10	<2	<2	<2	<1	<0.1
26	06.10.2023	56.3	24.5	6.9	15.8	<0.1	<1	<10	<2	<2	<2	<1	<0.1
27	09.10.2023	58.4	26.1	7.6	17.2	<0.1	<1	<10	<2	<2	<2	<1	<0.1
28	13.10.2023	54.9	25.3	7.1	15.7	<0.1	<1	<10	<2	<2	<2	<1	<0.1
29	16.10.2023	52.9	23.8	6.5	14.3	<0.1	<1	<10	<2	<2	<2	<1	<0.1
30	20.10.2023	56.6	27.9	9.1	16.8	<0.1	<1	<10	<2	<2	<2	<1	<0.1
31	23.10.2023	55.8	25.7	8.2	15.9	<0.1	<1	<10	<2	<2	<2	<1	<0.1
32	27.10.2023	59.7	29.6	9.9	18.2	<0.1	<1	<10	<2	<2	<2	<1	<0.1
33	03.11.2023	50.4	20.6	6.1	13.9	<0.1	<1	<10	<2	<2	<2	<1	<0.1
34	06.11.2023	47.6	19.2	5.4	13.3	<0.1	<1	<10	<2	<2	<2	<1	<0.1
35	10.11.2023	51.3	21.5	6.7	14.8	<0.1	<1	<10	<2	<2	<2	<1	<0.1
36	13.11.2023	53.9	23.2	7.5	16.1	<0.1	<1	<10	<2	<2	<2	<1	<0.1
37	17.11.2023	56.7	26.9	8.5	17.6	<0.1	<1	<10	<2	<2	<2	<1	<0.1
38	20.11.2023	52.1	23.4	6.7	15.3	<0.1	<1	<10	<2	<2	<2	<1	<0.1
39	24.11.2023	54.6	24.3	8.1	16.9	<0.1	<1	<10	<2	<2	<2	<1	<0.1
40	27.11.2023	51.8	22.9	7.3	16.2	<0.1	<1	<10	<2	<2	<2	<1	<0.1
41	01.12.2023	47.3	19.1	5.6	12.7	<0.1	<1	<10	<2	<2	<2	<1	<0.1
42	04.12.2023	44.7	17.6	5.1	11.5	<0.1	<1	<10	<2	<2	<2	<1	<0.1
43	08.12.2023	48.9	20.8	6.2	13.4	<0.1	<1	<10	<2	<2	<2	<1	<0.1
44	11.12.2023	52.4	22.9	7.9	15.3	<0.1	<1	<10	<2	<2	<2	<1	<0.1
45	15.12.2023	50.2	21.7	7.6	14.2	<0.1	<1	<10	<2	<2	<2	<1	<0.1
46	18.12.2023	53.6	25.1	7.9	14.7	<0.1	<1	<10	<2	<2	<2	<1	<0.1
47	22.12.2023	51.5	23.1	6.8	15.4	<0.1	<1	<10	<2	<2	<2	<1	<0.1
48	25.12.2023	54.2	24.6	7.3	14.7	<0.1	<1	<10	<2	<2	<2	<1	<0.1

RMU BUILDING (AAQ 2)



IN TERMINAL GATE - (AAQ3)													
Parameters		Particular matter PM10	Particular matter PM2.5	Sulphur dioxide as SO2	Nitrogen dioxide as NO2	Lead as Pb	Carbon monoxide as CO	Ozone as O3	Ammonia as NH3	Arsenic as As	Nickel as Ni	Benzene as C6H6	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												
1	03.07.2023	57.8	21.6	5	14.9	<0.1	<1	<10	<2	<2	<2	<1	<0.1
2	07.07.2023	59.4	23.7	5.6	13.5	<0.1	<1	<10	<2	<2	<2	<1	<0.1
3	10.07.2023	47.2	20.4	4.5	12.9	<0.1	<1	<10	<2	<2	<2	<1	<0.1
4	14.07.2023	56.9	28.7	6.1	15	<0.1	<1	<10	<2	<2	<2	<1	<0.1
5	17.07.2023	50.7	24.9	5.8	16.1	<0.1	<1	<10	<2	<2	<2	<1	<0.1
6	21.07.2023	55.4	27	6.9	17.6	<0.1	<1	<10	<2	<2	<2	<1	<0.1
7	24.07.2023	52.8	26.1	5.4	15.7	<0.1	<1	<10	<2	<2	<2	<1	<0.1
8	28.07.2023	57.2	28.6	6.7	17.9	<0.1	<1	<10	<2	<2	<2	<1	<0.1
9	04.08.2023	61.2	24.8	6.3	15.8	<0.1	<1	<10	<2	<2	<2	<1	<0.1
10	07.08.2023	57.6	22.3	5.2	12.4	<0.1	<1	<10	<2	<2	<2	<1	<0.1
11	11.08.2023	55.3	25.1	5.2	14	<0.1	<1	<10	<2	<2	<2	<1	<0.1
12	14.08.2023	51.6	21.4	4	13.6	<0.1	<1	<10	<2	<2	<2	<1	<0.1
13	18.08.2023	53.7	25.8	6.6	15.3	<0.1	<1	<10	<2	<2	<2	<1	<0.1
14	21.08.2023	59.4	26	7.2	16.1	<0.1	<1	<10	<2	<2	<2	<1	<0.1
15	25.08.2023	55.6	24.7	6.3	17.2	<0.1	<1	<10	<2	<2	<2	<1	<0.1
16	28.08.2023	63.4	30.1	8.3	18.4	<0.1	<1	<10	<2	<2	<2	<1	<0.1
17	04.09.2023	58.6	23.4	5.8	14.3	<0.1	<1	<10	<2	<2	<2	<1	<0.1
18	08.09.2023	60.4	25.2	6.4	13.5	<0.1	<1	<10	<2	<2	<2	<1	<0.1
19	11.09.2023	57.2	24	6.1	15.8	<0.1	<1	<10	<2	<2	<2	<1	<0.1
20	15.09.2023	55.1	23.8	5.4	14.9	<0.1	<1	<10	<2	<2	<2	<1	<0.1
21	18.09.2023	57.6	26.9	7.2	16.4	<0.1	<1	<10	<2	<2	<2	<1	<0.1
22	22.09.2023	62.4	27.5	8.4	17.5	<0.1	<1	<10	<2	<2	<2	<1	<0.1
23	25.09.2023	58.3	26.4	6.9	15.8	<0.1	<1	<10	<2	<2	<2	<1	<0.1
24	29.09.2023	65.7	31.2	9.1	19.2	<0.1	<1	<10	<2	<2	<2	<1	<0.1
25	02.10.2023	62.4	26.3	7.1	15.6	<0.1	<1	<10	<2	<2	<2	<1	<0.1
26	06.10.2023	64.1	27.5	7.6	16.8	<0.1	<1	<10	<2	<2	<2	<1	<0.1
27	09.10.2023	60.8	25.8	5.9	14.3	<0.1	<1	<10	<2	<2	<2	<1	<0.1
28	13.10.2023	58.9	24.6	6.7	15.6	<0.1	<1	<10	<2	<2	<2	<1	<0.1
29	16.10.2023	61.4	28.4	8.1	17.8	<0.1	<1	<10	<2	<2	<2	<1	<0.1
30	20.10.2023	65.8	30.1	9.4	18.9	<0.1	<1	<10	<2	<2	<2	<1	<0.1
31	23.10.2023	63.8	28.6	7.8	17.6	<0.1	<1	<10	<2	<2	<2	<1	<0.1
32	27.10.2023	68.4	32.9	10.5	20.4	<0.1	<1	<10	<2	<2	<2	<1	<0.1
33	03.11.2023	63.8	25.6	7.8	14.9	<0.1	<1	<10	<2	<2	<2	<1	<0.1
34	06.11.2023	60.4	24.1	6.7	15.3	<0.1	<1	<10	<2	<2	<2	<1	<0.1
35	10.11.2023	59.3	23.7	5.6	13.8	<0.1	<1	<10	<2	<2	<2	<1	<0.1
36	13.11.2023	62.7	25.9	7.2	16.1	<0.1	<1	<10	<2	<2	<2	<1	<0.1
37	17.11.2023	66.3	29.6	9.6	19.2	<0.1	<1	<10	<2	<2	<2	<1	<0.1
38	20.11.2023	63.2	25.8	8.1	17.3	<0.1	<1	<10	<2	<2	<2	<1	<0.1
39	24.11.2023	65.4	27.6	9.3	18.1	<0.1	<1	<10	<2	<2	<2	<1	<0.1
40	27.11.2023	61.8	24.2	8.4	16.3	<0.1	<1	<10	<2	<2	<2	<1	<0.1
41	01.12.2023	59.4	23.1	6.7	13.1	<0.1	<1	<10	<2	<2	<2	<1	<0.1
42	04.12.2023	55.6	21.8	5.9	12.4	<0.1	<1	<10	<2	<2	<2	<1	<0.1
43	08.12.2023	58.4	22.6	6.3	12.9	<0.1	<1	<10	<2	<2	<2	<1	<0.1
44	11.12.2023	61.3	24.3	7.8	14.8	<0.1	<1	<10	<2	<2	<2	<1	<0.1
45	15.12.2023	59.7	23.6	6.8	13.5	<0.1	<1	<10	<2	<2	<2	<1	<0.1
46	18.12.2023	62.8	24.3	7.4	15.2	<0.1	<1	<10	<2	<2	<2	<1	<0.1
47	22.12.2023	64.8	26.1	8.5	14.3	<0.1	<1	<10	<2	<2	<2	<1	<0.1
48	25.12.2023	60.8	22.5	7.3	13.7	<0.1	<1	<10	<2	<2	<2	<1	<0.1

IN TERMINAL GATE - (AAQ3)



ii. AMBIENT NOISE LEVEL INTENSITY

Collection of ambient noise levels at four locations. Spot noise levels were measured with a precalibrated Noise Level Meter - SL- 4023 SD for day and night periods.

DETAILS OF NOISE MONITORING LOCATIONS

STATION CODE	LOCATIONS	Geographical Location
N1	Port operating building	13.270444° N 80.334657° E
N2	RMU Building	13.273412° N 80.337600° E
N3	In Terminal Gate	13.273715° N 80.333810° E

Fig - 4. Noise Level Sampling Locations

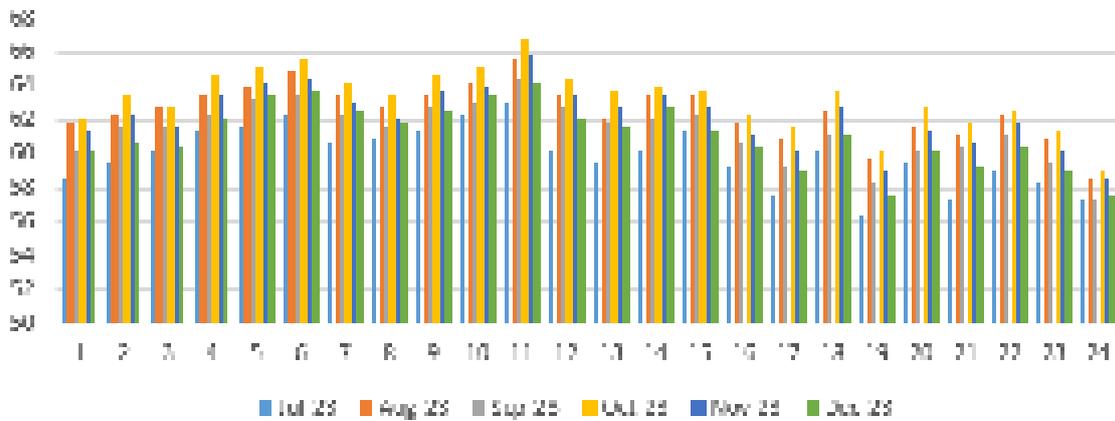


The noise levels monitored during the study period are given hereunder in form of Leq day, Leq night compared with CPCB Standards.

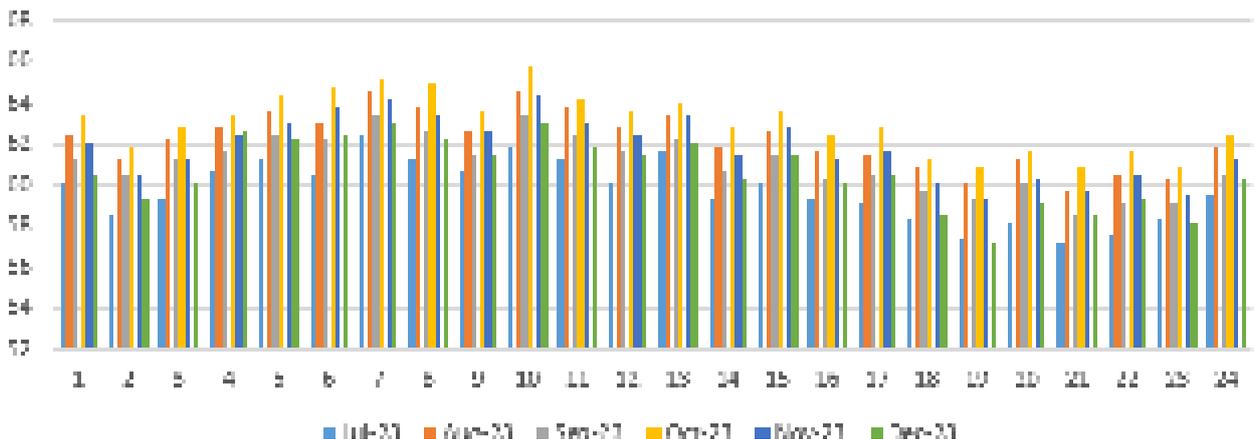
ANNEXURE - 3 RESULTS OF AMBIENT NOISE LEVEL MONITORING DATA

Location		IN TERMINAL GATE - (N1)						RMU BUILDING - (N2)					
Month & Year		July-23	Aug-23	Sept-23	Oct-23	Nov-23	Dec-23	July-23	Aug-23	Sept-23	Oct-23	Nov-23	Dec-23
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.N	Time of Sampling												
1	06.00 – 07.00 (Day)	58.6	61.8	60.3	62.1	61.3	60.1	60.1	62.4	61.2	63.4	62.1	60.4
2	07.00 – 08.00	59.4	62.3	61.7	63.5	62.4	60.7	58.6	61.2	60.4	61.9	60.5	59.3
3	08.00 – 09.00	60.1	62.8	61.5	62.9	61.6	60.5	59.4	62.3	61.2	62.8	61.3	60.1
4	09.00 – 10.00	61.3	63.5	62.4	64.8	63.5	62.1	60.7	62.9	61.7	63.5	62.4	62.7
5	10.00 – 11.00	61.6	64.1	63.2	65.1	64.2	63.4	61.3	63.7	62.5	64.3	63.1	62.3
6	11.00 – 12.00	62.3	64.9	63.5	65.7	64.5	63.8	60.5	63.1	62.3	64.8	63.9	62.5
7	12.00 – 13.00	60.7	63.5	62.4	64.2	63.1	62.5	62.4	64.5	63.4	65.1	64.2	63.1
8	13.00 – 14.00	60.9	62.7	61.6	63.4	62.2	61.9	61.2	63.9	62.7	64.9	63.5	62.2
9	14.00 – 15.00	61.4	63.6	62.7	64.6	63.7	62.6	60.7	62.7	61.5	63.7	62.6	61.5
10	15.00 – 16.00	62.3	64.2	63.1	65.2	64.1	63.4	61.8	64.5	63.4	65.7	64.3	63.1
11	16.00 – 17.00	63.1	65.7	64.5	66.9	65.8	64.2	61.2	63.9	62.5	64.2	63.1	61.8
12	17.00 – 18.00	60.2	63.5	62.7	64.5	63.4	62.1	60.1	62.8	61.6	63.6	62.5	61.4
13	18.00 – 19.00	59.4	62.1	61.9	63.7	62.9	61.6	61.6	63.5	62.3	64.1	63.4	62.1
14	19.00 – 20.00	60.2	63.4	62.2	64.1	63.5	62.7	59.3	61.8	60.7	62.9	61.5	60.3
15	20.00 – 21.00	61.4	63.5	62.3	63.8	62.9	61.3	60.2	62.6	61.5	63.7	62.9	61.5
16	21.00 – 22.00	59.3	61.9	60.6	62.3	61.2	60.5	59.4	61.7	60.3	62.5	61.3	60.1
17	22.00 – 23.00 (Night)	57.6	60.8	59.3	61.5	60.3	58.9	59.1	61.5	60.4	62.8	61.6	60.4
18	23.00 – 00.00	60.1	62.6	61.2	63.8	62.7	61.2	58.3	60.8	59.7	61.2	60.1	58.6
19	00.00 – 01.00	56.5	59.7	58.4	60.3	59.1	57.6	57.4	60.1	59.3	60.9	59.4	57.2
20	01.00 – 02.00	59.4	61.5	60.3	62.7	61.4	60.1	58.2	61.3	60.1	61.6	60.3	59.1
21	02.00 – 03.00	57.3	61.2	60.4	61.9	60.6	59.3	57.1	59.7	58.6	60.8	59.7	58.6
22	03.00 – 04.00	59.1	62.4	61.2	62.6	61.8	60.5	57.6	60.4	59.2	61.7	60.5	59.4
23	04.00 – 05.00	58.2	60.8	59.6	61.3	60.2	59.1	58.3	60.3	59.1	60.9	59.6	58.1
24	05.00 – 06.00	57.4	58.6	57.3	59.1	58.6	57.6	59.5	61.8	60.4	62.4	61.2	60.3

IN TERMINAL GATE (N1)

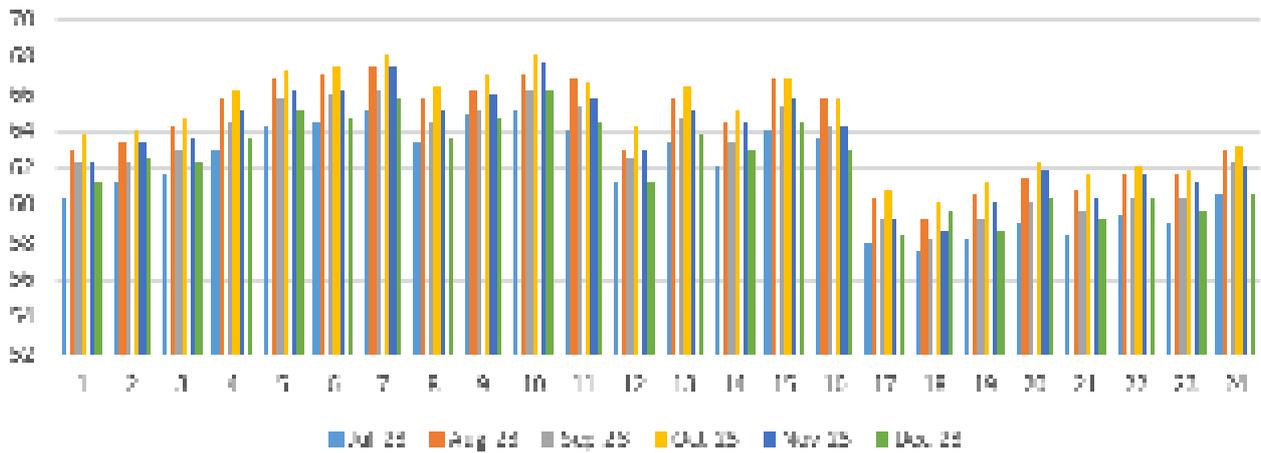


RMU BUILDING - (N2)



Location		PORT OPERATING BUILDING – (N3)					
Month & Year		July-23	Aug-23	Sept- 23	oct- 23	Nov- 23	Dec- 23
Parameter & Unit		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)	60.4	63.1	62.3	63.9	62.4	61.2
2	07.00 –08.00	61.3	63.5	62.4	64.1	63.5	62.5
3	08.00 – 09.00	61.8	64.2	63.1	64.8	63.7	62.4
4	09.00 – 10.00	63.1	65.8	64.5	66.2	65.1	63.7
5	10.00 – 11.00	64.3	66.9	65.7	67.4	66.2	65.1
6	11.00 – 12.00	64.5	67.2	66.1	67.6	66.3	64.8
7	12.00 – 13.00	65.1	67.5	66.3	68.1	67.5	65.9
8	13.00 – 14.00	63.4	65.9	64.5	66.4	65.2	63.6
9	14.00 – 15.00	64.9	66.3	65.1	67.2	66.1	64.7
10	15.00 – 16.00	65.2	67.2	66.3	68.1	67.8	66.3
11	16.00 – 17.00	64.1	66.8	65.4	66.7	65.9	64.5
12	17.00 – 18.00	61.3	63.1	62.5	64.2	63.1	61.2
13	18.00 – 19.00	63.4	65.9	64.8	66.4	65.2	63.8
14	19.00 –20.00	62.2	64.5	63.5	65.1	64.5	62.9
15	20.00 – 21.00	64.1	66.9	65.4	66.9	65.8	64.6
16	21.00 – 22.00	63.7	65.7	64.2	65.7	64.3	63.1
17	22.00 – 23.00 (Night)	58.1	60.5	59.3	60.9	59.4	58.4
18	23.00 – 00.00	57.6	59.4	58.2	60.1	58.7	59.8
19	00.00 – 01.00	58.3	60.7	59.4	61.3	60.2	58.6
20	01.00 – 02.00	59.1	61.6	60.2	62.4	61.9	60.5
21	02.00 – 03.00	58.4	60.9	59.7	61.8	60.5	59.3
22	03.00 – 04.00	59.6	61.7	60.4	62.1	61.7	60.4
23	04.00 – 05.00	59.2	61.8	60.5	61.9	61.2	59.8
24	05.00 – 06.00	60.6	63.1	62.4	63.2	62.1	60.7

PORT OPERATING BUILDING – (N3)



Ambient Air Quality Standards in respect of Noise

Area Code	Category of Area / Zone	Limits in dB(A) Leq*	
		Day Time	Night Time
(A)	Industrial area	75	70
(B)	Commercial area	65	60
(C)	Residential area	55	45
(D)	Silence Zone	50	40

- Notes: 1. Day time shall mean from 6:00 a.m. to 10:00 p.m.
 2. Night time shall mean from 10:00 p.m. to 6:00 a.m.
 3. Silence zone is an area comprising not less than 100 metres around hospitals, educational institutions, courts, religious places or any other area which is declared as such by the competent authority.
 4. Mixed categories of areas may be declared as one of the four above mentioned categories by the competent authority.

* dB(A) Leq denotes the time weighted average of the level of sound in decibels on scale A which is readable to human hearing.

A "decibel" is a unit in which noise is measured.

"A", in dB(A) Leq, denotes the frequency weighting in the measurement of noise and corresponds to frequency response characteristics of the human ear.

Leq is an energy mean of the noise level over a specified period.



iii. DG SET EMISSIONS

Sampling of Flue gas emission of 2000 KVA DG Set was done and its emissions were determined along with its noise intensity. The Detailed report has been is enclosed as Annexure - 4

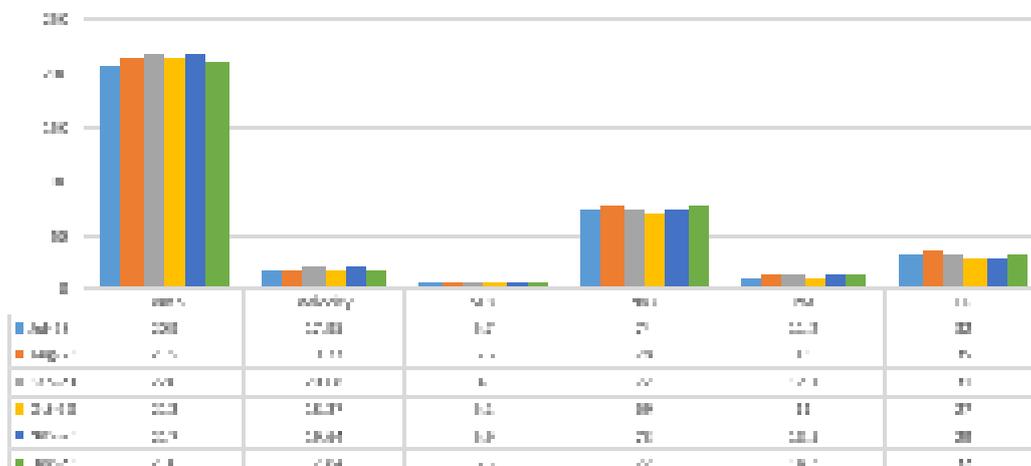
DETAILS OF EMISSION MONITORING LOCATIONS

STATION CODE	LOCATIONS	Geographical Location
SM-01	DG – 1 1500 KVA (Near MRSS)	13°16'13.40"N 80°20'8.15"E
SM-02	DG – 2 1500 KVA (Near MRSS)	13°16'13.40"N 80°20'8.15"E
SM-03	DG – 3 1500 KVA (Near MRSS)	13°16'13.40"N 80°20'8.15"E
SM-04	DG-4 125 KVA (Near MRSS)	13°16'13.16"N 80°20'7.19"E

ANNEXURE - 4 RESULTS OF SOURCE EMISSION MONITORING DATA

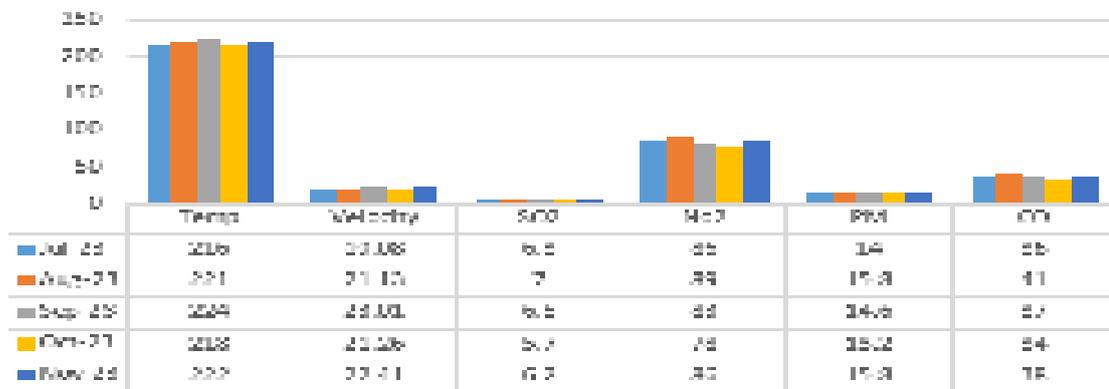
STACK MONITORING							
Location		DG 1500 KVA - 1					
Month & Year		July - 23	Aug - 23	Sept - 23	Oct - 23	Nov - 23	Dec - 23
S.No.	Parameters						
1	Stack Temperature, °C	209	215	220	213	217	210
2	Flue Gas Velocity, m/s	17.92	19.23	20.68	18.37	19.64	17.84
3	Sulphur Dioxide, mg/Nm3	5.7	6.6	6.0	5.2	5.9	6.3
4	NOX (as NO2) in ppmv	74	78	72	69	73	77
5	Particular matter, mg/Nm3	11.2	13.0	12.1	11.0	13.5	14.3
6	Carbon Monoxide, mg/Nm3	32	35	31	27	29	32
7	Gas Discharge, Nm3/hr	14578	15348	15986	14869	15579	15938

DG Set 1500 KVA - 1



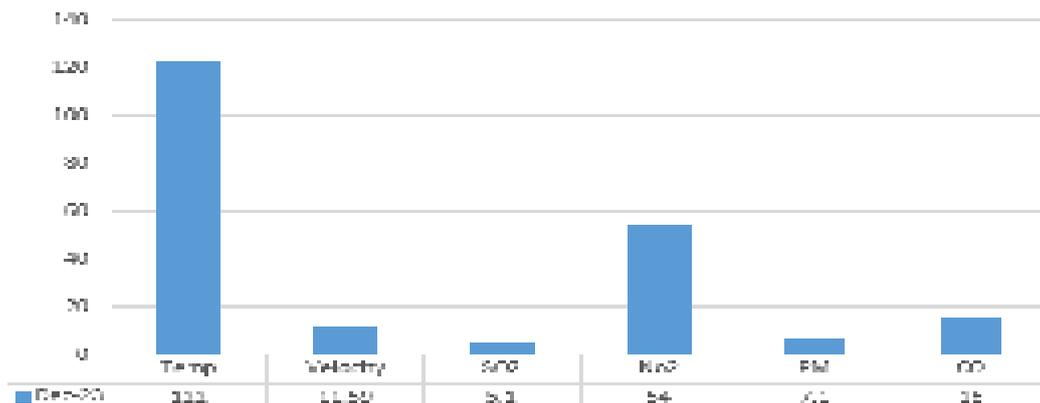
STACK MONITORING							
Location		DG 1500 KVA - 2					
Month & Year		July - 23	Aug - 23	Sept - 23	Oct - 23	Nov - 23	Dec - 23
S.No.	Parameters						
1	Stack Temperature, °C	216	221	224	218	222	-
2	Flue Gas Velocity, m/s	19.08	21.13	23.01	21.26	22.41	-
3	Sulphur Dioxide, mg/Nm3	6.3	7.0	6.5	5.7	6.2	-
4	NOX (as NO2) in ppmv	86	89	83	78	86	-
5	Particular matter, mg/Nm3	14.0	15.8	14.6	13.2	15.8	-
6	Carbon Monoxide, mg/Nm3	36	41	37	34	38	-
7	Gas Discharge, Nm3/hr	16329	17124	18045	17324	17863	-

DG Set 1500 KVA



STACK MONITORING							
Location		DG 125 KVA					
Month & Year		July - 23	Aug - 23	Sept - 23	Oct - 23	Nov - 23	Dec - 23
S.No.	Parameters						
1	Stack Temperature, °C	-	-	-	-	-	122
2	Flue Gas Velocity, m/s	-	-	-	-	-	11.59
3	Sulphur Dioxide, mg/Nm3	-	-	-	-	-	5.1
4	NOX (as NO2) in ppmv	-	-	-	-	-	54
5	Particular matter, mg/Nm3	-	-	-	-	-	7.10
6	Carbon Monoxide, mg/Nm3	-	-	-	-	-	16
7	Gas Discharge, Nm3/hr	-	-	-	-	-	1010

DG Set 125 KVA



Parameter	Site Category	Total number of samples collected (includes retests as well as new samples only)	Compliance with monitoring, and		
			Before 1.7.2019	Between 1.7.2019 and 1.7.2020	On or after 1.7.2020
Total Lead (mg/kg) in 0-100mm	A	100	100	0	0
	B	100	100	0	0
	A	100	100	0	0
	B	100	100	0	0
Total Lead (mg/kg) in 0-100mm	Site A and B	100	100	0	0
	Site A and B	100	100	0	0
Total Lead (mg/kg) in 0-100mm	Site A and B	100	100	0	0
	Site A and B	100	100	0	0
Total Lead (mg/kg) in 0-100mm	Site A and B	100	100	0	0
	Site A and B	100	100	0	0

¹ Based on the total number of samples collected (includes retests as well as new samples only) and 11 sites.

² Based on the total number of samples collected by SV Enviro Labs & Consultants (SVEL) monitoring sites. SVEL collected only 100 samples in 2019 and 2020.



iv. STP WATER SAMPLE ANALYSIS

Water samples were collected at the following points.

- 25 KLD Inlet and Treated Water Outlet

DETAILS OF STP WATER LOCATIONS

STATION CODE	LOCATIONS	Geographical Location
STP – 1	25 KLD	13°16'15.33"N 80°20'0.46"E

Analysis results of the water sample collected from the above location are enclosed as Annexure - 5.

ANNEXURE - 5 RESULTS OF STP WATER QUALITY DATA

STP WATER													
Location		STP 25KLD INLET						STP 25KLD OUTLET					
Month & Year		July - 23	Aug- 23	Sept - 23	Oct - 23	Nov - 23	Dec - 23	July - 23	Aug - 23	Sept - 23	Oct - 23	Nov - 23	Dec - 23
S.N	Parameters												
1	pH @ 25°C	7.04	6.92	6.80	6.71	6.89	6.63	7.10	7.03	7.14	7.05	7.15	7.04
2	Total Suspended	97.0	89.0	95.0	86.0	79.0	83.0	21.0	18.0	22.0	17.0	15.0	18.0
3	BOD at 27°C for 3	116	102	120	106	102	110	14.0	10.0	16.0	13.0	11.0	14.0
4	Fecal Coliform	1060	1030	1120	1060	900	952	110	97.0	118	104	90	98
5	COD	320	296	330	304	289	314	50.1	36.2	45.9	39.7	35.1	41.0
6	Oil & Grease	5.8	5.3	6.0	5.0	4.7	5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
7	Total Dissolved Solids	794	728	810	760	726	816	710	664	724	687	644	720
8	Chlorides (as Cl)	389	376	395	380	362	378	342	330	342	327	315	324
9	Sulphates (as SO4)	54	49	53	48	40	45	40	36	39	35	31	35

REPORTING ON ENVIRONMENTAL IMPACT AND SOCIAL IMPACT
SECTION 4.2.2.2

New York, the 1987-1988, 1997

Section 4.2.2.2.2 - In compliance with the provisions of sections 2 and 3 of the Environmental Conservation Law, 1964 (ECL) of 1964, the Federal Government hereby makes the following table Subject to the Environmental Conservation Law, 1964, 1964.

1. **Table 4.2.2.2.2.1** - This table shall be called the Environmental Conservation Law, 1964.

(1) This table shall be subject to the provisions of the Environmental Conservation Law, 1964.

2. In the Environmental Conservation Law, 1964, in Section 2.1, after section 198 and the other existing tables, the following table shall be added to the said table:

No.	Section	Description	Amount
1	1	Table 4.2.2.2.2.1	198
2	2	Table 4.2.2.2.2.2	198
3	3	Table 4.2.2.2.2.3	198
4	4	Table 4.2.2.2.2.4	198
5	5	Table 4.2.2.2.2.5	198
6	6	Table 4.2.2.2.2.6	198
7	7	Table 4.2.2.2.2.7	198
8	8	Table 4.2.2.2.2.8	198
9	9	Table 4.2.2.2.2.9	198
10	10	Table 4.2.2.2.2.10	198
11	11	Table 4.2.2.2.2.11	198
12	12	Table 4.2.2.2.2.12	198
13	13	Table 4.2.2.2.2.13	198
14	14	Table 4.2.2.2.2.14	198
15	15	Table 4.2.2.2.2.15	198
16	16	Table 4.2.2.2.2.16	198
17	17	Table 4.2.2.2.2.17	198
18	18	Table 4.2.2.2.2.18	198
19	19	Table 4.2.2.2.2.19	198
20	20	Table 4.2.2.2.2.20	198
21	21	Table 4.2.2.2.2.21	198
22	22	Table 4.2.2.2.2.22	198
23	23	Table 4.2.2.2.2.23	198
24	24	Table 4.2.2.2.2.24	198
25	25	Table 4.2.2.2.2.25	198
26	26	Table 4.2.2.2.2.26	198
27	27	Table 4.2.2.2.2.27	198
28	28	Table 4.2.2.2.2.28	198
29	29	Table 4.2.2.2.2.29	198
30	30	Table 4.2.2.2.2.30	198
31	31	Table 4.2.2.2.2.31	198
32	32	Table 4.2.2.2.2.32	198
33	33	Table 4.2.2.2.2.33	198
34	34	Table 4.2.2.2.2.34	198
35	35	Table 4.2.2.2.2.35	198
36	36	Table 4.2.2.2.2.36	198
37	37	Table 4.2.2.2.2.37	198
38	38	Table 4.2.2.2.2.38	198
39	39	Table 4.2.2.2.2.39	198
40	40	Table 4.2.2.2.2.40	198
41	41	Table 4.2.2.2.2.41	198
42	42	Table 4.2.2.2.2.42	198
43	43	Table 4.2.2.2.2.43	198
44	44	Table 4.2.2.2.2.44	198
45	45	Table 4.2.2.2.2.45	198
46	46	Table 4.2.2.2.2.46	198
47	47	Table 4.2.2.2.2.47	198
48	48	Table 4.2.2.2.2.48	198
49	49	Table 4.2.2.2.2.49	198
50	50	Table 4.2.2.2.2.50	198
51	51	Table 4.2.2.2.2.51	198
52	52	Table 4.2.2.2.2.52	198
53	53	Table 4.2.2.2.2.53	198
54	54	Table 4.2.2.2.2.54	198
55	55	Table 4.2.2.2.2.55	198
56	56	Table 4.2.2.2.2.56	198
57	57	Table 4.2.2.2.2.57	198
58	58	Table 4.2.2.2.2.58	198
59	59	Table 4.2.2.2.2.59	198
60	60	Table 4.2.2.2.2.60	198
61	61	Table 4.2.2.2.2.61	198
62	62	Table 4.2.2.2.2.62	198
63	63	Table 4.2.2.2.2.63	198
64	64	Table 4.2.2.2.2.64	198
65	65	Table 4.2.2.2.2.65	198
66	66	Table 4.2.2.2.2.66	198
67	67	Table 4.2.2.2.2.67	198
68	68	Table 4.2.2.2.2.68	198
69	69	Table 4.2.2.2.2.69	198
70	70	Table 4.2.2.2.2.70	198
71	71	Table 4.2.2.2.2.71	198
72	72	Table 4.2.2.2.2.72	198
73	73	Table 4.2.2.2.2.73	198
74	74	Table 4.2.2.2.2.74	198
75	75	Table 4.2.2.2.2.75	198
76	76	Table 4.2.2.2.2.76	198
77	77	Table 4.2.2.2.2.77	198
78	78	Table 4.2.2.2.2.78	198
79	79	Table 4.2.2.2.2.79	198
80	80	Table 4.2.2.2.2.80	198
81	81	Table 4.2.2.2.2.81	198
82	82	Table 4.2.2.2.2.82	198
83	83	Table 4.2.2.2.2.83	198
84	84	Table 4.2.2.2.2.84	198
85	85	Table 4.2.2.2.2.85	198
86	86	Table 4.2.2.2.2.86	198
87	87	Table 4.2.2.2.2.87	198
88	88	Table 4.2.2.2.2.88	198
89	89	Table 4.2.2.2.2.89	198
90	90	Table 4.2.2.2.2.90	198
91	91	Table 4.2.2.2.2.91	198
92	92	Table 4.2.2.2.2.92	198
93	93	Table 4.2.2.2.2.93	198
94	94	Table 4.2.2.2.2.94	198
95	95	Table 4.2.2.2.2.95	198
96	96	Table 4.2.2.2.2.96	198
97	97	Table 4.2.2.2.2.97	198
98	98	Table 4.2.2.2.2.98	198
99	99	Table 4.2.2.2.2.99	198
100	100	Table 4.2.2.2.2.100	198



v. DRINKING WATER SAMPLE ANALYSIS

Drinking Water samples were collected at the Canteen or Office Building. Analysis results of the water sample collected from the above location are enclosed as Annexure - 6.

vi. RAW WATER SAMPLE ANALYSIS

Raw water samples were collected at the Pond. Analysis results of the water sample collected from the above location are enclosed as Annexure - 7.

ANNEXURE - 6 RESULTS OF WATER SAMPLE (DRINKING WATER) QUALITY DATA

DRINKING WATER								
S.No.	Month & Paramete	Unit	July - 23	Aug- 23	Sept - 23	Oct - 23	Nov - 23	Dec - 23
1	pH @ 25°C	-	6.75	6.83	6.71	6.89	6.91	6.84
2	Total Hardness as CaCo ₃	mg/L	15.8	17.6	19.7	16.9	14.23	12.3
3	Chloride as Cl	mg/L	15.6	18.2	21.3	16.4	14.2	11.2
4	Total Dissolved Solids	mg/L	49.8	53.4	58.6	49.2	40.5	33.9
5	Calcium as Ca	mg/L	3.87	4.24	4.67	4.18	3.49	2.96
6	Sulphate as SO ₄	mg/L	BDL (D.L.0.01)					
7	Total Alkalinity as CaCo ₃	mg/L	26.4	30.2	33.7	27.6	24.8	20.6
8	Magnesium as Mg	mg/L	1.49	1.71	1.96	1.59	1.34	1.21
9	Color	Hazen	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
10	Odour	-	Unobjectionable	Unobjectionable	Unobjectionable	Unobjectionable	Unobjectionable	Unobjectionable
11	Taste	-	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
12	Turbidity	NTU	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
13	Nitrate as No ₃	mg/L	BDL(DL:1.0)	BDL(DL:1.0)	BDL(DL:1.0)	BDL(DL:1.0)	BDL(DL:1.0)	BDL(DL:1.0)
14	Iron as Fe	mg/L	0.05	0.07	0.09	0.06	0.04	0.02
15	Total Residual Chlorine	mg/L	BDL (D.L.<0.01)					
16	Copper as Cu	mg/L	BDL (D.L.0.01)					
17	Manganese as Mn	mg/L	BDL (D.L.0.01)					
18	Fluoride as F	mg/L	BDL (D.L.0.01)					
19	Phenolic compounds as	mg/L	Nil	Nil	Nil	Nil	Nil	Nil
20	Mercury as Hg	mg/L	BDL (D.L.0.01)					
21	Cadmium as Cd	mg/L	BDL (D.L.0.01)					
22	Selenium as Se	mg/L	BDL (D.L.0.01)					
23	Arsenic as As	mg/L	BDL (D.L.0.01)					
24	Lead as Pb	mg/L	BDL (D.L.0.01)					
25	Zinc as Zn	mg/L	BDL (D.L.0.01)					
26	Anionic Detergents as MBAS	mg/L	Nil	Nil	Nil	Nil	Nil	Nil
27	Total Chromium as Cr	mg/L	BDL (D.L.0.01)					
28	Phenolphthalein Alkalinity as CaCO ₃	mg/L	Nil	Nil	Nil	Nil	Nil	Nil
29	Aluminium as Al	mg/L	BDL (D.L.0.01)					
30	Boron as B	mg/L	BDL (D.L.0.01)					
31	Mineral Oil	mg/L	BDL (D.L.0.01)					
32	Polynuclear Aromatic Hydrocarbons as	mg/L	BDL (D.L.0.0001)					
33	Pesticides	mg/L	Absent	Absent	Absent	Absent	Absent	Absent
34	Cyanide as CN	mg/L	BDL (DL : 0.01)					
35	E. coli	MPN/100ml	Absent	Absent	Absent	Absent	Absent	Absent
36	Total Coliform	MPN/100ml	Absent	Absent	Absent	Absent	Absent	Absent

ANNEXURE - 7 RESULTS OF RAINWATER HARVESTING POND WATER SAMPLE QUALITY DATA

RAW WATER SAMPLE								
Month & Year		Unit	July - 23	Aug- 23	Sept - 23	Oct - 23	Nov - 23	Dec - 23
S.No.	Parameters							
1	pH @ 25°C	-	-	-	-	-	7.41	7.25
2	Total Hardness as CaCo3	mg/L	-	-	-	-	362	340
3	Chloride as Cl	mg/L	-	-	-	-	580	557
4	Total Dissolved Solids	mg/L	-	-	-	-	1280	1226
5	Calcium as Ca	mg/L	-	-	-	-	62.6	60.3
6	Sulphate as SO4	mg/L	-	-	-	-	71.6	67.1
7	Total Alkalinity as CaCo3	mg/L	-	-	-	-	390	360
8	Magnesium as Mg	mg/L	-	-	-	-	49.8	46.2
9	Color	Hazen	-	-	-	-	<1.0	<1.0
10	Odour	-	-	-	-	-	Unobjectionable	Unobjectionable
11	Taste	-	-	-	-	-	Agreeable	Agreeable
12	Turbidity	NTU	-	-	-	-	0.58	0.49
13	Nitrate as No3	mg/L	-	-	-	-	10.5	9.04
14	Iron as Fe	mg/L	-	-	-	-	0.19	0.15
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	-	-	-	-	0.58	0.52
19	Phenolic compounds as	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	-	-	-	-	0.039	0.035
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	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	Per 100ml	-	-	-	-	Absent	Absent
36	Total Coliform	Per 100ml	-	-	-	-	Absent	Absent

vii. Marine Sampling

Marine Water samples and sediment samples were collected at locations South side berth and North side berth. Analysis data of Marine and sediments as represented in Annexure - 8 & 9.

DETAILS OF MARINE WATER AND SEDIMENT LOCATIONS

STATION CODE	LOCATIONS	Geographical Location
MW - 1 / MS - 1	CB - 1	13 ⁰ 18' 50" N 80 ⁰ 20' 51" E
MW - 2 / MS - 2	CB - 2	13 ⁰ 18' 46" N 80 ⁰ 20' 49" E
MW - 3 / MS - 3	BERTH - 3	13 ⁰ 18' 41" N 80 ⁰ 21' 4" E

Fig - 5. Water and Marine Sampling Locations



ANNEXURE – 8 RESULTS OF MARINE WATER QUALITY DATA

MARINE WATER														
S.NO	PARAMETER	UNITS	Berth Area											
			July - 23		Aug- 23		Sept - 23		Oct - 23		Nov - 23		Dec - 23	
			Surface	Bottom										
Physicochemical Parameters			Surface	Bottom										
1	Colour	Hazan	21	35	21	35	21	38	19	35	17	33	14	29
2	Odour	-	Unobject ionable	Unobjectio nable	Unobjecti onable									
3	pH @ 25°C	-	8.02	8.01	8.02	8.01	8.09	8.05	8.16	8.10	8.28	8.14	9.21	8.10
4	Temperature	°C	28.6	28.5	28.6	28.5	28.5	28.4	28.3	28.2	28.1	28.0	28.0	27.8
5	Turbidity	NTU	20	27	20	27	18	25	16	23	14	21	12	17
6	Total Suspended Solids	mg/L	31	38	31	38	29	35	26	32	22	29	25	33
7	BOD at 27 oC for 3 days	mg/L	3.4	3.6	3.4	3.6	3.3	3.4	3.1	3.3	3.0	3.1	3.1	3.3
8	COD	mg/L	98.5	106	98.5	106	95.6	101	92.8	98.4	89.8	95.3	84.6	90.5
9	Dissolved oxygen	mg/L	3.4	3.0	3.4	3.0	3.5	3.2	3.6	3.3	3.7	3.4	3.5	3.3
10	Salinity at 25 °C	ppt	35.9	36.1	35.9	36.1	35.7	35.9	35.5	35.7	35.3	35.5	35.1	35.3
11	Oil & Grease	mg/L	BDL (DL : 1.0)											
Nutrient Parameters														
12	Nitrate as No3	mg/L	6.89	9.21	6.89	9.21	6.24	8.78	5.89	8.26	5.71	8.08	5.40	7.62
13	Nitrite as No2	mg/L	3.01	3.69	3.01	3.69	2.89	3.50	2.76	3.39	2.62	3.25	2.48	3.11
14	Ammonical Nitrogen as N	mg/L	BDL (DL : 1.0)											
15	Total Nitrogen	mg/L	BDL (DL : 1.0)											
16	Inorganic phosphates as PO4	mg/L	4.70	6.80	4.70	6.80	4.65	6.75	4.48	6.50	4.35	6.38	4.18	6.20
17	Silica as SiO2	mg/L	6.22	7.39	6.22	7.39	5.95	7.20	5.78	7.05	5.62	6.93	5.36	6.58
18	Particulate Organic Carbon	µgC/L	13	16	13	16	11	14	10	12	08	11	06	10
19	Pertoleum Hydrocarbons	µg/L	BDL (DL : 1.0)											
Heavy Metals														
20	Cadmium as Cd	mg/L	BDL (DL : 0.001)	BDL (DL : 0.01)	BDL (DL : 0.001)	BDL (DL : 0.01)	BDL (DL : 0.001)	BDL (DL : 0.01)						
21	Copper as Cu	mg/L	BDL (DL : 0.01)											
22	Total Iron as Fe	mg/L	0.75	0.84	0.75	0.84	0.71	0.80	0.63	0.77	0.61	0.71	0.57	0.68
23	Zinc as Zn	mg/L	BDL (DL : 0.01)											
24	Lead as Pb	mg/L	BDL (DL : 0.01)											
25	Mercury as Hg	mg/L	BDL (DL : 0.001)											
26	Nickel as Ni	mg/L	BDL (DL : 0.01)											
27	Total Chromium as Cr	mg/L	BDL (DL : 0.01)											
Bacteriological Parameters														
28	Escherichia Coli (ECLO)	per100ml	Absent											
29	Faecal Coliform (FCLO)	per100ml	Absent											
30	Pseudomonas aeruginosa (PALO)	per100ml	Absent											
31	Streptococcus faecalis (SFCLO)	per100ml	Absent											
32	Shigella (SHLO)	per100ml	Absent											
33	Salmonella (SLO)	per100ml	Absent											
34	Total Coliform (TC)	per100m	Absent											
35	Total Viable Count (TVC)	cfu/ml	9.0	15.0	6.0	11.0	9.0	15.0	12	18	09	15	14	21
36	Vibrio cholera (VC)	per100m	Absent											
37	Vibrio parahaemolyticus (VPHLO)	per100m	Absent											

CB - 1														
Month & Year			July - 23		Aug- 23		Sept - 23		Oct - 23		Nov - 23		Dec - 23	
S.No	Parameters	Unit	Surface	Bottom	Surface	Bottom	Surface	Bottom	Surface	Bottom	Surface	Bottom	Surface	Bottom
38	Primary Productivity	mg C/m ³ /hr	8.75	9.13	8.72	9.10	8.74	9.13	8.77	9.15	8.79	9.17	8.81	9.19
39	Chlorophyll a	mg /m ³	6.12	6.75	6.10	6.72	6.14	6.75	6.17	6.79	6.19	6.81	6.21	6.84
40	Phaeopigment	mg /m ³	2.91	3.56	2.89	3.53	2.92	3.55	2.93	3.57	2.94	3.59	2.96	3.62
41	Total Biomass	ml /100 m ³	1.88	2.17	1.86	2.16	1.89	2.19	1.91	2.21	1.92	2.22	1.94	2.23
PHYTOPLANKTON														
42	Bacteriastrium hyalinum	nos/ml	17	15	19	16	22	18	25	20	29	17	31	19
43	Bacteriastrium varians	nos/ml	15	19	13	17	15	19	13	16	15	21	17	24
44	Chaetoceros didymus	nos/ml	13	10	12	08	13	10	17	13	19	16	21	17
45	Chaetoceros decipiens	nos/ml	12	17	14	21	11	18	13	21	10	19	12	23
46	Biddulphia mobiliensis	nos/ml	23	19	25	17	28	19	32	22	35	26	38	28
47	Ditylum brightwellii	nos/ml	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
48	Gyrosigma sp	nos/ml	7	5	9	6	11	8	8	5	11	9	8	6
49	Cladophyxis sps	nos/ml	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
50	Coscinodiscus centralis	nos/ml	19	16	22	18	25	21	28	23	33	24	31	22
51	Coscinodiscus granii	nos/ml	12	8	14	10	17	13	19	14	22	18	25	20
52	Cylcotella sps	nos/ml	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
53	Hemidiscus hardmanianus	nos/ml	21	15	19	12	23	15	27	17	34	21	31	18
54	Laudaria annulata	nos/ml	23	18	26	21	28	23	33	25	29	22	27	20
55	Pyropacus horologicum	nos/ml	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
56	Pleurosigma angulatum	nos/ml	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
57	Leptocylindrus danicus	nos/ml	16	11	19	13	16	11	18	13	15	10	14	08
58	Guinardia flaccida	nos/ml	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
59	Rhizosolenia alata	nos/ml	12	9	15	12	18	13	25	16	30	19	34	21
60	Rhizosolenia imbricata	nos/ml	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
61	Rhizosolenia semispina	nos/ml	23	20	21	17	23	19	25	21	21	16	24	19
62	Thalassionema nitzschioides	nos/ml	25	22	28	20	31	23	28	18	34	21	38	23
63	Triceratium reticulatum	nos/ml	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
64	Ceratium trichoceros	nos/ml	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
65	Ceratium furca	nos/ml	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
66	Ceratium macroceros	nos/ml	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
67	Ceracium longipes	nos/ml	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
ZOOPLANKTONS														
68	Acrocalanus gracilis	nos/ml	18	17	21	19	23	17	27	19	34	22	42	27
69	Acrocalanus sp	nos/ml	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
70	Paracalanus parvus	nos/ml	11	13	13	17	156	19	18	23	15	20	21	25
71	Eutintinus sps	nos/ml	4	2	6	3	3	2	5	3	9	5	9	4
72	Centropages furcatus	nos/ml	15	12	17	13	25	16	28	19	32	22	24	14
73	Corycaeus dana	nos/ml	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
74	Oithona brevicornis	nos/ml	15	22	18	26	21	28	24	32	20	28	20	27
75	Euterpina acutifrons	nos/ml	11	16	13	19	16	21	11	16	16	23	23	31
76	Metacalanus aurivilli	nos/ml	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
77	Copipod nauplii	nos/ml	10	8	12	10	15	11	17	12	19	13	18	13
78	Cirripede nauplii	nos/ml	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
79	Bivalve veliger	nos/ml	18	14	21	16	23	18	25	21	31	26	29	27
80	Gastropod veliger	nos/ml	15	19	17	21	19	23	22	27	17	24	11	16

ANNEXURE - 9 RESULTS OF MARINE SEDIMENT QUALITY DATA

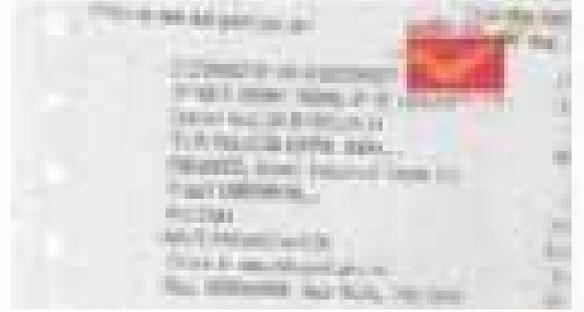
		SEA SEDIMENT						
Location		CB - 1						
Month & Year		Uni	July - 23	Aug- 23	Sept - 23	Oct - 23	Nov - 23	Dec - 23
S.No.	Parameters							
1	Total organic matter	%	0.63	0.59	0.63	0.57	0.54	0.51
2	% Sand	%	21	23	21	23	26	29
3	%silt	%	36	33	37	39	36	41
4	%Clay	%	43	44	42	38	38	30
5	Iron (as Fe)	mg/kg	19.5	18.6	20.1	18.9	17.8	19.5
6	Aluminium (as Al)	mg/kg	8925	8813	9056	8852	8781	8452
7	Chromium (as cr)	mg/kg	51	48	51	48	45	41
8	Copper (as cu)	mg/kg	45	43	45	43	41	38
9	Manganese (as Mn)	mg/kg	53	50	53	51	47	45
10	Nickel (as Ni)	mg/kg	47	45	47	44	42	38
11	Lead (as Pb)	mg/kg	18	16	18	16	14	11
12	Zinc (as Zn)	mg/kg	235	221	240	234	224	218
13	Mercury(as Hg)	mg/kg	BDL(D.L. 0.1)					
14	Total phosphorus as P	mg/kg	141	136	141	135	131	124
15	Octane	mg/kg	BDL(D.L. 0.1)					
16	Nonane	mg/kg	BDL(D.L. 0.1)					
17	Decane	mg/kg	BDL(D.L. 0.1)					
18	Undecane	mg/kg	0.59	0.56	0.50	0.48	0.43	0.39
19	Dodecane	mg/kg	BDL(D.L. 0.1)					
20	Tridecane	mg/kg	BDL(D.L. 0.1)					
21	Tetradecane	mg/kg	BDL(D.L. 0.1)					
22	Phntadecane	mg/kg	BDL(D.L. 0.1)					
23	Hexadecane	mg/kg	BDL(D.L. 0.1)					
24	Heptadecane	mg/kg	BDL(D.L. 0.1)					
25	Octadecane	mg/kg	BDL(D.L. 0.1)					
26	Nonadecane	mg/kg	BDL(D.L. 0.1)					
27	Elcosane	mg/kg	BDL(D.L. 0.1)					
I. Nematoda								
28	Oncholaimussp	nos/m ²	22	25	29	32	35	32
29	Tricomasp	nos/m ²	23	22	23	25	27	24
II. Foraminifera								
30	Ammoniaebecarii	nos/m ²	18	20	18	21	17	19
31	Quinquinasp	nos/m ²	28	25	28	32	29	33
32	Discorbinellasp.,	nos/m ²	16	19	21	24	28	30
33	Bolivinaspathulata	nos/m ²	13	15	18	19	21	23
34	Elphidiumsp	nos/m ²	17	19	21	18	23	27
35	Noniondepressula	nos/m ²	19	22	24	22	26	29
III. Molluscs-Bivalvia								
36	Meretrixveligers	nos/m ²	23	26	29	34	38	35
37	Anadoraveligers	nos/m ²	18	17	19	15	18	15
	Total No. of individuals	nos/m ²	198	210	230	242	262	267
	Shanon Weaver Diversity Index		2.30	2.27	2.29	2.27	2.27	2.28

AECTPL/ENV/TNPCB/ES/2023/26

Date: 23.09.2023

To,

The Member Secretary,
Tamil Nadu Pollution Control Board,
76, Mount Salai,
Guindy,
Chennai - 600 032



Dear Sir,

Sub: Submission of Environmental Statement (Form V) for the financial year ending 31st March, 2023 of Adani Ennore Container Terminal Private Limited (AECTPL) - Reg.

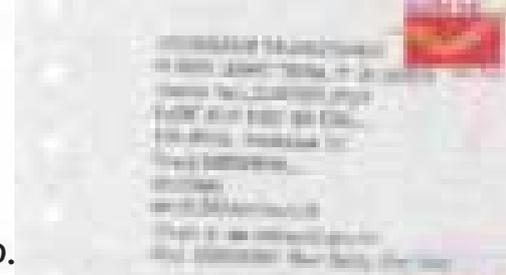
Ref: 1. Consent to Operate Order No. 2108136876855 dated 24.08.2021 under Water Act
2. Consent to Operate Order No. 2108236876855 dated 24.08.2021 under Air Act

With reference to the captioned subject and cited references above, we submit herewith the Environmental Statement of M/s Adani Ennore Container Terminal Private Limited, in Form-V prescribed under Rule 14 of the Environment (Protection) Rules 1986 for the financial year ending 31st March 2023.

Submitted for your kind information and records.

Thanking you,

For, M/s. ADANI ENNORE CONTAINER TERMINAL PRIVATE LIMITED.



Sudip Dasgupta
Chief Executive Officer



Enclosure: as above

Copy To:

- 1) The Joint Chief Environmental Engineer, Tamilnadu Pollution Control Board, First Floor, 950/1, Poonamallee High Road, Arumbakkam, Chennai-600 106
- 2) The District Environmental Engineer, Tamil Nadu Pollution Control Board, Gummidipoondi - 601201.



Adani Ennore Container Terminal Pvt Ltd
Adani House
C/o. Kamarajar Port Limited
Ponneri Taluk, Tiruvallur District
Tamil Nadu- 600 120.

Tel +91 44 2824 3062

info@adani.com
www.adani.com

CIN: U61200GJ2014PTC078795



Form-V

(See rule 14 of Environment (Protection) Rules, 1986)

Environmental Statement for the financial year ending 31st March 2023

PART - A

i) Name and Address of the owner / occupier of the industry operation or process	Mr. Sudip Des Gupta Chief Executive Officer Adani Ennore Container Terminal Private Limited C/O Kamarajar Port Limited Vattar Post, Ennore Thiruvattur District – 600 120 Tamil Nadu, India
ii) Industry Category	Primary (Red) Secondary - 1055 – Ports and Harbour, Jetties and Dredging Operations.
iii) Production Capacity	Cargo Handling Capacity 11.58 MMTPA of Container cargo
iv) Year of establishment	2016
v) Date of the last environmental statement submitted	Vide our Letter No. ADCTPL/TNFCB/2022-23/128 dated 22.09.2022

PART - B

WATER AND RAW MATERIAL CONSUMPTION

(i) Water Consumption

S. No	Water Consumption (m ³ /Calendar Day)	2021-2022	2022-2023
1.	Process	NIL	NIL
2.	Cooling	NIL	NIL
3.	Domestic	12.6	12.1

(ii) Raw Material Consumption

S. No.	Name of Raw Material	Name of Products	Consumption of Raw Material per Unit of output	
			During the previous financial year (2021-22)	During the current financial year (2022-23)
1	Not Applicable	Not Applicable	NIL	NIL

The unit does not undergo any manufacturing process. Hence, there is no raw material consumption.

PART - C

POLLUTION DISCHARGE TO ENVIRONMENT/ UNIT OF OUTPUT

(Parameters as specified in the consent issued)

Pollutants	Quantity of Pollutants Discharged (Mass/day)	Concentration of Pollutants discharges (mass/volume)	Percentage of variation from prescribed standards with reason	
e) Water	STP Treated Water Characteristics -			
	Parameter	Consent Limit	Actual	% Variation with prescribed standard
	pH	8.5-9	7.6	-66
	Total Suspended Solids (mg/l)	50	25.83	-49
	BOD (3 days at 20°C) (mg/l)	20	18.18	-9
Fecal Coliform (MPN/100ml)	1000	214.17	-78	
b) Air	<p>DG sets are provided as standby power source and are used during power failure only. The Height of DG stacks as per CPCB/ TNPCB Standards. All the monitored parameters are within standards.</p> <p>All the DG Sets are retrofitted to reduce the Particulate Matter emission level. Efficiency of the retrofitting equipment is observed above 90% against the TNPCB requirement of >70%.</p> <p>All the monitored parameters are well within the prescribed standards.</p>			
Particulate Matter (mg/m ³)	DG stack emission report is enclosed as Annexure 1			
Sulphur Dioxide (mg/m ³)				
Nitrogen Oxide (ppm)				

PART-D**HAZARDOUS WASTES**

(As specified under Hazardous Waste Management and Handling Rules 1989)

Hazardous Wastes	Total Quantity (Kg)	
	During the previous Financial Year (2021-22)	During the current Financial Year (2022-23)
(a) From Process	<ul style="list-style-type: none"> Used/Spent Oil (S.1) - 2500 Liters (2.268 Tons) Wastes or residue containing oil (S.2) - 800 Liters (0.72 Tons) 	NA
(b) From Pollution control facilities	NA	NA

PART-E**SOLID WASTES**

TOTAL QUANTITY GENERATED			
Solid Waste		During the previous Financial Year (2021-22)	During the current Financial Year (2022-23)
a)	From process	Nil	Nil
b)	From pollution control facilities- STP	99.3 kgs	105.8 kgs
c)	1. Quantity recycled or reused within the Unit	99.3 kgs	105.8 kgs
	2. Sent	Nil	Nil
	3. Dumped	Nil	Nil

PART-E

Please specify the characterization (in terms of Composition and quantum) of Hazardous as well as solid wastes and indicate disposal practice adopted for both these categories of waste:

- "Zero Waste to Landfill" Initiative - No waste is being sent to landfill or incineration facility. AECTPL is having Integrated Waste Management System (IWMS) to properly segregate & recover the materials and are handled as per 5R (Reduce, Reuse, Recycle, Recover and Re-process) principle.
- AECTPL has awarded with Zero Waste to Landfill Management System (ZWL MS 2020) from TUV Rheinland India Pvt. Ltd (Annexure - J).
- Hazardous wastes include Used oil, Filters contaminated with Oil and Empty barrels / containers contaminated with hazardous wastes. All the hazardous wastes are collected and stored properly in Integrated Waste Management Shed & are being disposed to TNPCB authorized registered recycler in line with Hazardous and other Wastes (Management and Transboundary Movement) Rules, 2016 (As amended).
- The used batteries and E -wastes are also stored in Integrated Waste Management Shed and disposed off through approved vendor in line to E-Waste Management Rules 2016 (as amended).
- Hazardous waste Annual returns in Form 4 was submitted in line with the Hazardous and Other Wastes (Management & Trans boundary Movement) Rules, 2016.
- E-waste returns in Form 3 was submitted in line with the E-waste Management Rules, 2016.
- 100% utilization of STP sludge for greenbelt maintenance as manure.
- AECTPL certified as "Single Use Plastic (SUP) Free" site from OI -ITC Centre of Excellence for Sustainable Development.

FART-G

Impact of the pollution abatement measures taken on conservation of natural resources and on the cost of production.

- Adani Ennore Container Terminal Private Limited is having electrified cranes only and hence the diesel consumption by the cranes is eliminated completely.
- All the DG Sets are retrofitted to reduce the Particulate Matter emission level. Efficiency of the retrofitting equipment is observed above 90% against the TNPCB requirement of >70%.
- All the domestic wastewaters being generated at port is treated at existing sewage treatment plant and the treated water is being reused within port premises for gardening/horticulture purpose.
- Sewage Treatment Plant (STP) is in continuous operation and the treated effluent water quality is meeting the TNPCB norms. The total cost spent on STP operation during the year 2022-23 is Rs. 5.11 Lakhs.
- Regular Environmental monitoring is being carried out through NABL accredited laboratory. All the monitored environmental parameters are well within the prescribed norms & the details of monitored data is being submitted regularly to TNPCB, CPCB, MoEF&CC and other concerned authorities.
- Unit is continuously developing and maintaining Greenbelt within the port premises.
- Implemented Integrated Waste Management System (IWMS) for managing all types of wastes in line with 3R (Reduce, Reuse, Recycle, Recover and Re-process) principle.

FART-H

Additional measures/investment proposal for Environmental protection including abatement of pollution, prevention of pollution.

Regular Expenditure (Cost in INR lakhs/year)		
S. No.	Description	Cost
1	Environmental monitoring & Environment Studies	13.28
2	Green belt & Horticulture development	5.11
3	Annual maintenance contractor of STP operation	5.11
4	Operation & Maintenance of Integrated Waste Management System	3.14
5	Housekeeping	8.27

PART-3

ANY OTHER PARTICULARS IN RESPECT TO ENVIRONMENT

- Handling of all types of wastes in line with 5R (Reduce, Reuse, Recycle, Recover and Reprocess) Principle.
- Paperless Operation is in place (except for statutory requirements) using application tools and Software – Terminal Info Gateway (TIG).
- Energy Conservation Committee to measure the amount of energy consumed and take actions to reduce the energy consumed through port operations.
- Water Warriors committee to identify and reduce the water consumption. The committee would propose innovative water solutions.
- Integrated Management System (ISO 9001:2015, 14001:2015, 45001:2018 and 30001:2018) certified Port.
- Obtained "5S" Certification at MOP.
- AICTPL is bestowed with the top honors and the details of accolades received during the year 2022-23 are mentioned here under (photos attached at Annexure-3);
 - EMDOT's "Platinum Award" under Environment Improvement category

• **Community Development:**

Katupalli Port has been propagating the community development through a broad based Corporate Social Responsibility (CSR) program in the project area through Adani Foundation since 2018 to ensure inclusive growth and catering to the developmental needs of the community at the grassroots level. The project area encompasses 17 panchayats covering about 45 villages within 10 Km radius of the Katupalli Port. The key interventions introduced in the project area are as under:

- Education
- Community Health
- community infrastructure facility
- Sustainable Livelihood development
- Tree Plantation & Bio-Diversity development program
- Special Focus Groups
- COVID / Cyclone relief measures

Significant highlights during the year 2022-23 are as follows.

Education: 20 Adani Evening Education Centers where 600 students from fishermen, sailors and other backward communities get benefit through this program.

Established Computer Smart Lab for government school students, where 450 students get benefit through this program, Pulicat Panchayat, Minjur and Tiruvetur, Tamilnadu.

Health: Addressing health issues of rural communities through mobile health care program where 1600 persons get benefit every month through this program.

Supesha: Creating awareness and preventing unwanted health issues faced by mothers and children below 5 years of age working closely with government system and ensuring to improve the health condition of the children below 5 years of age.

Sustainable Livelihood Development: Natural Farming: Ensuring 100 farmers do natural farming by assisting them to ensure to adopt and implement the natural farming protocols as per the norms of government where government will certify them under POS program.

Livelihood Enhancement program for 121 women through group based entrepreneurship program and providing livelihood support to 30 individuals- widows, destitute and persons with disabilities.

Community Infrastructure Development: Installed 10 high mast lights in the rural communities, Established 5 RO plants in the community, Government Schools and Government Hospitals in addressing its access to drinking water, Community Toilet for women was constructed, Desalinated Kattupalli pond and gave life to the pond, built toilet block for girl students of government school students, Pulicat Panchayats which will be benefited by girl students from four panchayats, planned to build a community hall for Satanguppam and to do Desalination of boat parking areas of fishermen in 18 locations.

Date: 23.09.2023

(Signature of a person carrying out an industry operation or process)

Name : **Sudip Dasgupta**

Designation: **Chief Executive Officer**

Address : Adani Ennore Container Terminal Pvt Ltd
C/O Kamarajar Port Limited
Vafur post, Ennore
Tiruvallur District- 606 120.



ANNEXURE - 1

AECTPL- STACK MONITORING (April'2022 to March'2023)													
Location		DG - 1 1500KVA											
Month & Year		Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	Feb-23	Mar-23
S.No.	Parameters	20.04.22	21.05.22	19.06.22	21.07.22	19.08.22	16.09.22	22.10.22	16.11.22	27.12.22	24.01.23	17.02.23	24.03.23
1	Stack Temperature, °C	241.0	253.0	240.0	228.0	218.0	221.0	237.0	214.0	225.0	216.0	210.0	207.0
2	Flue Gas Velocity, m/s	23.3	24.1	24.9	23.5	21.1	22.4	24.0	22.1	21.3	21.0	22.8	22.6
3	Gas Discharge, Nm ³ /hr	6124.0	6159.0	6520.0	6316.0	5771.0	6093.0	6342.0	6096.0	5739.0	5771.0	6346.0	6340.0
4	Sulphur Dioxide, mg/Nm ³	7.5	7.9	7.4	6.9	6.0	6.9	8.1	7.8	7.0	7.7	6.4	6.3
5	NOX (as NO ₂) in ppmv	136.0	142.0	135.0	122.0	110.0	118.0	129.0	117.0	98.0	98.0	92.0	87.0
6	Particular matter, mg/Nm ³	11.0	9.6	8.2	8.9	8.1	9.2	8.5	9.3	7.4	31.6	8.5	11.3
7	Carbon Monoxide, mg/Nm ³	38.0	40.0	38.0	33.0	35.0	37.0	34.0	31.0	28.0	68.0	30.0	41.0
Location		DG-2 1500KVA											
Month & Year		Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	Feb-23	Mar-23
S.No.	Parameters	20.04.22	21.05.22	19.06.22	21.07.22	19.08.22	16.09.22	22.10.22	16.11.22	27.12.22	24.01.23	17.02.23	24.03.23
1	Stack Temperature, °C	230.0	-	-	238.0	244.0	231.0	219.0	210.0	218.0	214.0	231.0	125.0
2	Flue Gas Velocity, m/s	22.0	-	-	23.9	23.1	23.8	22.0	22.5	22.0	20.7	21.0	13.2
3	Gas Discharge, Nm ³ /hr	5879.0	-	-	6295.0	6004.0	6362.0	6005.0	6262.0	6052.0	5720.0	5595.0	626.0
4	Sulphur Dioxide, mg/Nm ³	7.1	-	-	8.4	8.7	9.2	7.8	7.3	6.5	7.3	7.8	6.1
5	NOX (as NO ₂) in ppmv	130.0	-	-	136.0	139.0	132.0	115.0	104.0	94.0	93.0	96.0	76.0
6	Particular matter, mg/Nm ³	9.6	-	-	9.4	10.3	9.8	7.4	8.1	7.6	8.6	7.0	9.7
7	Carbon Monoxide, mg/Nm ³	35.0	-	-	39.0	41.0	37.0	30.0	27.0	25.0	31.0	36.0	32.0

Location		DO-3 1800VIA											
Month & Year		Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	Feb-23	Mar-23
Site	Parameter	09-04-22	01-05-22	19-06-22	07-07-22	19-08-22	19-09-22	02-10-22	19-11-22	07-12-22	24-01-23	17-02-23	04-03-23
1	Soak Temperature, °E	-	-	-	221.0	218.0	218.0	221.0	221.0	-	-	-	-
2	Flow Gas Velocity, m/s	-	-	-	20.1	20.7	21.7	22.8	22.7	-	-	-	-
3	Gas Discharge, km3/hr	-	-	-	6009.2	5950.0	5939.0	6101.0	5930.0	-	-	-	-
4	Sulfur Dioxide, mg/Nm3	-	-	-	8.0	8.4	8.8	8.0	8.8	-	-	-	-
5	NOx (as NO2) in ppm	-	-	-	125.0	132.0	125.0	132.0	115.0	-	-	-	-
6	Particulate matter, mg/Nm3	-	-	-	8.0	8.2	8.0	8.8	8.0	-	-	-	-
7	Carbon Monoxide, mg/Nm3	-	-	-	15.0	16.0	15.0	18.0	22.0	-	-	-	-

Location		DO-4 1200VIA											
Month & Year		Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	Feb-23	Mar-23
Site	Parameter	09-04-22	01-05-22	19-06-22	07-07-22	19-08-22	19-09-22	02-10-22	19-11-22	07-12-22	24-01-23	17-02-23	04-03-23
1	Soak Temperature, °E	-	129.0	121.0	118.0	123.0	120.0	125.0	120.0	-	-	-	-
2	Flow Gas Velocity, m/s	-	12.4	12.0	12.8	13.0	14.7	13.2	13.0	-	-	-	-
3	Gas Discharge, km3/hr	-	388.0	379.0	403.0	410.0	429.0	409.0	423.0	-	-	-	-
4	Sulfur Dioxide, mg/Nm3	-	4.8	4.2	4.4	4.8	5.0	5.4	5.1	-	-	-	-
5	NOx (as NO2) in ppm	-	38.0	35.0	38.0	39.0	40.0	37.0	38.0	-	-	-	-
6	Particulate matter, mg/Nm3	-	4.9	4.0	4.8	4.3	5.4	5.0	5.8	-	-	-	-
7	Carbon Monoxide, mg/Nm3	-	21.0	10.0	18.0	21.0	23.0	21.0	19.0	-	-	-	-

KAMARAJAR PORT LIMITED



Compliance Report

On

Ministry's guidelines for

**DEVELOPMENT OF ADDITIONAL COAL BERTHS (CB3 AND
CB4) AT KAMARAJAR PORT, TAMIL NADU BY M/S.
KAMARAJAR PORT LTD.,**

Point wise compliance report on Ministry's guidelines for the Kamarajar Ports project "Development of additional coal berths (CB3 and CB4) at Kamarajar Port, Tamil Nadu by M/s. Kamarajar Port Limited (Formerly known as Ennore Port Limited)- Environmental and CRZ clearance-reg.

Ref: MoEF's Notification F.No.11-51/2012-IA.III dated 12th March 2015

Construction of Coal Berth No. 3

Construction of Coal berth No 3 for TNEB was planned for a capacity of 9 MTPA at an estimated cost of 209.68 crores. The agreement was signed between M/s ITD Cementation India Ltd., on 20th January 2015, and the work was commenced on 02nd June 2015 and completed on 13.12.2017. Though the berth construction was completed on 13.12.2017, since the other berth infrastructure being constructed, the terminal is yet to commission.

Construction of Coal Berth No. 4

Construction of Coal berth No 4 for TNEB was planned for a capacity of 9 MTPA at an estimated cost of 255.79 crores. The agreement was signed between M/s Afcons Infrastructure Ltd., on 20th July 2015, and the work was commenced on 19th August 2015 and completed on 31.05.2018. Though the berth construction was completed on 31.05.2018, since the other berth infrastructure being constructed, the terminal is yet to commission.

S.No	Specific Conditions	Compliance Status
A (i)	"Consent for Establishment" shall be obtained from State Pollution Control Board under Air (Prevention and Control of Pollution) Act, 1981 and Water (Prevention and Control of Pollution) Act, 1974.	Complied with. Tamil Nadu Pollution Control Board has accorded consent to Establish for the project vide Consent Order No. 15061355540 dated 31.8.2015 and Proceedings No. T6/TNPCB/F.0044AMB/RL/AMB/W/2015 dated 31.8.2015 for Water and Proceedings No. T6/TNPCB/F.0044AMB/RL/AMB/A/2015 dated 31.8.2015 for Air.
(ii)	Dust screens shall be provided with a height of 2 meter above the maximum stack height. Water sprinkling shall be carried out for settling dust. Three layers of green belt of all growing trees shall be provided on all sides.	Will be complied during operation phase.

(iii)	Water sprinkler should be provided in the area of coal loading and unloading, storage and vehicle path/roads.	Noted.
(iv)	Energy conservation measures shall be provided which may include use of solar panels, wind mill etc.	Complied with. At present, port has installed solar panels with a total capacity of 20 KV.
(v)	There shall be no washing of conveyor belt.	Noted for compliance.
(vi)	All the conditions stipulated by Tamil Nadu Coastal Zone Management Authority (TNCZMA) vide letter No. 23187/EC.3/2014-1, dated 16.12.2014, shall be complied with.	Noted for compliance.
(vii)	All the recommendation of the EIA/EMP, Disaster Management Plan shall be strictly complied within letter and spirit. All the mitigation measures submitted in the EIA report shall be prepared in a matrix format and the compliance for each mitigation plan shall be submitted to MoEF & CC along with half yearly compliance report to MoEF & CC - RO.	Noted for compliance.
(viii)	Cargo shall be unloaded directly into hopper from the ship and transportation of coal shall be through covered/closed trucks/ rail only. Closed conveyor belt shall be used for loading the product in the barges.	The project is yet to be commissioned. Cargo shall be unloaded directly into hopper from the ships and transported through elevated closed conveyor systems to the stack yard/thermal power plant.
(ix)	The dredge material shall be reused for low level rising wherever possible and excess shall be dumped into sea at the designated dumping areas identified based on mathematical model studies.	Noted. Portion of the dredged material was dumped in the sea.
(x)	To prevent discharge of sewage and other liquid waste including ballast into marine environment, adequate system for collection, treatment and disposal of liquid waste must be provided.	Noted for compliance.

(xi)	Necessary arrangements for the treatment of the effluents and solid waste must be made and it must be ensured that the untreated effluents and solid wastes are not discharged into the water or on the beach; and no effluent or solid waste shall be discharged on the beach.	Noted for compliance.
(xii)	The quality of treated effluents, solids wastes, emission and noise levels and the like, from the project area must conform to the standards laid down by the competent authorities including the Central or State Pollution Control Board and under the Environment (Protection) Act, 1986.	Being complied with. Monitoring of ambient air, marine water, noise levels were carried out during construction phase. The same will be continued during operation phase too.
(xiii)	The project proponent shall set up separate Environmental management cell for effective implementation of the stipulated environmental safeguards under the supervision of a Senior Executive.	Port is having Environmental Cell under HSE-Division of Marine Services Department, headed by General Manager (MS). The compliance of Environmental Management Plan of the Port is monitoring by Environmental Cell of HSE division. Port has engaged M/s. Nitya Laboratories (MoEF&CC recognized and NABL accredited laboratory to carry out regular environmental monitoring.
(xiv)	The commitment made by the proponent to the issues raised during Public Hearing shall be implemented by the Proponent.	Noted for compliance.
(xv)	Corporate Environment Responsibility: a) The Company shall have a well laid down Environment Policy approved by the Board of Directors. b) The Environment Policy shall prescribe for standard operating	Kamarajar Port Limited is having an Environmental Management System Policy. Noted. Noted.

	<p>process/producers to bring into focus any infringements / deviation / violation of the environmental or forest norms/conditions.</p> <p>c) The hierarchical system or Administrative Order of the company to deal with environmental issues and for ensuring compliance with the environmental clearance conditions shall be furnished.</p> <p>To have proper checks and balances, the company shall have a well laid down system of reporting of non-compliances/violations of environmental norms to the Board of Directors of the company and/or shareholders or stakeholders at large.</p>	<p>Noted.</p>
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B. General conditions

S.No	General Conditions	Compliance Status
(i)	Appropriate measures must be taken while understanding digging activities to avoid any likely degradation of water quality.	<p>Noted.</p> <p>Port is regularly monitoring the marine water quality during the construction activities.</p>
(ii)	Full support shall be extended to the officers of this Ministry/Regional Office at Chennai by the project proponent during inspection of the project for monitoring purposes by furnishing full details and action plan including action taken reports in respect of mitigation measures and other environmental protection activities.	<p>Noted.</p> <p>Full support will be extended to the officers of the Ministry/Regional office at Chennai.</p>
(iii)	A six-Monthly monitoring report shall need to be submitted by the project proponent to the Regional Office of this Ministry at Chennai regarding the	<p>Complied with.</p>

	implementation of the stipulated conditions.	
(iv)	Ministry of Environment, Forest & Climate Change or any other component authority may stipulate any additional conditions or modify the existing ones, if necessary in the interest of environment and the same shall be complied with.	Noted.
(v)	The Ministry reserves the right to revoke this clearance if any of the condition stipulated are not complied with the satisfaction of the Ministry.	Noted.
(vi)	In the event of a change in project profile or change in the implementation agency, a fresh reference shall be made to the Ministry of Environment, Forest & Climate Change.	There is no change in the project profile.
(vii)	The project proponent shall inform the Regional Office 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.	<p><u>Construction of Coal Berth No. 3</u> Coal berth No 3 for TNEB was planned for a capacity of 9 MTPA at an estimated cost of 209.68 crores. The agreement was signed with M/s. ITD Cementation India Ltd.,</p> <p><u>Date of financial closure- internal resources:</u> Date of final approval of the project by concerned authorities- KPL Board approved it on 9.6.2015</p> <p>Date of start of land development works- 2.6.2015.</p> <p><u>Construction of Coal Berth No. 4</u> Construction of Coal berth No 4 for TNEB was planned for a capacity of 9 MTPA at an estimated cost of 255.79 crores. The agreement was signed between M/s Afcons Infrastructure Ltd.,</p>

		<p><u>Date of financial closure - internal resources:</u> Date of final approval of the project by concerned authorities- KPL Board approved it on 21.2.2015 Date of start of land development works-19.8.2015.</p>
(viii)	A copy of the clearance letter shall be marked to concern Panchayat/local NGO, if any, from whom any suggestion/ representation has been made received while processing the proposal.	<p>Complied with. KPL has advertised in two local Newspapers informing that the project has been accorded with Environmental and CRZ clearance. The copy of the clearance letter was forwarded to the local Panchayat vide letter dated 26.3.2015.</p>
(ix)	Full support should be extended to the officers of this Ministry's Regional Office at Chennai and the offices of the Central and Tamil Nadu State Pollution control Board by the project 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.	Full support is being extended to the officers of Ministry of Environment, Forests & Climate Change.
(x)	The funds earmarked for environmental protection measures shall be kept in separate account and shall not be diverted for other purpose. Year-wise expenditure shall be reported to this Ministry and its concerned Regional Office.	Noted for compliance.
5	These stipulations would be enforced among others under the provisions of Water (Prevention and Control of Pollution) Act 1974, the Air (Prevention and Control of Pollution) Act 1981, the Environment (Protection) Act, 1986,	KPL is enforcing the provisions of Water (Prevention and Control of Pollution) Act 1974, the Air (Prevention and Control of Pollution) Act 1981 and the Environment (Protection) Act, 1986.

	the Public Liability (Insurance) Act, 1991 and EIA Notification 1994, including the amendments and rules made thereafter.	With regard to the Public Liability Insurance, Port has obtained 'Public Liability Insurance' through Oriental Insurance Company Ltd., vide Policy No:411400/22/2023/1, valid till 05/05/2024.
6	All other statutory clearances such as the approvals for storage of diesel 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 authority.	Presently, no diesel is stored inside the project area. Clearances from Fire Department, Chief Controller of explosives, Civil Aviation Department, Forest conservation Act are not applicable for the above project.
7	The project proponent shall advertise in at least two local Newspaper widely circulated in the region, one of which shall be in the vernacular language informing that the project has been accorded Environmental and CRZ clearance and copies of clearance letters are available with the Tamil Nadu State Pollution Control Board and may also be seen on the website of the Ministry of Environment, Forest & Climate Change at http://www.envfor.nic.in . The advertisement should be made within Seven 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 with. It was advertised in the vernacular Tamil and English newspapers on 25.3.2015 in the New Indian Express and Tamil Paper Dinamani.
8	This clearance is subject to final order of the Hon'ble Supreme court of India in the matter of Goa Foundation Vs. Union of India in Writ Petition (Civil) No.460 of 2004 as may be applicable to this project.	Noted.

9	Status of compliance to the various stipulated environmental conditions and environment safeguards will be uploaded by the project proponent in its website.	Complied with.
10	Any appeal against this clearance shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.	There is no appeal against this EC was made with National Green Tribunal. However, a case was filed before the Hon'ble National Green Tribunal [NGT] (SZ) vide application nos. 8/2016, 152/2016 & 198/2016 regarding dumping of dredged soil/debris in the CRZ area. The proceedings on the case are in progress.
11	A copy of the clearance letter shall be sent by the proponent to concerned Panchayat, ZillaParisad/Municipal Corporation, Urban Local Body and the Local NGO, if any, from whom suggestions/representations, if any, were received while processing the proposal. The clearance letter shall also be put on the website of the company by the proponent.	Complied with. The copy of the clearance letter was forwarded to local body. The copy of the clearance letter was also uploaded in KPL website.
12	The proponent shall upload the status of compliance of the stipulated Clearance conditions, including results of monitored data on their website and shall update the same periodically. It shall simultaneously be sent to the regional Office of MoEF, the respective Zonal Office of CPCB and the SPCB.	The compliance reports are sent to Regional office of MoEF&CC, O/o of District Environment Engineer, TNPCB and Member Secretary, TNPCB.
13	The environment statement for each financial year ending 31 st March in Form-V as is mandated to be submitted by the project proponent to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be put on the website of the company	Noted for compliance.

	along with the status of compliance of Clearance conditions and shall be sent to the respective Regional Office of MoEF&CC by e-mail.	
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Point wise compliance report to the conditions given in the Tamil Nadu Coastal Zone Management Authority letter No. 23187/EC.3/2014-1, dated 16.12.2014 for additional coal berths (CB3 & CB4), which are under construction.

1	There should not be any sea water intrusion or erosion on the adjacent coastal areas due to the proposed construction of two additional berths, dredging and also due to the dumping of dredged material.	<p>Complied with.</p> <p>There is no seawater intrusion. The berths are constructed inside the already existing two break waters.</p>
2	Dredged material should be dumped on the landward side and should not be dumped into sea (CRZ IV), intertidal area (CRZIB) of the Buckingham canal and also in the salt pan areas as the salt pan areas are declared as CRZ-IB (intertidal zone) as per approved coastal Zone management plan of Tamil Nadu.	<p>During the development of terminals and capital dredging process, KPL has dumped a quantity of 73000 cum of dredged materials at the south side of NCTPS road and at the west of Port Access Road. A case was filed before the Hon'ble National Green Tribunal [NGT] (SZ) vide application nos. 8/2016, 152/2016 & 198/2016 regarding dumping of dredged soil/ debris in the CRZ area. After hearing, Hon'ble NGT directed KPL to remove the dumped earth in the above said areas. KPL has removed the dumped material and informed the same to the Hon'ble NGT. However, the petitioner has raised objection before the Hon'ble NGT that KPL has not removed the materials fully.</p> <p>National Green Tribunal (NGT) vide order dated 20.05.2019 had constituted a committee to inspect and ascertain the present status of the unit (north Chennai Thermal Power station) in respect of fly ash disposal, the damage caused to the environment. The committee</p>

		<p>inspected the dredged material dumped area and submitted an assessment report to NGT on 17.01.2020. Based on assessment report of the committee, NGT vide orders dated 20.01.2020 had imposed the environmental compensation to KPL to the tune of Rs.8,34,60,000/- (Rupees Eight Crores Thirty Four Lakhs and Sixty Thousand only). KPL filed a petition for reviewing the above order dated 20.01.2020. Hon'ble NGT vide order dated 06.11.2020 reviewed and imposed an interim compensation of Rs.4,00,00,000/- (Rupees Four Crore only) instead of Rs.8,34,60,000/- and directed to deposit the amount within a period of 2 (Two) months with the Central Pollution Control Board (CPCB).</p> <p>KPL has filed a civil appeal before the Hon'ble Supreme Court of India. Hon'ble Supreme Court has issued stay on the petition vide its order dated 05.01.2021.</p>
3	<p>There should not be any impact of dispersal of dredged material on the adjacent L&T shipyard area especially the navigational channels of that shipyard.</p>	<p>National Institute of Ocean Technology (NIOT) had conducted modelling study to identify the marine disposal area for Ennore Port in 2004.</p> <p>NIOT had re-validated the impact of dredged material for further development in 2010.</p> <p>'Outcome of the 2010 Re-validation Study is as below.</p> <p><i>'The effect of dredge spoil is in line with earlier model with the plume moving in NNE-SSW direction and generally parallel to the coast line. The boundaries of L&T shipyard are sufficiently away from the path of</i></p>

		<p><i>modeled plume drift</i>'.</p> <p>The modeled sedimentation rate is 0.3m at dumping site and 0.1m after spreading at 11km away from dump site.</p>
4	A continuous proper air quality monitoring station should be under taken around the project area to implement corrective, mitigate measures immediately on the noticing of any adverse impact.	Noted for compliance during operation phase.
5	Necessary adequate preventive measures should be undertaken to maintain the air quality PM10 level at Ennore Port within the standards and it should not cross the prescribed limit and suitable plan on handling of coal in the project area shall be implemented.	Adequate pollution control measures will be implemented during the operational stage.
6	Necessary measures should be taken to control the noise level within the prescribed standard levels.	Adequate pollution control measures will be implemented during the operational stage.
7	Closed conveyor system with latest technology should be established for coal handling as indicated in the report.	Noted for compliance.
8	Green belt development shall be implemented.	Complied with.
9	There shall be no extraction of ground water	Complied with. No ground water is extracted inside the port for construction or for operational purpose. Only open dug well are made for horticulture purpose.
10	As indicated in the revised report sufficient allocation of funds should be made to carryout outdoor Environment Social welfare activities.	Noted.

Annexure-I**Environmental Mitigation Measures in Matrix format**

S. No	Component	Impact	Mitigation Measures
Construction Phase			
1.	Land	<ul style="list-style-type: none">• Change in topography of inner dock basin, which will be dredged and converted into marine berthing area.• Land pollution due to discharge of sewage and solid waste onto land.	<ul style="list-style-type: none">• Use of removed soil (top soil only) for green belt development.• No change in land use land cover is done as the proposed project site is located within port area, adjacent to the existing coal berths CB 1 and CB2.• Disposal of solid waste through authorized recyclers/ contractors.• Local labours are engaged.
2.	Water	<ul style="list-style-type: none">• Water pollution due to disposal of sewage and construction waste into water body.	<ul style="list-style-type: none">• No construction waste is disposed off into the water body.
3.	Air	<ul style="list-style-type: none">• Generation of PM2.5, PM10, CO, SO2, NO2	<ul style="list-style-type: none">• Use of water sprinklers.• Covering of construction and with sheets while transportation and storage.• Low sulphur content diesel for DG sets.• Regular servicing of vehicles and DG sets done.• Compulsory wearing of Personal Protective Equipment (PPE) like dust mask by workers ensured.
4.	Noise and Vibration	<ul style="list-style-type: none">• Increase in the noise level due to movement of vehicles and construction activities.	<ul style="list-style-type: none">• Regular servicing and maintenance of construction machineries, equipments and vehicles done to control noise.

		<ul style="list-style-type: none"> Vibration due to movement of vehicles and construction activities. 	<ul style="list-style-type: none"> Compulsory wearing of Personal Protective Equipment ensured. PPE like ear plugs or ear muff by workers ensured. The impact due to vibration from vehicular movement is insignificant. Anti-vibration gloves made of visco-elastic material will be compulsorily worn by workers exposed to hand vibration due to continuous hammering etc.
5.	Marine Environment	<ul style="list-style-type: none"> Increase in suspended solid concentration due to dredging in the marine water body. Change in shoreline. 	<ul style="list-style-type: none"> Usage of silt curtains to contain spread of suspended sediment in marine water body. Construction of coal berths are within the two breakwaters. Aspects relating to sediment cell and coastal erosion are not relevant. No change in shoreline.
6.	Biological <ul style="list-style-type: none"> Flora Fauna 	<ul style="list-style-type: none"> Site clearance. Disturbance due to increase in noise. 	<ul style="list-style-type: none"> Green belt development. No operations of heavy machinery.
7.	Socio-Economic	<ul style="list-style-type: none"> Employment generation. 	<ul style="list-style-type: none"> Local people were engaged by the contractors during construction.
Operation Phase:			
8.	Land	<ul style="list-style-type: none"> Pollution due to discharge of sewage. 	<ul style="list-style-type: none"> Sanitation facilities will be provided. Sewage will be collected in septic tank, and will be emptied regularly by the contractor.

9.	Water	<ul style="list-style-type: none"> • Consumption of water. • Contamination of water body by discharge of untreated sewage. • Contamination of water body due to discharge of contaminated storm water runoff. 	<ul style="list-style-type: none"> • Water consumption is only for domestic purpose. No process or manufacturing is taking place. • Sewage will be collected in septic tank, which will be emptied regularly by contractor. • Storm water drainage system.
10.	Air	<ul style="list-style-type: none"> • Coal dust generation. • Emission of air pollutants like CO, SO₂, NO_x from vehicles, heavy machineries and DG sets. 	<ul style="list-style-type: none"> • Installation of coal dust suppression mechanism. • Transportation of coal in closed conveyer system. • Dust masks for workers. • Regular servicing and maintenance of DG set and vehicles. • Air quality will be monitored.
11.	Noise and Vibration	<ul style="list-style-type: none"> • Operation of heavy machineries will result in generation of noise and vibration. 	<ul style="list-style-type: none"> • Ear muffs for workers working near noisy environment.
12.	Marine Environment	<ul style="list-style-type: none"> • Contamination of marine water and bottom sediment due to discharge/disposal of untreated sewage/garbage from the ships/port area into the marine environment. • Any spillage/ runoff from the coal unloading/handling area, windblown dust might also contaminate the marine water quality and sediment quality. 	<ul style="list-style-type: none"> • Coal will be transferred through elevated closed conveyer belt to the stack yard. • Water sprinkler will be installed at the unloading points. • No garbage will be disposed into the sea. The same will be collected by the port and disposed off.
13.	Biological <ul style="list-style-type: none"> • Flora • Fauna 	<ul style="list-style-type: none"> • Dust emission due to storage and handling of coal. 	<ul style="list-style-type: none"> • Coal dust suppression. • Green belt development.
14.	Socio-	<ul style="list-style-type: none"> • Employment opportunity. 	<ul style="list-style-type: none"> • Employment opportunity.

	Economic	<ul style="list-style-type: none"> • Increase in thermal power generation. 	<ul style="list-style-type: none"> • The coal is supplied to thermal power station for the generation of power.
15.	Occupational Health and Safety	<ul style="list-style-type: none"> • Generation of dust during handling and storage of coal leading to respiratory ailments. • Fire hazard due to coal handling and storage. 	<ul style="list-style-type: none"> • Usage of personal protective equipment like dust mask and safety goggle. • Safety training. • Display of visible signages at places of fire hazard. • Cordoning of coal handling area, transportation area and Storage area as No Smoking Zone.

KAMARAJAR PORT LIMITED



Compliance Report

On

Ministry's guidelines for

**“DEVELOPMENT OF THE FACILITIES ENVISAGED IN
THE PORT MASTER PLAN (PHASE III) BY
M/S KAMARAJAR PORT LIMITED”**

Point wise compliance report on Ministry's guidelines for Development of the facilities envisaged in the Port Master Plan(Phase III) by M/s Kamarajar Port Limited-Environmental clearance.

Ref: MoEF's Ltr No. F.No.11-51/2012-1A-111, dated 30.10.2018

Present expansion proposals- Phase III

Due to cargo demand and to effectively use the facilities already created, port proposed to develop the following projects (as shown in Table below) as envisaged in the Kamarajar Port master plan. The projects will be developed in a phased manner in line with the market requirements, well within the existing break waters and in the lands owned by Kamarajar Port.

Phase III projects

S.No	Description	Qty	Capacity
1	Automobile export/import terminal-	2Nos.	6 MTPA
2	Container terminal-1000m quay length (3berths)	3Nos.	24 MTPA
3	Marine Liquid Terminal	1No.	5 MTPA
4	IOC captive jetty	1No.	5 MTPA
5	Bulk terminal (coal/ore/other type)	2Nos.	18 MTPA
6	Multi cargo berth	1No.	2 MTPA
7	Associated capital dredging for the above projects	33.0 Million M ³	
Total No. of berths		10 Nos.	60 MTPA

Present status:

Port has obtained Consent To Establish for the following terminals:-

1. Automobile Export/Import Terminal-3MMTPA capacity-1Nos. (Consent Nos.2101138790505 & 2101238790505, dated 02.08.2021) under Air & Water Acts.
2. IOC captive jetty-5MMTPA-1Nos. (Consent Nos.2101131814699 & 2101231814699, dated 10.04.2021) under Air & Water Acts.

The consent To Establish for the above said terminal mentioned at Sl.No.1 is inclusive of the associated dredging of 33 million cubic meters for all the Master Plan Projects.

The construction of the above said projects and their associated facilities are being carried out. The terminals are expected to put in operation in the November 2023 & 2024 respectively.

Remaining projects as stipulated in the Environmental Clearance letter will be taken in a phased manner.

Compliance report to the Conditions stipulated vide Ltr No. F.No.11-51/2012-1A-111, dated 30.10.2018

S.No	MoEF Guidelines	Compliance Status
A.	Specific Conditions	
(i)	<p>The project is recommended for grant of Environmental and CRZ Clearance subject to final outcome of cases [Shri R. Ravimaran, Chennai (NGT Case No.8 of 2016) and Meena Thanthai K. R. Selvaraj Kumar, Chennai (NGT Case No.152 of 2016)] which are sub-judice in the Hon'ble National Green Tribunal (NGT) South Zone, Chennai, Tamil Nadu.</p>	<p>Noted.</p> <p>During the development of terminals and capital dredging process, KPL has dumped a quantity of 73000 cum of dredged materials at the south side of NCTPS road and at the west of Port Access Road. A case was filed before the Hon'ble National Green Tribunal [NGT] (SZ) vide application nos. 8/2016, 152/2016 & 198/2016 regarding dumping of dredged soil/debris in the CRZ area.</p> <p>After hearing, Hon'ble NGT directed KPL to remove the dumped earth in the above said areas. KPL has removed the dumped material and informed the same to the Hon'ble NGT. However, the petitioner has raised objection before the Hon'ble NGT that KPL has not removed the materials fully.</p> <p>National Green Tribunal (NGT) vide order dated 20.05.2019 had constituted a committee to inspect and ascertain the present status of the unit (north Chennai Thermal Power station) in respect of fly ash disposal, the damage caused to the environment. The committee inspected the dredged material dumped area and submitted an assessment report to NGT on 17.01.2020. Based on assessment report of the committee, NGT vide orders dated 20.01.2020 had imposed the environmental compensation to KPL to the tune of Rs.8,34,60,000/- (Rupees Eight Crores Thirty Four Lakhs and Sixty Thousand only). KPL filed a petition for reviewing the above order</p>

		<p>dated 20.01.2020. Hon'ble NGT vide order dated 06.11.2020 reviewed and imposed an interim compensation of Rs.4,00,00,000/- (Rupees Four Crore only) instead of Rs.8,34,60,000/- and directed to deposit the amount within a period of 2 (Two) months with the Central Pollution Control Board (CPCB).</p> <p>KPL has filed a civil appeal before the Hon'ble Supreme Court of India. Hon'ble Supreme Court has issued stay on the petition vide its order dated 05.01.2021.</p>
(ii)	Construction activity shall be carried out strictly according to the provisions of the CRZ Notification, 2011. No construction work other than those permitted in Coastal Regulation Zone Notification shall be carried out in Coastal Regulation Zone area.	Noted and being complied with.
(iii)	All the recommendations and conditions specified by the Tamil Nadu Coastal Zone Management Authority who has recommended the project vide letter No. 12311/EC.3/2017-1 dated 20.07.2017 shall be complied with.	Please find enclosed the compliance report as Annexure-1
(iv)	The project proponent shall ensure that the project is in consonance with the new CZMP prepared by the State Government under the provisions of CRZ Notification, 2011.	Noted.
(v)	Consent to Establish/Operate for the project shall be obtained from the State Pollution Control Board as required under the Air (Prevention and Control of Pollution) Act, 1981 and the Water (Prevention and Control of Pollution) Act, 1974.	<p>Noted.</p> <p>Consent To Establish/Consent Operate for the following terminals were obtained from TNPCCB.</p> <p>1. Consent TO Operate-Automobile Export/Import Terminal-3MMTPA capacity-1Nos.</p>

		<p>(Consent No.2304254957162, dated 10.12.2023)</p> <p>2. Consent To Establish-IOC captive Jetty-5MMTPA-1Nos. (Consent No.2101231814699, dated 10.04.2021)</p>
(vi)	<p>As per the latest map no development zone shall be maintained 100m on either side of the Kosasthalaiyar river. Besides 50m buffer zone shall be maintained from the mangrove boundary as marked in the combined map indicating the actual field position taking into consideration both the maps i.e. CRZ Map of Anna University prepared for KPL in 2016 and draft CZMP of TNCZMA 2018.</p>	Noted and being complied with.
(vii)	<p>Though the area including the portion of Kosasthalaiyar river has been transferred to KPL, no activity shall be carried out in this zone by maintaining a buffer of 100m since water bodies and wet lands are more important than the development activity.</p>	Noted and will be complied with.
(viii)	<p>The area in the southern side meant for Commercial building, office and parking terminal shall be relocated to some other area on the northern side (within the existing port limit where sufficient land is available).</p>	Noted.
(ix)	<p>The referred Culverts i.e. C1 to C6 as marked in the combined map indicating the actual field position taking into consideration both the maps i.e. CRZ Map of Anna University prepared for KPL in 2016 and draft CZMP of TNCZMA2018 shall be widened to facilitate the free flow of water.</p>	Noted.

(x)	The Project proponent shall ensure that no creeks or rivers are blocked due to any activities at the project site and free flow of water is maintained.	Noted.
(xi)	Dredging shall not be carried out during the fish breeding season.	Noted.
(xii)	Dredging, etc shall be carried out in the confined manner to reduce the impacts on marine environment including turbidity.	Noted.
(xiii)	Dredged material shall be disposed safely in the designated areas.	Noted. Port has identified an area of 6000m x 6000m in the open sea through mathematical modeling studies for the disposal of dredged material.
(xiv)	Shoreline should not be disturbed due to dumping. Periodical study on shoreline changes shall be conducted and mitigation carried out, if necessary. The details shall be submitted along with the six monthly monitoring report.	Noted.
(xv)	While carrying out dredging, an independent monitoring shall be carried out by Government Agency/Institute to check the impact and necessary measures shall be taken on priority basis if any adverse impact is observed.	Noted.
(xvi)	The fresh water requirement (1000 KLD) for the present project will be met from Chennai Metro water supply. However if additional quantity is required the same will be met through outsourced external agency. However Rain water harvesting shall be followed as per local byelaw and harvested water shall be stored, treated and reused to reduce the additional water	Noted. With regard to construction activities of IOCL Captive Jetty water is being procured from outsourced external agency by the construction contractor. With regard to Automobile Export/ Import Terminal-II, during

	<p>requirement since Chennai is a water deficient area, besides use of water efficient appliances.</p>	<p>construction activities, water is outsourced from external agency by the construction contractor. Further, during operation phase, the water requirement will be met from the CMWSSB approved quantity.</p> <p>Rain Water Harvesting system is being provided at 5acres plot for the proposed facilities being constructed therein.</p>
(xvii)	<p>The concerns expressed during the public hearing held by the Kamarajar Port Limited needs to be addressed during the project implementation. These would also cover socio-economic and ecological and environmental concerns, besides commitment by the management towards employment opportunities.</p>	<p>Noted.</p>
(xviii)	<p>Marine ecological studies as carried out by the accredited consultant (Indomer Coastal Hydraulics Pvt Ltd), Chennai and its mitigation measures for protection of phytoplankton, zooplanktons, Macrobenthos etc as given in the EIA-EMP Report shall be complied with in letter and spirit.</p>	<p>Noted.</p>
(xix)	<p>A copy of the Marine and riparian biodiversity management plan duly validated by the State Biodiversity Board shall be submitted before commencement of implementation.</p>	<p>A copy of the duly validated Bio-Diversity Management Plan was submitted to RO, MoEF&CC, vide letter dated.02.06.2022.</p>
(xx).	<p>A continuous monitoring programme covering all the seasons on various aspects of the coastal environs need to be undertaken by a competent organization available in the State or by entrusting to the National</p>	<p>Continuous monitoring of various environmental parameters is being carried out by engaging a NABL accredited & MoEF recognized laboratory, M/s.Nitya Laboratories. The monthly monitoring reports are</p>

	<p>Institutes/reowned Universities/accredited Consultant with rich experiences in marine science aspects. The monitoring should cover various physicochemical parameters coupled with biological indices such as microbes, plankton, benthos and fishes on a periodic basis during construction and operation phase of the project. Any deviations in the parameters shall be given adequate care with suitable measures to conserve the marine environment and its resources.</p>	<p>submitted to TNPCB regularly.</p> <p>The same will be continued for the present project also during operation phase.</p>
(xxi)	<p>Continuous online monitoring of for air and water covering the total area shall be carried out and the compliance report of the same shall be submitted along with the 6 monthly compliance report to the regional office of MOEF&CC.</p>	<p>Noted and will be complied with once the projects are implemented.</p> <p>With regard to IOCL Captive Jetty, monthly water quality, AAQ and stack monitoring test reports pertaining to IOCL projects are attached herewith.</p> <p>With regard to Automobile Export/Import Terminal-II, continuous monitoring of various environmental parameters is being carried out by engaging a NABL accredited & MoEF recognized laboratory, M/s.Nitya Laboratories. The monthly monitoring reports are submitted to TNPCB regularly.</p>
(xxii)	<p>Effective and efficient pollution control measures like covered conveyors/stacks (coal, iron ore and other bulk cargo) with fogging/back filters and water sprinkling commencing from ship unloading to stacking to evacuation shall be undertaken. Coal and iron ore stack yards shall be bounded by thick two tier green belt with proper drains and wind barriers wherever necessary.</p>	<p>Noted and the same will be complied with.</p>

(xxiii)	Marine ecology shall be monitored regularly also in terms of sea weeds, sea grasses, mudflats, sand dunes, fisheries, echinoderms, shrimps, turtles, corals, coastal vegetation, mangroves and other marine biodiversity components as part of the management plan. Marine ecology shall be monitored regularly also in terms of all micro, macro and mega floral and faunal components of marine biodiversity.	Noted and will be complied with. KPL has prepared Bio-Diversity Management Plan and submitted to Tamilnadu Biodiversity Board (TNBB) for validation and approval. TNBB has accorded approval vide their letter dated 31.12.2021. The Bio-Diversity Management Plan will be implemented as per the timelines indicated.
(xxiv)	The project proponents would also draw up and implement a management plan for the prevention of fires due to handling of coal.	Will be complied with. With regard to IOCL captive Jetty, only POL/LPG products are handled in the facility. Fire prevention for the IOCL Jetty is covered under QRA studies carried out. The jetty has been provided with facilities as per the requirements of OISD 156, 2017 revision.
(xxv)	Spillage of fuel / engine oil and lubricants from the construction site are a source of organic pollution which impacts marine life, particularly benthos. This shall be prevented by suitable precautions and also by providing necessary mechanisms to trap the spillage.	Noted necessary precautions will be taken to trap and combat spillage.
(xxvi)	Necessary arrangements for the treatment of the effluents and solid wastes/facilitation of reception facilities under MARPOL must be made and it must be ensured that they conform to the standards laid down by the competent authorities including the Central or State Pollution Control Board and under the Environment (Protection) Act, 1986. The provisions of Solid Waste Management Rules, 2016.	Being carried out and the same will be extended to the other projects also during construction and operation.

	E- Waste Management Rules, 2016, and Plastic Waste Management Rules, 2016 shall be followed.	
(xxvii)	Compliance to Energy Conservation Building Code (ECBC-2017) shall be ensured for all the building complexes. Solar/wind or other renewable energy shall be installed to meet energy demand of 1% equivalent.	<p>Complied with.</p> <p>With regard to IOCL Captive Jetty, the project comprises of Solar plant of capacity 100KW peak which is more than 1% of energy demand (700KVA) of IOCL.</p> <p>Kamarajar Port has installed 300KWp solar power plant in its premises. Port draws 50% of its captive usage through solar power. In line with ECBC-2017, all the appliances installed at KPL are replaced with higher rated capacity appliances.</p>
(xxviii)	All the recommendations mentioned in the rapid risk assessment report, disaster management plan and safety guidelines shall be implemented.	Noted.
(xxix)	Measures should be taken to contain, control and recover the accidental spills of fuel and cargo handle.	Noted.
(xxx).	Necessary arrangement for general safety and occupational health of people should be done in letter and spirit.	Noted and being complied with.
(xxxi)	All the mitigation measures submitted in the EIA report shall be prepared in a matrix format and the compliance for each mitigation plan shall be submitted to the RO, MoEF&CC along with half yearly compliance report.	Noted and being complied with.
(xxxii)	KPL will strengthen their Environmental Management Cell.	Port is having Environmental Cell under HSE-Division of Marine Services Department, headed by General Manager (MS). The compliance of Environmental Management Plan of the Port is monitoring by Environmental Cell of HSE

		<p>division. However, port is in the process of strengthening its Environmental Management Cell.</p> <p>Port is monitoring the environment. Port has engaged M/s. Nitya Laboratories (MoEF& CC recognized and NABL accredited laboratory) for sampling and testing of various environmental parameters.</p>
(xxxiii)	KPL Shall consider more employment opportunities to the local people.	Noted for compliance.
(xxxiv)	<p>As per the Ministry's Office Memorandum F.No. 22-65/2017-IA.III dated 1stMay 2018, and proposed by the project proponent, an amount of Rs. 15 Crore (@0.25% of project Cost) shall be earmarked under Corporate Environment Responsibility (CER) for the activities such as strengthening of environmental cell by new recruitments, development of green fields, environmental monitoring surveys, solid waste management, sanitation and sewage facilities, widening of culverts etc.</p> <p>The activities proposed under CER shall be restricted to the affected area around the project. The entire activities proposed under the CER shall be treated as project and shall be monitored. The monitoring report shall be submitted to the regional office as a part of half yearly compliance report, and to the District Collector. It should be posted on the website of the project proponent.</p>	Noted and will be complied with.
(xxxv)	The project is recommended for grant of Environmental and CRZ Clearance subject to final outcome/legal opinion	Noted.

	<p>on the order dated 22nd November, 2017 of Hon'ble NGT in the Original Application No. 424 of 2016 (Earlier O.A.No. 169 of 2015) and Original Application No. 11 of 2014 in the matter of M/s. Mehdad & Anr. Vs. Ministry of Environment, Forests & Climate Change & Ors. and Shamsunder Shridhar Dalvi & Ors. Vs. Govt. of India & Ors.</p>	
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B. General Conditions:

(i)	<p>Appropriate measures must be taken while undertaking digging activities to avoid any likely degradation of water quality.</p>	<p>Appropriate measures are being undertaken to avoid degradation of the water quality.</p>
(ii)	<p>Full support shall be extended to the officers of this Ministry/ Regional Office at Chennai by the project proponent during inspection of the project for monitoring purposes by furnishing full details and action plan including action taken reports in respect of mitigation measures and other environmental protection activities.</p>	<p>Will be complied with.</p>
(iii)	<p>A six-monthly monitoring report shall need to be submitted by the project proponents to the Regional Office of this Ministry at Chennai regarding the implementation of the stipulated conditions.</p>	<p>Being complied with.</p>
(iv)	<p>Ministry of Environment, Forest and Climate Change or any other competent authority may stipulate any additional conditions or modify the existing ones, if necessary in the interest of environment and the same shall be complied with.</p>	<p>Noted and shall be complied with.</p>
(v)	<p>The Ministry reserves the right to revoke this clearance if any of the conditions stipulated are not complied</p>	<p>Noted.</p>

	with the satisfaction of the Ministry.	
(vi)	In the event of a change in project profile or change in the implementation agency, a fresh reference shall be made to the Ministry of Environment, Forest and Climate Change.	Noted.
(vii)	The project proponents shall inform the Regional Office 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.	Noted and will be informed accordingly.
(viii)	A copy of the clearance letter shall be marked to concerned Panchayat/local NGO, if any, from whom any suggestion/ representation has been made received while processing the proposal.	Complied with. It was Advertised in two local Newspapers informing that the project has been accorded Environmental and CRZ clearance. Further, the Commissioner, Minjur panchayat union, Ponneri taluk, vide KPL's letter dated 22.11.2018.
(ix)	A copy of this clearance letter shall also be displayed on the website of the concerned State Pollution Control Board. The Clearance letter shall also be displayed at the Regional Office, District Industries centre and Collector's Office/ Tehsildar's office for 30 days.	Noted.
6	All other statutory clearances such as the approvals for storage of diesel 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.	Presently, no diesel is stored inside the project area. Clearances from Fire Department, Chief Controller of explosives, Civil Aviation Department, Forest conservation Act are not applicable for the above said project. However, one of the project operator M/s.IOCL has obtained the PESO License for the terminal vide approval No. G-22(47)183, dated 17.08.2021.

7	<p>The project proponent shall advertise in at least two local Newspapers widely circulated in the region, one of which shall be in the vernacular language informing that the project has been accorded Environmental and CRZ Clearance and copies of clearance letters are available with the State Pollution Control Board and may also be seen on the website of the Ministry of Environment, Forest and Climate Change at http://www.envfor.nic.in. The advertisement should be made within Seven 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.</p>	<p>Complied with.</p> <p>It was advertised in the vernacular Tamil and English newspapers on 14.11.2018 in the Indian Express and Tamil paper Dinamani.</p>
8	<p>This clearance is subject to final order of the Hon'ble Supreme Court of India in the matter of Goa Foundation Vs. Union of India in Writ Petition (Civil) No.460 of 2004 as may be applicable to this project.</p>	<p>Noted.</p>
9	<p>Any appeal against this clearance shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.</p>	<p>Noted.</p>
10	<p>Status of compliance to the various stipulated environmental conditions and environmental safeguards will be uploaded by the project proponent in its website.</p>	<p>Noted.</p>
11	<p>A copy of the clearance letter shall be sent by the proponent to concerned Panchayat, Zilla Parisad/Municipal Corporation, Urban Local Body and the Local NGO, if any, from whom suggestions/representations, if any, were received while processing the</p>	<p>Complied with.</p> <p>The copy of the clearance letter was forwarded to the Commissioner, Minjur panchayat union, Ponneri Taluk vide KPL letter dated 22.11.2018.</p>

	proposal. The clearance letter shall also be put on the website of the company by the proponent.	
12	The proponent shall upload the status of compliance of the stipulated Clearance conditions, including results of monitored data on their website and shall update the same periodically. It shall simultaneously be sent to the Regional Office of MoEF&CC, the respective Zonal Office of CPCB and the SPCB.	Noted. The compliance reports shall be sent to Regional office of MoEF & CC, O/o District Environment Engineer, TNPCB and Member Secretary, TNPCB.
13	The project proponent shall also submit six monthly reports on the status of compliance of the stipulated Clearance conditions including results of monitored data (both in hard copies as well as by e-mail) to the respective Regional Office of MoEF&CC, the respective Zonal Office of CPCB and the SPCB.	Noted.
14	The environmental statement for each financial year ending 31st March in Form-V as is mandated to be submitted by the project proponent to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be put on the website of the company along with the status of compliance of Clearance conditions and shall also be sent to the respective Regional Office of MoEF&CC by e-mail.	Noted.
15	The above stipulations would be enforced among others under the provisions of Water (Prevention and Control of Pollution) Act 1974, the Air (Prevention and Control of Pollution) Act 1981, the Environment (Protection) Act, 1986, the Public Liability	Port has obtained Public Liability Insurance through 'The Oriental Insurance Company Ltd.', vide Policy No: 411400/22/2023/1, valid till 05/05/2024.

	(Insurance) Act, 1991 and EIA Notification 1994, including the amendments and rules made thereafter.	
16	These issues with the approval of the Competent Authority.	Noted.

Directions of TNSCZMA	Annexure-I
<p>1 The proposed activities involve capital dredging in port basin and Navigational channel resulting in a quantity of 33 MCM of dredged material and the dredging is proposed to be carried out for a period of 5 years. A dredge disposal site at a depth of 25-50m depth has been identified for disposal of dredged material amounting to 30 MCM and the disposal will be made in a phased manner for a period of 5 years. The disposal site measures about 30 sq km and the dumped dredged material is expected to rise the sea bed level from 0.5 to 1 m after completion of the dumping. The Authority felt that blanketing of 30 sq km seabed area with a cover of dredge soil upto 1m may affect drastically the benthic fauna of the area. Using the models, the dump area size should be designed in such a way that it extends from 20km or more from the 50m depth in the offshore area with a narrow band of dumping area say 100-200m width and low discharge rate, leading to marginal increase of sea bed level. Such an arrangement may minimize the damaging effect on fauna. Fine scale bathymetry data should be collected before initiation of dumping in the proposed site and repeated annually till completion of the dumping. A report in this regard has to be submitted to the Authority as a part of Compliance report that will be submitted to the MoEF & CC, GoI after obtaining Environmental Clearance.</p>	<p>The area for offshore disposal was extended to 6000m x 6000m spread over the depth of 25 to 55m CD as per the revised study and recommendation of State Coastal Zone management Authority.</p>

2	It should be ensured that the proposed construction of Truss does not affect free flow of water.	Noted and the same will be complied with.
3	No interference of any kind to be done in Mangroves and Salt marsh areas, including construction of coal conveyor belt.	Noted.
4	Area under wetlands as elaborated by the EIA report need to be considered and managed as wetlands, and not reclaimed or built up in future.	Noted.
5	In addition to the mangroves, the existing patch of sand dune/beach vegetation within the Kamarajar Port Limited (KPL) premises needs to be scientifically studied, covering aspects such as checklist of flora and fauna, diversity, representativeness, population trends, regeneration and recruitment trends, percentage coverage of invasive alien species and presence of breeding populations. The proposed afforestation/greenbelt programme needs to be based on the above assessment, with habitat specific greening plans being developed and implemented.	KPL has prepared Bio-Diversity Management Plan for Kamarajar Port Limited” through M/s L&T Infrastructure Engineers Ltd., and submitted to Tamilnadu Biodiversity Board (TNBB) for validation and approval. TNBB has accorded the approval vide their letter dated 31.12.2021. The Bio-Diversity Management Plan will be implemented as per the timelines indicated.
6	The afforestation/greenbelt programme needs to be representative of the typical vegetation of the Ennore estuary, covering all the major habitat types including salt marshes. It is further recommended that a set of biological indicators be identified based on the scientific assessment and be used for monitoring the efficiency of the afforestation/greening programme.	KPL has prepared Bio-Diversity Management Plan for Kamarajar Port Limited” through M/s L&T Infrastructure Engineers Ltd., and submitted to Tamilnadu Biodiversity Board (TNBB) for validation and approval. TNBB has accorded the approval vide their letter dated 31.12.2021. The Bio-Diversity Management Plan will be implemented as per the timelines indicated.

7	It is also recommended that impact assessment studies be commissioned that cover a select number of species as also the different phases of project execution. The Kamarajar Port Limited shall develop and implement ecological restoration programme with the support of the Tamil Nadu Forest Department, especially addressing wetlands and wetland bio-diversity.	KPL has prepared Bio-Diversity Management Plan for Kamarajar Port Limited” through M/s L&T Infrastructure Engineers Ltd., and submitted to Tamilnadu Biodiversity Board (TNBB) for validation and approval. TNBB has accorded the approval vide their letter dated 31.12.2021. The Bio-Diversity Management Plan will be implemented as per the timelines indicated.
8	In view of the location of the project within the landscape that encompasses a perennial river and its estuarine complex, it is recommended that a dedicated programme be developed and implemented on the hydrological services of the landscape, notably flood mitigation.	Noted.
9	The concerns expressed during the public hearing that was held by the kamarajar Port need to be addressed during the project implementation. These would cover socio-economic as also ecological and environmental concerns.	Noted.
10	Oil Spill Contingency Plan should be prepared and a team of trained men formed to be available 24 X 7 to tackle any disasters.	KPL has prepared an Oil Spil Contignecy plan in line with NOS-DCP guidelines. Port is also having a team of trained manpower available on 24 x 7 basis to tackle any disasters.
11	A detailed plan for the source segregation and disposal of solid waste (Bio-degradable/non-degradable etc.) generated shall be formulated. Further solid wastes such as plastics may be collected and disposed as per rules. ETP should be provided and treatment done meticulously.	Kamarajar Port has engaged a contractor for collection, segregation and disposal of solid wastes. Solid waste including plastic generated from the port and ships are being collected, segregated and sent to various approved recyclers for further beneficial use. ETP/STP is provided as per the requirements in accordance with TNPCB norms.



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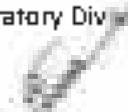
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Test Report

Report No	GC/ANAL/2734 A /2023 - 2024	Report Date	31.07.2023		
Customer Name & Address	M/s. ITD Cementation India Limited Captive POL / LNG Jetty Site, IOCL, KPL, Ennore (DM051922)				
Survey Description	AAQ Monitoring Plot - 1	Sample Received on	26.07.2023		
Survey conducted by	GCSPL	Test Commenced on	26.07.2023		
Survey conducted on	25.07.2023 to 26.07.2023 (24hrs)	Test Completed on	28.07.2023		
Ambient Temperature °C	31	% Relative Humidity	65		
S No	PARAMETERS	UNITS	RESULTS	REFERENCE METHODS	MAAQ Standards (Industrial, Residential & Rural Area)
1	PM ₁₀	µg/m ³	61	IS 5182 : Part 23 - 2006	1001
2	PM _{2.5}	µg/m ³	22	IS 5182 : Part 24 - 2019	50
3	Oxides of Sulphur as SO ₂	µg/m ³	7.5	IS 5182 : Part 2 - 2001	80
4	Oxides of Nitrogen as NO ₂	µg/m ³	16.8	IS 5182 : Part 6 - 2006	80
5	Lead as Pb	µg/m ³	BDL (DL:0.5)	IS 5182 : Part 22 - 2004	1
6	Carbon monoxide as CO	mg/m ³	BDL (DL:1.0)	IS 5182 : Part 10 - 1999	4
7	Ozone as O ₃	µg/m ³	BDL (DL:2.0)	IS 5182 - Part 9 - 1974	180
8	Ammonia as NH ₃	µg/m ³	BDL (DL: 2.0)	IS 5182 : Part 25 - 2018	400
9	Benzene as C ₆ H ₆	µg/m ³	BDL (DL: 1)	IS 5182 : Part 11 - 2006	5
10	Benzo (a) pyrene	ng/m ³	BDL (DL: 0.1)	IS 5182 : Part 12 - 2004	1
11	Arsenic as As	ng/m ³	BDL (DL: 2)	GCS/Lab/SOP/089	6
12	Nickel as Ni	ng/m ³	BDL (DL: 5)	IS 5182 : Part 26 - 2020	20
BDL: Below Detection Limit; DL: Detection Limit					
Remarks: The above sample tested parameters are within the CPCB Limits.					
					For Green Chem Solutions Pvt. Ltd (Laboratory Division)
					 Authorized Signatory

End of Report



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Test Report

Report No	GCS/AAQ/ 2734 B /2023 - 2024		Report Date	31.07.2023	
Customer Name & Address	M/s. ITD Cementation India Limited Captive POL / LNG Jetty Site, IOCL, KPL, Ennore (DM051922)				
Survey Description	AAQ Monitoring - 5 Acre	Sample Received on	26.07.2023		
Survey conducted by	GCSPL	Test Commenced on	26.07.2023		
Survey conducted on	25.07.2023 to 26.07.2023 (24hrs)	Test Completed on	28.07.2023		
Ambient Temperature °C	31	% Relative Humidity	65		
S No	PARAMETERS	UNITS	RESULTS	REFERENCE METHODS	MAAQ Standards (Industrial, Residential & Rural Area)
1	PM ₁₀	µg/m ³	64	IS 5182 : Part 23 - 2006	100
2	PM _{2.5}	µg/m ³	26	IS 5182 : Part 24 - 2019	60
3	Oxides of Sulphur as SO ₂	µg/m ³	8.1	IS 5182 : Part 2 - 2001	80
4	Oxides of Nitrogen as NO ₂	µg/m ³	17.3	IS 5182 : Part 6 - 2006	80
5	Lead as Pb	µg/m ³	BDL (DL:0.5)	IS 5182 : Part 22 - 2004	1
6	Carbon monoxide as CO	mg/m ³	BDL (DL:1.0)	IS 5182 : Part 10 - 1999	4
7	Ozone as O ₃	µg/m ³	BDL (DL:2.0)	IS 5182 - Part 9 - 1974	180
8	Ammonia as NH ₃	µg/m ³	BDL (DL: 2.0)	IS 5182 : Part 25 - 2018	400
9	Benzene as C ₆ H ₆	µg/m ³	BDL (DL: 1)	IS 5182 : Part 11 - 2006	5
10	Benzo (a) pyrene	ng/m ³	BDL (DL: 0.1)	IS 5182 : Part 12 - 2004	1
11	Arsenic as As	ng/m ³	BDL (DL: 1)	GCS/Lab/SDP/089	6
12	Nickel as Ni	ng/m ³	BDL (DL: 5)	IS 5182 : Part 26 - 2020	20

BDL: Below Detection Limit DL: Detection Limit

Remarks: The above sample tested parameters are within the CPCB Limits

For Green Chem Solutions Pvt. Ltd

(Laboratory Division)

Authorized Signatory

End of Report



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Test Report

Report No.	GCS/AAQ/ 2734 C /2023 - 2024			Report Date	31.07.2023
Customer Name & Address	M/s. ITO Cementation India Limited Captive POL / LNG Jetty Site, IOCL, KPL, Ennore (DM051922)				
Survey Description	AAQ Monitoring Land Fall	Sample Received on	26.07.2023		
Survey conducted by	GCSPL	Test Commenced on	26.07.2023		
Survey conducted on	25.07.2023 to 26.07.2023 (24hrs)	Test Completed on	29.07.2023		
Ambient Temperature °C	31	% Relative Humidity	65		
S.No	PARAMETERS	UNITS	RESULTS	REFERENCE METHODS	NAAQ Standards (Industrial, Residential & Rural Area)
1	PM ₁₀	µg/m ³	55	IS 5182 : Part 23 - 2006	100
2	PM _{2.5}	µg/m ³	21	IS 5182 : Part 24 - 2019	60
3	Oxides of Sulphur as SO ₂	µg/m ³	6.9	IS 5182 : Part 2 - 2001	80
4	Oxides of Nitrogen as NO ₂	µg/m ³	16.4	IS 5182 : Part 6 - 2006	80
5	Lead as Pb	µg/m ³	BDL (DL: 0.5)	IS 5182 : Part 22 - 2004	1
6	Carbon monoxide as CO	mg/m ³	BDL (DL: 1.0)	IS 5182 : Part 10 - 1999	4
7	Ozone as O ₃	µg/m ³	BDL (DL: 2.0)	IS 5182 - Part 9 - 1974	180
8	Ammonia as NH ₃	µg/m ³	BDL (DL: 2.0)	IS 5182 : Part 25 - 2018	400
9	Benzene as C ₆ H ₆	µg/m ³	BDL (DL: 1)	IS 5182 : Part 11 - 2006	5
10	Benzo (a) pyrene	ng/m ³	BDL (DL: 0.1)	IS 5182 : Part 12 - 2004	1
11	Arsenic as As	ng/m ³	BDL (DL: 1)	GCS/Lab/SQ2/089	6
12	Nickel as Ni	ng/m ³	BDL (DL: 5)	IS 5182 : Part 25 - 2020	20
BDL: Below Detection Limit DL: Detection Limit					
Remarks: The above mentioned tested parameters are within the CPCB Limits.					
					For Green Chem Solutions Pvt. Ltd (Laboratory Division) Authorized Signatory

End of Report



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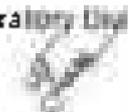
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Test Report

Report No	GC5/NLM/ 2736 /2023 -2024	Report Date	31.07.2023				
Customer Name & Address	M/s. ITD Cementation India Limited Captive POL / LNG Jetty Site, IOCL, KPL, Ennore (DM051922)						
Survey Description	Ambient Noise Level Monitoring	Survey Date	25.07.2023				
Survey Conducted by	GCSP	Data Received On	25.07.2023				
S.No	Locations	Day Time			Night Time		
		L _{eq}	L _{max}	L _{min}	L _{eq}	L _{max}	L _{min}
1	Plot - 1	65.2	69.1	57.8	60.4	65.6	54.9
2	S Acre	68.7	71.6	63.1	62.5	66.2	57.4
3	Land Fall	66.8	68.5	60.3	60.9	64.9	57.2
Unit	dB(A)						
TNPCB Standards (Industrial Area)	75.0			70.0			
Reference Method	GC5/LAB/SOP/Noise/001						
Remarks: The above sample tested parameters are within the TNPCB Limits for the above tested locations.							
							For Green Chem Solutions PVT LTD (Laboratory Division)  Authorized Signatory

End of Report



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Test Report

Report No	GCS/SM/ 2735 A /2023 - 2024		Report Date	30.07.2023	
Customer Name & Address	M/s. ITD Cementation India Limited Captive POL / LNG Jetty Site, IOCL, KPL, Ennore (DM051922)				
Sample Description	Stack Monitoring - Plot - 1 - DG Set 320 KVA	Sample Received on	25.07.2023		
Sample Collected by	GCSPL	Test Commenced on	26.07.2023		
Sample Collected Date	25.07.2023	Test Completed on	28.07.2023		
Sl No	Description	Unit	Results	Reference Method	Limits as per CPCB Specification
1	Total Stack Height From 'G' Level	m	3.66	---	---
2	Port Hole Height From 'G' Level	m	3.66	---	---
3	Stack Diameter	m	0.25	---	---
4	Ambient Temperature	°C	28	IS:11255 Part 3 : 2008 (Reaff:2018)	---
5	Stack Temperature	°C	189	IS:11255 Part 3 : 2008 (Reaff:2018)	---
6	Flue gas velocity	m/sec	18.56	IS:11255 Part 3 : 2008 (Reaff:2018)	---
7	Gaseous Emission	Nm ³ /hr	761	IS:11255 Part 3 : 2008 (Reaff:2018)	---
8	Particulate Matter (PM)	g/kw-hr	0.059	IS:11255 Part 1:1985 (Reaff:2019)	≤ 0.2
9	Sulphur Di-Oxide (SO ₂)	mg/ Nm ³	7.6	IS:11255 Part 2:1985 (Reaff:2019)	---
10	Oxides of Nitrogen (NO _x +HC)	g/kw-hr	0.49	IS:11255 Part 7 : 2005 (Reaff:2017)	4.0 (NO _x +HC)
	Total Hydro Carbon (HC)		BDL(D.L:1.0)		
11	Carbon Monoxide	g/kw-hr	BDL(D.L:0.2)	IS 13270 : 1992 (Reaff:2009)	≤ 3.5
BDL: Below Detection Limit DL: Detection Limit					
Remarks: The above tested parameters are within the CPCB Limits.					
					For Green Chem Solutions Private Limited (Laboratory Division)
					Authorized Signatory

End of Report



GREEN CHEM SOLUTIONS PVT LTD

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Laboratory Division

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Test Report

Report No.	GCS/SM/ 2735 B /2023 - 2024		Report Date	31.07.2023	
Customer Name & Address	M/s. ITD Cementation India Limited Captive POL / LNG Jetty Site, IOCL, KPL, Ennore (DM051922)				
Sample Description	Stack Monitoring - 5 Acre - DG Set 320 KVA	Sample Received on	25.07.2023		
Sample Collected by	GCSPL	Test Commenced on	26.07.2023		
Sample Collected Date	25.07.2023	Test Completed on	28.07.2023		
Sl No	Description	Unit	Results	Reference Method	Limits as per CPCB Specification
1	Total Stack Height From 'G'Level	m	3.66	---	---
2	Port Hole Height From 'G'Level	m	3.66	---	---
3	Stack Diameter	m	0.15	---	---
4	Ambient Temperature	°C	28	IS:11255 Part 3 : 2008 (Reaff:2018)	---
5	Stack Temperature	°C	181	IS:11255 Part 3 : 2008 (Reaff:2018)	---
6	Flue gas velocity	m/sec	17.28	IS:11255 Part 3 : 2008 (Reaff:2018)	---
7	Gaseous Emission	Nm ³ /hr	720	IS:11255 Part 3 : 2008 (Reaff:2018)	---
8	Particulate Matter (PM)	g/kw-hr	0.049	IS:11255 Part 1 1985 (Reaff:2019)	≤ 0.2
9	Sulphur Di-Oxide (SO ₂)	mg/ Nm ³	8.4	IS:11255 Part 2:1985 (Reaff:2019)	---
10.	Oxides of Nitrogen (NO _x)	g/kw-hr	0.60	IS:11255 Part 7 : 2015 (Reaff:2017)	4.0 {NO _x +HC}
	Total Hydro Carbon (HC)		BDL(D.L.:1.0)		
11	Carbon Monoxide	g/kw-hr	0DL(D.L.:0.2)	IS:13270 : 1992 (Reaff:2019)	≤ 5
BDL: Below Detection Limit, DL: Detection Limit					
Remarks: The above tested parameters are within the CPCB Limits.					
For Green Chem. Solutions Private Limited (Laboratory Division)					
 Authority Signatory					

End of Report



GREEN CHEM SOLUTIONS PVT LTD

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Laboratory Division

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Test Report

Report No.	GCS/SM/ 2735 C /2023 - 2024	Report Date	31.07.2023		
Customer Name & Address	M/s. ITD Cementation India Limited Captive POL / LNG Jetty Site, IOCL, KPL, Ennore (DM051922)				
Sample Description	Stack Monitoring - Land Fall - DG Set 200 KVA	Sample Received on	25.07.2023		
Sample Collected by	GCSPL	Test Commenced on	26.07.2023		
Sample Collected Date	25.07.2023	Test Completed on	28.07.2023		
Sl.No	Description	Unit	Results	Reference Method	Limits as per CPCB Specification
1.	Total Stack Height From 'G' Level	m	3.66	---	---
2.	Port Hole Height From 'G' Level	m	3.66	---	---
3.	Stack Diameter	m	0.10	---	---
4.	Ambient Temperature	°C	28	IS 11255 Part 3 : 2008 (Reaff:2018)	---
5.	Stack Temperature	°C	158	IS:11255 Part 3 : 2008 (Reaff:2018)	---
6.	Flue gas velocity	m/sec	16.57	IS:11255 Part 3 : 2008 (Reaff:2018)	---
7.	Gaseous Emission	Nm ³ /hr	321	IS-11255 Part 3 : 2008 (Reaff:2018)	---
8.	Particulate Matter (PM)	g/kw-hr	0.045	IS.11255 Part 1:1985 (Reaff:2019)	≤ 0.2
9.	Sulphur Di-Oxide (SO ₂)	mg/ Nm ³	4.9	IS 11255 Part 2:1985 (Reaff:2019)	---
10.	Oxides of Nitrogen (NO _x)	g/kw-hr	0.44	IS:11255 Part 7 : 2005 (Reaff:2019)	4.0 (NO _x + HCl)
	Total Hydro Carbon (HC)		BDL(D.L.:1.0)	EPA 429	
11.	Carbon Monoxide	g/kw-hr	BDL(D.L.:0.2)	IS:13270 . 1992 (Reaff:2019)	≤ 3.5
BDL: Below Detection Limit. DL: Detection Limit					
Remarks: The above tested parameters are within the CPCB limits.					
					For Green Chem Solutions Private Limited (Laboratory Division)
					Authorized Signatory

End of Report



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Test Report

Report No	GCS/SM/ 2735 D /2023 - 2024		Report Date	31.07.2023	
Customer Name & Address	M/s. ITD Cementation India Limited Captive POL / LNG Jetty Site, IOCL, KPL, Ennore (DM051922)				
Sample Description	Stack Monitoring - Plant - 1 - DG Set 200 KVA	Sample Received on	25.07.2023		
Sample Collected by	GCSPI	Test Commenced on	26.07.2023		
Sample Collected Date	25.07.2023	Test Completed on	28.07.2023		
Sl No	Description	Unit	Results	Reference Method	Limits as per CPCB Specification
1	Total Stack Height From 'G' Level	m	3.66	-	-
2	Port Hole Height From 'G' Level	m	3.66	-	-
3	Stack Diameter	m	0.15	-	-
4	Ambient Temperature	°C	28	IS:11255 Part 3 : 2008 (Reaff:2018)	-
5	Stack Temperature	°C	161	IS:11255 Part 4 : 2008 (Reaff:2018)	-
6	Flue gas velocity	m/sec	14.93	IS:11255 Part 3 : 2008 (Reaff:2018)	-
7	Gaseous Emission	Nm ³ /hr	651	IS:11255 Part 3 : 2008 (Reaff:2018)	-
8	Particulate Matter (PM)	g/kw-hr	0.045	IS:11255 Part 1:1985 (Reaff:2019)	≤ 0.2
9	Sulphur Di-Oxide (SO ₂)	mg/ Nm ³	6.5	IS:11255 Part 2:1985 (Reaff:2019)	-
10	Oxides of Nitrogen (NO _x)	g/kw-hr	0.46	IS:11255 Part 7 : 2005 (Reaff:2019)	4.0 (NO _x + HC)
	Total Hydro Carbon (HC)		BDL(D.L:1.0)	EPA 429	
11	Carbon Monoxide	g/kw-hr	BDL(D.L:0.2)	IS:13270 : 1992 (Reaff:2019)	≤ 3.5
BDL: Below Detection Limit DL: Detection Limit					
Remarks: The above tested parameters are within the CPCB Limits.					
For Green Chem Solutions Private Limited (Laboratory Division)					 Authorized Signatory

End of Report



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Laboratory Division

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Test Report

Report No	GCS/AAQ/ 2931 A / 2023 - 2024	Report Date	29.08.2023		
Customer Name & Address	M/s. ITO Cementation India Limited Captive PDL / LNG Jetty Site, IOCL, KPL, Ennore (DM051922)				
Survey Description	AAQ Monitoring – North Break Water	Sample Received on	23.08.2023		
Survey conducted by	GCSPL	Test Commenced on	23.08.2023		
Survey conducted on	23.08.2023 to 23.08.2023 (24hrs)	Test Completed on	25.08.2023		
Ambient Temperature °C	31	% Relative Humidity	65		
S.No	PARAMETERS	UNITS	RESULTS	REFERENCE METHODS	NAAQ Standards (Industrial, Residential & Rural Area)
1	PM ₁₀	µg/m ³	63	IS 5187 : Part 23 - 2006	100
2	PM _{2.5}	µg/m ³	23	IS 5182 : Part 24 - 2019	60
3	Oxides of Sulphur as SO ₂	µg/m ³	7.7	IS 5182 : Part 2 - 2001	80
4	Oxides of Nitrogen as NO ₂	µg/m ³	17.1	IS 5182 : Part 6 - 2006	80
5	Lead as Pb	µg/m ³	BDL (DL:0.5)	IS 5187 : Part 22 - 2004	1
6	Carbon monoxide as CO	mg/m ³	BDL (DL:1.0)	IS 5182 : Part 10 - 1999	4
7	Ozone as O ₃	µg/m ³	BDL (DL:2.0)	IS 5182 - Part 9 - 1974	180
8	Ammonia as NH ₃	µg/m ³	BDL (DL: 2.0)	IS 5182 : Part 25 - 2018	400
9	Benzene as C ₆ H ₆	µg/m ³	BDL (DL: 1)	IS 5182 : Part 11 - 2006	5
10	Benzo (a) pyrene	ng/m ³	BDL (DL: 0.1)	IS 5182 : Part 12 - 2004	1
11	Arsenic as As	ng/m ³	BDL (DL: 1)	GCS/Lab/SOP/089	6
12	Nickel as Ni	ng/m ³	BDL (DL: 5)	IS 5187 : Part 26 - 2020	20
BDL Below Detection Limit DL: Detection Limit					
Remarks: The above sample tested parameters are within the CPCB Limits.					
					For Green Chem Solutions Pvt. Ltd (Laboratory Division)
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End of Report



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Laboratory Division

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Test Report

Report No	GCS/AAQ/ 2931 B /2023 - 2024	Report Date	29.08.2023		
Customer Name & Address	M/s. ITD Cementation India Limited Captive POL / LNG Jetty Site, IOCL, KPL, Ennore (DM051922)				
Survey Description	AAQ Monitoring – 5 Acre	Sample Received on	23.08.2023		
Survey conducted by	GCSPL	Test Commenced on	23.08.2023		
Survey conducted on	23.08.2023 to 23.08.2023 (24hrs)	Test Completed on	25.08.2023		
Ambient Temperature C	31	% Relative Humidity	65		
S.No	PARAMETERS	UNITS	RESULTS	REFERENCE METHODS	NAAQ Standards (Industrial, Residential & Rural Area)
1	PM ₁₀	µg/m ³	61	IS 5182 - Part 23 - 2006	100
2	PM _{2.5}	µg/m ³	25	IS 5182 - Part 24 - 2019	60
3	Oxides of Sulphur as SO ₂	µg/m ³	7.8	IS 5182 : Part 2 - 2001	80
4	Oxides of Nitrogen as NO ₂	µg/m ³	17.1	IS 5182 : Part 6 - 2006	80
5	Lead as Pb	µg/m ³	BDL (DL:0.5)	IS 5182 : Part 22 - 2004	1
6	Carbon monoxide as CO	mg/m ³	BDL (DL:1.0)	IS 5182 : Part 10 - 1999	4
7	Ozone as O ₃	µg/m ³	BDL (DL:2.0)	IS 5182 - Part 9 - 1974	180
8	Ammonia as NH ₃	µg/m ³	BDL (DL: 2.0)	IS 5182 : Part 25 - 2018	400
9	Benzene as C ₆ H ₆	µg/m ³	BDL (DL: 1)	IS 5182 : Part 11 - 2006	5
10	Benzo (a) pyrene	ng/m ³	BDL (DL: 0.1)	IS 5182 : Part 12 - 2004	1
11	Arsenic as As	ng/m ³	BDL (DL: 1)	GCS/Lab/SOP/089	6
12	Nickel as Ni	ng/m ³	BDL (DL: 5)	IS 5182 : Part 26 - 2020	20
BDL: Below Detection Limit DL: Detection Limit					
Remarks: The above sample tested is/are are within the CPCB limits.					
					For Green Chem Solutions Pvt. Ltd (Laboratory Division)
					 Authorized Signatory

End of Report

Note: The results refer only to the samples tested. This test report shall not be reproduced without approval of the laboratory.
The samples will not be retained for more than one Month from the date of issue of test report.



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Laboratory Division

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Test Report

Report No	GCS/AAQ/ 2931 C /2023 - 2024		Report Date	29.08.2023	
Customer Name & Address	M/s. ITD Cementation India Limited Captive PDL / LNG Jetty Site, IOCL, KPL, Ennore (DM051922)				
Survey Description	AAQ Monitoring - Land Fall	Sample Received on	23.08.2023		
Survey conducted by	GCSPL	Test Commenced on	23.08.2023		
Survey conducted on	23.08.2023 to 23.08.2023 (24hrs)		Test Completed on	25.08.2023	
Ambient Temperature °C	31	% Relative Humidity	65		
S.No	PARAMETERS	UNITS	RESULTS	REFERENCE METHODS	NAAQ Standards (Industrial, Residential & Rural Area)
1	PM ₁₀	µg/m ³	58	IS 5182 : Part 23 - 2005	100
2	PM _{2.5}	µg/m ³	22	IS 5182 : Part 24 - 2019	60
3	Oxides of Sulphur as SO ₂	µg/m ³	6.6	IS 5182 : Part 2 - 2001	80
4	Oxides of Nitrogen as NO ₂	µg/m ³	16.2	IS 5182 : Part 6 - 2006	80
5	Lead as Pb	µg/m ³	BDL (DL:0.5)	IS 5182 : Part 22 - 2004	1
6	Carbon monoxide as CO	mg/m ³	BDL (DL:1.0)	IS 5182 : Part 10 - 1999	4
7	Ozone as O ₃	µg/m ³	BDL (DL:2.0)	IS 5182 - Part 9 - 1974	180
8	Ammonia as NH ₃	µg/m ³	BDL (DL: 2.0)	IS 5182 : Part 25 - 2018	400
9	Benzene as C ₆ H ₆	µg/m ³	BDL (DL: 1)	IS 5182 : Part 11 - 2006	5
10	Benzo (a) pyrene	ng/m ³	BDL (DL: 0.1)	IS 5182 : Part 12 - 2004	1
11	Arsenic as As	ng/m ³	BDL (DL: 1)	GCS/Lab/SOP/089	6
12	Nickel as Ni	ng/m ³	BDL (DL: 5)	IS 5182 : Part 26 - 2020	20
BDL: Below Detection Limit DL: Detection Limit					
Remarks: The above sample tested parameters are within the OPCS Limits.					
					For Green Chem Solutions Pvt. Ltd (Laboratory Division)
					 Authorised Signatory

End of Report

Note: The results relate only to the samples tested. This test report shall not be reproduced without approval of the Laboratory. The sample will not be retained for more than one month from the date of issue of test report.



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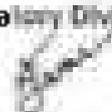
Laboratory Division

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Test Report

Report No	GCS/NLM/ 2932 /2023 - 2024	Report Date	29.08.2023				
Customer Name & Address	M/s. ITD Cementation India Limited Captive POL / LNG Jetty Site, IOCL, KPL, Ennore (DM051922)						
Survey Description	Ambient Noise Level Monitoring	Survey Date	23.08.2023				
Survey Conducted by	GCSPL	Data Received On	23.08.2023				
S.No	Locations	Day Time			Night Time		
		L _{eq}	L _{max}	L _{min}	L _{eq}	L _{max}	L _{min}
1	Plot - 1	66.4	70.2	58.5	61.3	66.5	55.1
2	5 Acre	67.6	71.1	62.8	61.9	65.7	56.8
3	Land Fall	67.5	69.4	61.5	61.6	65.2	58.4
Unit	dB(A)						
TNPCB Standards (Industrial Area)	75.0			70.0			
Reference Method	GCS/LAB/SOP/Noise/001						
Remarks: The above sample tested parameters are within the TNPCB Limits for the above tested locations.							
							For Green Chem Solutions PVT LTD (Laboratory Division)  Authorized Signatory

End of Report



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Test Report

Report No.	GCS/SM/ 2933 A /2023 - 2024		Report Date	28.08.2023	
Customer Name & Address	M/s. ITD Cementation India Limited Captive PDL / LNG Jetty Site, IOCL, KPL, Ennore (DM051922)				
Sample Description	Stack Monitoring - Plot - 1 - DG Set 320 KVA	Sample Received on	23.08.2023		
Sample Collected by	GCSPL	Test Commenced on	23.08.2023		
Sample Collected Date	23.08.2023	Test Completed on	25.08.2023		
Sl.No	Description	Unit	Results	Reference Method	Limits as per CPCB Specification
1.	Total Stack Height From 'G' Level	m	3.66	---	---
2.	Port Hole Height From 'G' Level	m	3.66	---	---
3.	Stack Diameter	m	0.15	---	---
4.	Ambient Temperature	°C	31	IS:11255 Part 3 : 2008 {Reaff:2018}	---
5.	Stack Temperature	°C	182	IS:11255 Part 3 : 2008 {Reaff:2018}	---
6.	Flue gas velocity	m/sec	10.6 2	IS:11255 Part 3 : 2008 {Reaff:2018}	---
7.	Gaseous Emission	Nm ³ /hr	816	IS:11255 Part 3 : 2008 {Reaff:2018}	---
8.	Particulate Matter (PM)	g/kw-hr	0.057	IS:11255 Part 1:1985 {Reaff:2019}	≤ 0.2
9.	Sulphur Di-Oxide (SO ₂)	mg/ Nm ³	7.4	IS:11255 Part 2:1985 {Reaff:2019}	---
10.	Oxides of Nitrogen (NO _x +HC)	g/kw-hr	0.46	IS:11255 Part 7 : 2005 {Reaff:2017}	4.0 {NO _x +HC}
	Total Hydro Carbon (HC)		BDL{D.L:1.0}	EPA 419	
11.	Carbon Monoxide	g/kw-hr	BDL{D.L:0.2}	IS:13270 : 1992 {Reaff:2019}	≤ 3.5
BDL: Below Detection Limit DL: Detection Limit					
Remarks: The above tested parameters are within the CPCB limits.					
					For Green Chem Solutions Private Limited (Laboratory Division)
					Authorized Signatory

End of Report

Note: This report is valid only for the samples tested. This test report shall not be reproduced without approval of the Laboratory. The samples will not be retained for more than one Month from the date of issue of test report.



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Test Report

Report No.	GCS/SM/ 2933 C /2023 - 2024		Report Date	29.08.2023	
Customer Name & Address	M/s. ITD Cementation India Limited Captive POL / LNG Jetty Site, IOCL, KPL, Ennore (DM051922)				
Sample Description	Stack Monitoring - 5 Acre - DG Set 200 KVA	Sample Received on	23.08.2023		
Sample Collected by	GCSPL	Test Commenced on	23.08.2023		
Sample Collected Date	23.08.2023	Test Completed on	25.08.2023		
Sl No	Description	Unit	Results	Reference Method	Limits as per CPCB Specification
1	Total Stack Height From 'G' Level	m	2.74	---	---
2	Port Hole Height From 'G' Level	m	2.74	---	---
3	Stack Diameter	m	0.15	---	---
4	Ambient Temperature	°C	31	IS:11255 Part 3 : 2008 (Reaff:2018)	---
5	Stack Temperature	°C	172	IS:11255 Part 3 : 2008 (Reaff:2018)	---
6	Flue gas velocity	m/sec	15.94	IS:11255 Part 3 : 2008 (Reaff:2018)	---
7	Gaseous Emission	Nm ³ /hr	678	IS:11255 Part 3 : 2008 (Reaff:2018)	---
8	Particulate Matter (PM)	g/kw-hr	0.041	IS:11255 Part 1:1985 (Reaff:2019)	≤ 0.2
9	Sulphur Di-Oxide (SO ₂)	mg/ Nm ³	6.9	IS:11255 Part 2:1985 (Reaff:2019)	---
10	Oxides of Nitrogen (NO _x)	g/kw-hr	0.63	IS:11255 Part 7 : 2005 (Reaff:2019)	4.0 (NO _x + hC)
	Total Hydro Carbon (HC)		BDL(D.L:1.0)	EPA 429	
11	Carbon Monoxide	g/kw-hr	BDL(D.L:0.2)	IS:13270 : 1992 (Reaff:2019)	≤ 3.5
BOL: Below Detection Limit DL: Detection Limit					
Remarks: The above tested parameters are within the CPCB Limits					
					For Green Chem Solutions Private Limited (Laboratory Division)

End of Report

Note: The results relate only to the samples tested. This test report shall not be reproduced without approval of the laboratory. The samples will not be retained for more than one month from the date of issue of test report.



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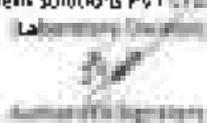
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Test Report

Report No.	GCS/W/ 3036 /2023-2024		Report Date	29.08.2023
Company Name & Address	M/s. ITO Cementation India Limited Captive PDL / LNG Jetty Site, IOCL, KPL, Ennore (DMOS1922)			
Sample Description	Water - Land Fall - Sea Water	Sample Received on	22.08.2023	
Sample Collected by	GCS/PI	Test Commenced on	27.08.2023	
Sample Collected Date	22.08.2023	Test Completed on	28.08.2023	
S.No	Parameter	Units	Results	Reference method
1	pH @ 25°C		8.39	IS 3025 Part 11 : 1983 (Reaff.2017)
2	Temperature	°C	28	IS 3025 Part 9 : 1984 (Reaff.2017)
3	Particle size of Suspended Solids		Passes through 850 µ I.S. Sieve	IS 3025 Part 20: 1984 (Reaff.2017)
4	Total Dissolved Solids	mg/L	32589	IS 3025 Part 16 : 1994 (Reaff.2017)
5	Total Suspended Solids	mg/L	23	IS 3025 Part 17 : 1984 (Reaff.2017)
6	BOD 3 days @ 27°C	mg/L	4.0	IS 3025 Part 44 : 1993 (Reaff. 2019)
7	Oil & Grease	mg/L	7.0	IS 3025 Part 39 - 1991 (Reaff. 2019)
8	COD	mg/L	252	IS 3025 Part 58 - 2006 (Reaff. 2019)
9	Chloride as Cl	mg/L	8514	IS 3025 Part 32 : 1988 (Reaff. 2019)
10	Sulphate as SO ₄	mg/L	1238	IS 3025 Part 24 : 1988 (Reaff. 2019)
11	Total Residual Chlorine	mg/L	BDL (DL : 0.1)	IS 3025 Part 26 : 1986 (Reaff. 2019)
12	Free ammonia as NH ₃	mg/L	BDL (DL : 0.1)	IS 3025 Part 34 - 1988 (Reaff.2019)
13	Ammonical Nitrogen as N	mg/L	1.53	IS 3025 Part 34 - 1988 (Reaff.2019)
14	Total Kjeldahl Nitrogen as N	mg/L	1.92	IS 3025 Part 34 - 1988 (Reaff.2019)
15	Arsenic as As	mg/L	BDL (DL : 0.01)	APHA 23 rd Edition 3114 B
16	Mercury as Hg	mg/L	BDL (DL : 0.01)	APHA 23 rd Edition 3112 B
17	Lead as Pb	mg/L	BDL (DL : 0.05)	APHA 23 rd Edition 3112 B
18	Zinc as Zn	mg/L	BDL (DL : 0.05)	APHA 23 rd Edition 3113 B
19	Copper as Cu	mg/L	BDL (DL : 0.05)	APHA 23 rd Edition 3111 B
20	Cadmium as Cd	mg/L	BDL (DL : 0.01)	APHA 23 rd Edition 3111 B

For Green Chem Solutions PVT. LTD.
Laboratory Division

Analyst: [Signature]



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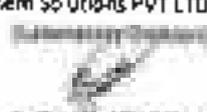
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Test Report

Report No.	GCS/W/ 3036 /2023-2024	Report Date	29.08.2023	
Company Name & Address	M/s. LTD Cementation India Limited Captive PDL / LNG Jetty Site, IQCL, KPL, Ennore (DM051922)			
Sample Description	Water - Land Fall - Sea Water	Sample Received on	22.08.2023	
Sample Collected by	GCS/	Test Commenced on	22.08.2023	
Sample Collected Date	22.08.2023	Test Completed on	28.08.2023	
S no	Parameter	Units	Results	Reference method
21	Nickel as Ni	mg/L	NDL (DL : 0.05)	APHA 23 rd Edition 3111 B
22	Total Chromium as Cr	mg/L	BDL (DL : 0.05)	APHA 23 rd Edition 3111 B
23	Hexavalent Chromium as Cr ^{VI}	mg/L	BDL (DL : 0.05)	APHA 23 rd Edition 3500-Cr
24	Selenium as Se	mg/L	BDL (DL : 0.01)	APHA 23 rd Edition 3114 B
25	Boron as B	mg/L	0.47	APHA 23 rd Edition 4500 B/B
26	Percent Sodium	%	81	GCS/LAB/SOP/040
27	Residual Sodium Carbonate	me/L	Nil	IS 15624 - 1986
28	Cyanide as CN	mg/L	BDL (DL : 0.01)	APHA 23 rd Edn 4500-CN
29	Fluoride as F	mg/L	4.21	IS 3025 Part 60:2008 (Reaff.2019)
30	Dissolved Phosphate as PO ₄	mg/L	BDL (DL : 0.01)	IS 3025 Part 31 - 1988 (Reaff.2019)
31	Sulphide as S	mg/L	BDL (DL : 0.5)	IS 3025 Part 29 - 1986 (Reaff.2019)
32	Pesticides	mg/L	Nil	LSEPA
33	Phenolic compounds as	mg/L	BDL (DL : 0.001)	IS 3025 Part 43 - 1992 (Reaff.2019)
Bacteriological Parameters				
34	Fecal Coliform	MPN/100ml	<1.8	APHA 23 rd Edn 9221 E
For Green Chem Solutions PVT LTD				
				

Page No. 2 of 2

End of Report

1. This report is valid only for the samples tested. This test method shall not be used for tests without approval of the laboratory. The samples should be analyzed for multiple parameters within the period of validity of test report.



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Test Report

Report No	GCS/AAQ/ 3028 A /2023-2024	Report Date	03.10.2023		
Customer Name & Address	M/s. ITD Cementation India Limited Captive POL / LNG Jetty Site, IOCL, KPL, Ennore (DM051922)				
Sample Description	AAQ Monitoring - North Break Water	Sample Received on	28.09.2023		
Survey conducted by	GCSPL	Test Commenced on	28.09.2023		
Survey conducted on	27.09.2023 to 28.09.2023 (24hrs)	Test Completed on	03.10.2023		
Ambient Temperature C	31	% Relative Humidity	65		
S.No	PARAMETERS	UNITS	RESULTS	REFERENCE METHODS	NAAQ Standards (Industrial, Residential & Rural Area)
1	PM ₁₀	µg/m ³	67	IS 5182 : Part 23 - 2006	100
2	PM _{2.5}	µg/m ³	26	IS 5182 : Part 24 - 2019	60
3	Oxides of Sulphur as SO ₂	µg/m ³	8.2	IS 5182 : Part 2 - 2001	80
4	Oxides of Nitrogen as NO ₂	µg/m ³	17.9	IS 5182 : Part 6 - 2006	80
5	Lead as Pb	µg/m ³	BDL (DL:0.5)	IS 5182 : Part 22 - 2004	1
6	Carbon monoxide as CO	mg/m ³	BDL (DL:1.0)	IS 5182 : Part 10 - 1999	4
7	Ozone as O ₃	µg/m ³	BDL (DL:2.0)	IS 5182 - Part 9 - 1974	180
8	Ammonia as NH ₃	µg/m ³	BDL (DL: 2.0)	IS 5182 : Part 25 - 2018	400
9	Benzene as C ₆ H ₆	µg/m ³	BDL (DL: 1)	IS 5182 : Part 11 - 2006	5
10	Benzo (a) pyrene	ng/m ³	BDL (DL: 0.1)	IS 5182 : Part 12 - 2004	1
11	Arsenic as As	ng/m ³	BDL (DL: 1)	GCS/lab/SOP/089	6
12	Nickel as Ni	ng/m ³	BDL (DL: 5)	IS 5182 : Part 26 - 2020	20
BDL: Below Detection Limit DL: Detection Limit					
Remarks: The above samples tested parameters are within the CPCB Limits.					
					For Green Chem Solutions Pvt Ltd (Laboratory Division)  Authorized Signatory

End of Report

Note: The results relate only to the samples tested. This test report shall not be reproduced without approval of the Laboratory.
The samples will not be retained for more than one Month from the date of issue of test report.



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Test Report

Report No.	GCS/AAQ/ 3028 B /2023-2024		Report Date	03.10.2023	
Customer Name & Address	M/s. ITD Cementation India Limited Captive POL / LNG Jetty Site, IOCL, KPL, Ennore (DM051922)				
Survey Description	AAQ Monitoring – 5 Acre	Sample Received on	28.09.2023		
Survey conducted by	GCSPL	Test Commenced on	28.09.2023		
Survey conducted on	27.09.2023 to 28.09.2023 (24hrs)	Test Completed on	03.10.2023		
Ambient Temperature °C	31	% Relative Humidity	65		
S.No	PARAMETERS	UNITS	RESULTS	REFERENCE METHODS	NAAC Standards (Industrial, Residential & Rural Area)
1	PM ₁₀	µg/m ³	66	IS 5182 : Part 23 - 2006	100
2	PM _{2.5}	µg/m ³	29	IS 5182 : Part 24 - 2019	60
3	Oxides of Sulphur as SO ₂	µg/m ³	8.4	IS 5182 : Part 2 - 2001	80
4	Oxides of Nitrogen as NO ₂	µg/m ³	18.3	IS 5182 : Part 6 - 2006	80
5	Lead as Pb	µg/m ³	BDL (DL:0.5)	IS 5182 : Part 22 - 2004	1
6	Carbon monoxide as CO	mg/m ³	BDL (DL:1.0)	IS 5182 : Part 10 - 1999	4
7	Ozone as O ₃	µg/m ³	BDL (DL:2.0)	IS 5182 - Part 9 - 1974	180
8	Ammonia as NH ₃	µg/m ³	BDL (DL: 2.0)	IS 5182 : Part 25 - 2018	400
9	Benzene as C ₆ H ₆	µg/m ³	BDL (DL: 1)	IS 5182 : Part 11 - 2006	5
10	Benzo (a) pyrene	ng/m ³	BDL (DL: 0.1)	IS 5182 : Part 12 - 2004	1
11	Arsenic as As	ng/m ³	BDL (DL: 1)	GCS/Lab/SOP/089	6
12	Nickel as Ni	ng/m ³	BDL (DL: 5)	IS 5182 : Part 26 - 2020	20
BDL: Below Detection Limit DL: Detection Limit					
Remarks: The above sample tested parameters are within the CPCB limits.					
For Green Chem Solutions Pvt. Ltd					
(Laboratory Division)					
Authorized Signatory					

End of Report



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Laboratory Division

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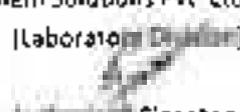
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Test Report

Report No	GCS/AAQ/ 3028 C /2023-2024	Report Date	03.10.2023		
Customer Name & Address	M/s. ITO Cementation India Limited Captive POL / LNG Jetty Site, IOCL, KPL, Ennore (DM051922)				
Survey Description	AAQ Monitoring – Land Fall	Sample Received on	28.09.2023		
Survey conducted by	GCSPL	Test Commenced on	28.09.2023		
Survey conducted on	27.09.2023 to 28.09.2023 (24hrs)	Test Completed on	03.10.2023		
Ambient Temperature °C	31	% Relative Humidity	65		
S.No	PARAMETERS	UNITS	RESULTS	REFERENCE METHODS	NAAQ Standards (Industrial Residential & Rural Area)
1	PM ₁₀	µg/m ³	56	IS 5182 : Part 23 - 2006	100
2	PM _{2.5}	µg/m ³	19	IS 5182 : Part 24 - 2019	60
3	Oxides of Sulphur as SO ₂	µg/m ³	7.5	IS 5182 : Part 2 - 2001	80
4	Oxides of Nitrogen as NO ₂	µg/m ³	16.7	IS 5182 : Part 6 - 2006	80
5	Lead as Pb	µg/m ³	BDL (DL:0.5)	IS 5182 : Part 22 - 2004	1
6	Carbon monoxide as CO	mg/m ³	BDL (DL:1.0)	IS 5182 : Part 10 - 1999	4
7	Ozone as O ₃	µg/m ³	BDL (DL:2.0)	IS 5182 - Part 9 - 1974	180
8	Ammonia as NH ₃	µg/m ³	BDL (DL: 2.0)	IS 5182 : Part 25 - 2013	400
9	Benzene as C ₆ H ₆	µg/m ³	BDL (DL: 1)	IS 5182 : Part 11 - 2006	5
10	Benzo (a) pyrene	ng/m ³	BDL (DL: 0.1)	IS 5182 : Part 12 - 2004	1
11	Arsenic as As	ng/m ³	BDL (DL: 1)	GCS/Lab/SOP/089	6
12	Nickel as Ni	ng/m ³	BDL (DL: 5)	IS 5182 : Part 26 - 2020	20
BDL: Below Detection Limit DL: Detection Limit					
Remarks: The above sample tested parameters are within the CPEB Limits					
					For Green Chem Solutions Pvt Ltd (Laboratory Division)
					 Authorized Signatory

End of Report

Note: The results relate only to the samples tested. This test report shall not be reproduced without approval of the Laboratory. The sample will not be retained for more than one month from the date of issue of test report.



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Laboratory Division

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Test Report

Report No	GCS/NLM/ 3029 /2023-2024	Report Date	03.10.2023				
Customer Name & Address	M/s. ITD Cementation India Limited Captive POL / LNG Jetty Site, IDCL, KPL, Ennore (DMOS1922)						
Survey Description	Ambient Noise Level Monitoring	Survey Date	27.09.2023				
Survey Conducted by	GCSPL	Data Received On	28.09.2023				
S.No.	Locations	Day Time			Night Time		
		L_{eq}	L_{max}	L_{min}	L_{eq}	L_{max}	L_{min}
1	Plot - 1	65.8	69.1	57.6	61.5	65.3	54.9
2	5 Acre	67.1	70.4	62.5	62.3	66.0	57.4
3	Land Fall	66.4	68.9	61.0	60.7	64.9	56.9
Unit	dB(A)						
TNPSB Standards (Industrial Area)	75.0			70.0			
Reference Method	GCS/LAB/SOP/Noise/001						
Remarks: The above sample tested parameters are within the TNPSB Limits for the above tested locations.							
							For Green Chem Solutions Pvt. Ltd (Laboratory Division) Author:  Signatory

End of Report



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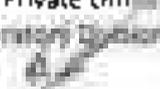
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Test Report

Report No.	GCS/SM/3030 A/2023-2024		Report Date	03.10.2023	
Customer Name & Address	M/s. ITD Cementation India Limited Captive POL / LNG Jetty Site, IOCL, KPL, Ennore (DM051922)				
Sample Description	Stack Monitoring - 5 Acre - DG Set 200 KVA	Sample Received on	28.09.2023		
Sample Collected by	GCSPL	Test Commenced on	28.09.2023		
Sample Collected Date	27.09.2023	Test Completed on	03.10.2023		
Sl.No	Description	Unit	Results	Reference Method	Limits as per CPCB Specification
1.	Total Stack Height From 'G' Level	m	2.74	---	---
2.	Port Hole Height From 'G' Level	m	2.74	---	---
3.	Stack Diameter	m	0.15	---	---
4.	Ambient Temperature	°C	29	IS:11255 Part 3 : 2008 (Reaff:2018)	---
5.	Stack Temperature	°C	169	IS:11255 Part 3 : 2008 (Reaff:2018)	---
6.	Flue gas velocity	m/sec	15.63	IS:11255 Part 3 : 2008 (Reaff:2018)	---
7.	Gaseous Emission	Nm ³ /hr	660	IS:11255 Part 3 : 2008 (Reaff:2018)	---
8.	Particulate Matter (PM)	g/kw-hr	0.039	IS:11255 Part 1:1985 (Reaff:2019)	≤ 0.2
9.	Sulphur Di-Oxide (SO ₂)	mg/ Nm ³	6.5	IS:11255 Part 2:1985 (Reaff:2019)	---
10.	Oxides of Nitrogen (NO _x)	g/kw-hr	0.61	IS 11255 Part 7 : 2005 (Reaff:2019)	4.0 (NO _x + HC)
	Total Hydro Carbon (HC)		BDLDL:1.0}	EPA 429	
11.	Carbon Monoxide	g/kw-hr	BDLDL:0.2}	IS:13170 : 1992 (Reaff:2019)	≤ 3.5
BDL: Below Detection Limit DL: Detection Limit					
Remarks: The above tested parameters are within the CPCB Limits					
For Green Chem Solutions Private Limited (Laboratory Division)  Authorized Signatory					

End of Report



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Laboratory Division

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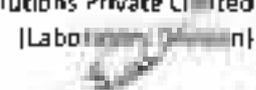
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Test Report

Report No.	GCS/SM/3030 B /2023-2024		Report Date	03.10.2023	
Customer Name & Address	M/s. ITD Cementation India Limited Captive POL / LNG Jetty Site, IOCL, KPL, Ennore (DM051922)				
Sample Description	Stack Monitoring - Plot - 1 - DG Set 200 KVA	Sample Received on	28.09.2023		
Sample Collected by	GCSPL	Test Commenced on	28.09.2023		
Sample Collected Date	27.09.2023	Test Completed on	03.10.2023		
Sl.No	Description	Unit	Results	Reference Method	Limits as per CPCB Specification
1.	Total Stack Height From 'G'Level	m	3.66	---	---
2.	Port. Hole Height From 'G'Level	m	3.66	---	---
3.	Stack Diameter	m	0.15	---	---
4.	Ambient Temperature	°C	29	IS:11755 Part 3 : 2008 (Reaff:2018)	---
5.	Stack Temperature	°C	149	IS:11255 Part 3 : 2008 (Reaff:2018)	---
6.	Flue gas velocity	m/sec	16.03	IS:11255 Part 3 : 2008 (Reaff:2018)	---
7.	Gaseous Emission	Nm ³ /hr	719	IS:11255 Part 3 : 2008 (Reaff:2018)	---
8.	Particulate Matter (PM)	g/kw-hr	0.044	IS:11255 Part 1:1985 (Reaff:2019)	≤ 0.2
9.	Sulphur Di-Oxide (SO ₂)	mg/ Nm ³	6.7	IS:11255 Part 2:1985 (Reaff:2019)	---
10.	Oxides of Nitrogen (NO _x)	g/kw-hr	0.48	IS:11255 Part 7 : 2005 (Reaff:2019)	4.0 (NO _x + HC)
	Total Hydro Carbon (HC)		BDL(D.L:1.0)	EPA 429	
11.	Carbon Monoxide	g/kw-hr	BDL(D.L:0.2)	IS:13270 : 1992 (Reaff:2019)	≤ 3.5
BDL: Below Detection Limit D.L: Detection Limit					
Remarks: The above tested parameters are within the CPCB Limits.					
				For Green Chem Solutions Private Limited (Laboratory Division)	
				 Authorized Signatory	

End of Report



GREEN CHEM SOLUTIONS PVT LTD

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Laboratory Division

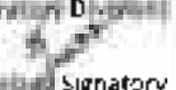
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Test Report

Report No.	GCS/SM/ 3030 C /2023-2024		Report Date	03.10.2023	
Customer Name & Address	M/s. ITD Cementation India Limited Captive PDL / LNG Jetty Site, IOCL, KPL, Ennore (DM051922)				
Sample Description	Stack Monitoring – Land Fall – DG Set 125 KVA	Sample Received on	28.09.2023		
Sample Collected by	GCSPL	Test Commenced on	28.09.2023		
Sample Collected Date	27.09.2023	Test Completed on	03.10.2023		
Sl.No	Description	Unit	Results	Reference Method	Limits as per CPCB Specification
1.	Total Stack Height From 'G' Level	m	2.74	---	---
2.	Port Hole Height From 'G' Level	m	2.74	---	---
3.	Stack Diameter	m	0.10	---	---
4.	Ambient Temperature	°C	29	IS:11255 Part 3 : 2008 (Reaff:2018)	---
5.	Stack Temperature	°C	135	IS:11255 Part 3 : 2008 (Reaff:2018)	---
6.	Flue gas velocity	m/sec	13.3	IS:11255 Part 3 : 2008 (Reaff:2018)	---
7.	Gaseous Emission	Nm ³ /hr	274	IS:11255 Part 3 : 2008 (Reaff:2018)	---
8.	Particulate Matter (PM)	g/kw-hr	0.031	IS:11255 Part 1:1985 (Reaff:2019)	≤ 0.2
9.	Sulphur Di-Oxide (SO ₂)	mg/ Nm ³	0.48	IS:11255 Part 2:1985 (Reaff:2018)	---
10.	Oxides of Nitrogen (NO _x)	g/kw-hr	0.25	IS:11255 Part 7 : 2005 (Reaff:2019)	4.0 (NO _x + HC)
	Total Hydro Carbon (HC)		BDL(D.L:1.0)	EPA 429	
11.	Carbon Monoxide	g/kw-hr	BDL(D.L:0.2)	IS:13270 : 1992 (Reaff:2019)	≤ 3.5
BDL: Below Detection Limit DL: Detection Limit					
Remarks: The above tested parameters are within the CPCB Limits					
				For Green Chem Solutions Private Limited (Laboratory Division)	
				 Authorized Signatory	

End of Report

NOTE: The results relate only to the samples tested. This test report shall not be reproduced without approval of the laboratory. The samples will not be retained for more than one Month from the date of issue of test report.



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Laboratory Division

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Test Report

Report No.	GCS/W/ 3048 /2023-2024			Report Date	09.09.2023
Customer Name & Address	M/s. ITD Cementation India Limited Captive PDL / LNG Jetty Site, IOCL, KPL, Ennore (DM051922)				
Sample Description	Drinking water	Sample Received on	04.09.2023		
Sample Collected by	GCSPL	Test Commenced on	04.09.2023		
Sample Collected Date	04.09.2023	Test Completed on	05.09.2023		
Sl No	PARAMETER	UNITS	RESULTS	REFERENCE METHOD	
1	pH @ 25°C		7.56	IS 3025 Part 11 - 2012	
2	Temperature	°C	28	IS 3025 Part 9 - 1984 (Reaff. 2017)	
3	Turbidity	NTU	BDL (DL : 0.5)	IS 3025 Part 10 - 1984 (Reaff. 2017)	
4	Electrical Conductivity @ 25°C	µmhos/cm	702	IS 3025 Part 14: 2013 (Reaff.2017)	
5	Total Dissolved Solids	mg/L	394	IS 3025 Part 16 - 1984 (Reaff. 2017)	
6	Dissolved Phosphate as P	mg/L	0.2	IS 3025 Part 31 - 1988 (Reaff.2019)	
7	Dissolved Oxygen	mg/L	6.22	IS 3025 Part 44 - 1989 (Reaff. 2019)	
BD.. Below Detection Limit, D.L. Detection Limit					
 For Green Chem Solutions Pvt Ltd Laboratory Division Authorized Signatory					

****End of Report ****



GREEN CHEM SOLUTIONS PVT LTD

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Laboratory Division

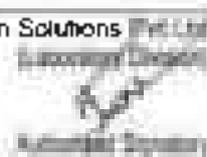
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Test Report

Report No	GCS/W/ 3049 /2023-2024		Report Date	09.09.2023
Customer Name & Address	M/s. ITD Cementation India Limited Captive POL / LNG Jetty Site, POCL, KPL, Ennore (60051922)			
Sample Description	RO Drinking water	Sample Received on	04.09.2023	
Sample Collected by	GCSPL	Test Commenced on	04.09.2023	
Sample Collected Date	04.09.2023	Test Completed on	05.09.2023	
Sl.No	PARAMETER	UNITS	RESULTS	REFERENCE METHOD
1	pH @ 25°C		6.74	IS 3025 Part 11 - 2022
2	Temperature	°C	28	IS 3025 Part 9 : 1984 (Reaff.2017)
3	Turbidity	NTU	BDL (DL : 0.5)	IS 3025 Part 10 - 1984 (Reaff. 2017)
4	Electrical Conductivity @ 25°C	µmhos/cm	42	IS 3025 Part 14: 2013 (Reaff.2017)
5	Total Dissolved Solids	mg/L	17	IS 3025 Part 16 - 1984 (Reaff. 2017)
6	Dissolved Phosphate as P	mg/L	BDL (DL : 0.01)	IS 3025 Part 31 - 1768 (Reaff 2019)
7	Dissolved Oxygen	mg/L	5.19	IS 3025 Part 44 - 1989 (Reaff. 2019)
BDL: Below Detection Limit, D.U- Detection Limit				
				For Green Chem Solutions PVT Ltd  Laboratory Division

****End of Report****



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Test Report

Report No	GCS/AAQ/ 3137 A /2023-2024			Report Date	31.10.2023
Customer Name & Address	M/s. ITD Cementation India Limited Captive POL / LNG Jetty Site, IQCL, KPL, Ennore (DM051922)				
Survey Description	AAQ Monitoring – North Break Water	Sample Received on	27.10.2023		
Survey conducted by	GCSPL	Test Commenced on	27.10.2023		
Survey conducted on	26.10.2023 to 27.10.2023 (24hrs)	Test Completed on	30.10.2023		
Ambient Temperature °C	29	% Relative Humidity	63		
S.No	PARAMETERS	UNITS	RESULTS	REFERENCE METHODS	NAAQ Standards (Industrial, Residential & Rural Area)
1	PM ₁₀	µg/m ³	76	IS 5182 : Part 23 - 2006	100
2	PM _{2.5}	µg/m ³	29	IS 5182 : Part 24 - 2019	60
3	Oxides of Sulphur as SO ₂	µg/m ³	10.8	IS 5182 : Part 2 - 2001	80
4	Oxides of Nitrogen as NO ₂	µg/m ³	19.5	IS 5182 : Part 6 - 2006	80
5	Lead as Pb	µg/m ³	BDL (DL:0.5)	IS 5182 : Part 22 - 2004	1
6	Carbon monoxide as CO	mg/m ³	BDL (DL:1.0)	IS 5182 : Part 10 - 1999	4
7	Ozone as O ₃	µg/m ³	BDL (DL:2.0)	IS 5182 - Part 9 - 1974	180
8	Ammonia as NH ₃	µg/m ³	BDL (DL: 7.4)	IS 5182 : Part 25 - 2018	400
9	Benzene as C ₆ H ₆	µg/m ³	BDL (DL: 1)	IS 5182 : Part 11 - 2006	5
10	Benzo (a) pyrene	ng/m ³	BDL (DL: 0.1)	IS 5182 : Part 12 - 2004	1
11	Arsenic as As	ng/m ³	BDL (DL: 1)	GCS/Lab/SOP/089	6
12	Nickel as Ni	ng/m ³	BDL (DL: 5)	IS 5182 : Part 26 - 2020	20
BDL: Below Detection Limit DL: Detection Limit					
Remarks: The above sample tested parameters are within the CPCB Limits.					
					For Green Chem Solutions Pvt. Ltd (Laboratory Division) Authorized Signatory

End of Report

Note: The results relate only to the samples tested. This test report shall not be reproduced without approval of the laboratory. The samples will not be retained for more than one Month from the date of issue of test report.



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Laboratory Division

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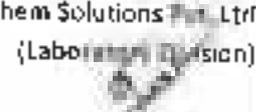
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Test Report

Report No	GCS/AAQ/ 3137 B /2023-2024	Report Date	31.10.2023		
Customer Name & Address	M/s. ITD Cementation India Limited Captive POL / LNG Jetty Site, IOCL, KPL, Ennore (DM051922)				
Survey Description	AAQ Monitoring - 5 Acre	Sample Received on	27.10.2023		
Survey conducted by	GCSPL	Test Commenced on	27.10.2023		
Survey conducted on	26.10.2023 to 27.10.2023 (24hrs)	Test Completed on	30.10.2023		
Ambient Temperature °C	29	% Relative Humidity	63		
S.No	PARAMETERS	UNITS	RESULTS	REFERENCE METHODS	NAAQ Standards (Industrial, Residential & Rural Area)
1	PM ₁₀	µg/m ³	78	IS 5182 : Part 23 - 2006	100
2	PM _{2.5}	µg/m ³	32	IS 5182 : Part 24 - 2019	60
3	Oxides of Sulphur as SO ₂	µg/m ³	11.5	IS 5182 : Part 2 - 2001	80
4	Oxides of Nitrogen as NO ₂	µg/m ³	20.4	IS 5182 : Part 6 - 2006	80
5	Lead as Pb	µg/m ³	BDL (DL:0.5)	IS 5182 : Part 22 - 2004	1
6	Carbon monoxide as CO	mg/m ³	BDL (DL:1.0)	IS 5182 : Part 10 - 1999	4
7	Ozone as O ₃	µg/m ³	BDL (DL:2.0)	IS 5182 - Part 9 - 1974	180
8	Ammonia as NH ₃	µg/m ³	BDL (DL: 2.0)	IS 5182 : Part 25 - 2018	400
9	Benzene as C ₆ H ₆	µg/m ³	BDL (DL: 1)	IS 5182 : Part 11 - 2006	5
10	Benzo (a) pyrene	ng/m ³	BDL (DL: 0.1)	IS 5182 : Part 12 - 2004	1
11	Arsenic as As	ng/m ³	BDL (DL: 1)	GCS/Lab/SOP/089	6
12	Nickel as Ni	ng/m ³	BDL (DL: 5)	IS 5182 : Part 26 - 2020	20
BDL Below Detection Limit DL Detection Limit					
Remarks: The above table tested parameters are within the CPCB Limits					
					For Green Chem Solutions Pvt. Ltd (Laboratory Division)
					 Authorized Signatory

End of Report

Note: The results relate only to the samples tested. This test report shall not be reproduced without approval of the laboratory.
The samples will not be retained for more than one month from the date of issue of test report.



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Laboratory Division

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Test Report

Report No.	GCS/AAQ/ 3137 C /2023-2024		Report Date	31.10.2023	
Customer Name & Address	M/s. ITD Cementation India Limited Captive PDL / LNG Jetty Site, IOCL, KPL, Ennore (DM051922)				
Survey Description	AAQ Monitoring – Land Fall	Sample Received on	27.10.2023		
Survey conducted by	GCSPL	Test Commenced on	27.10.2023		
Survey conducted on	26.10.2023 to 27.10.2023 (24hrs)	Test Completed on	30.10.2023		
Ambient Temperature °C	29	% Relative Humidity	63		
S.No	PARAMETERS	UNITS	RESULTS	REFERENCE METHODS	NAAQ Standard: Industrial, Residential & Rural Area
1	PM ₁₀	µg/m ³	72	IS 5187 Part 23 - 2006	100
2	PM _{2.5}	µg/m ³	28	IS 5150 Part 21 - 2019	50
3	Oxides of Sulphur as SO ₂	µg/m ³	10.3	IS 162 Part 2 - 2001	80
4	Oxides of Nitrogen as NO _x	µg/m ³	19.6	IS 162 Part 6 - 2006	80
5	Lead as Pb	µg/m ³	BDL (DL 1.5)	IS 162 Part 20 - 2004	1
6	Carbon monoxide as CO	mg/m ³	BDL (DL 1.0)	IS 150 Part 10 - 1999	4
7	Ozone as O ₃	µg/m ³	BDL (DL 1.0)	IS 5182 - Part 9 - 1974	150
8	Ammonia as NH ₃	µg/m ³	BDL (DL 1.0)	IS 5182 Part 25 - 2018	400
9	Benzene as C ₆ H ₆	µg/m ³	BDL (DL 1)	IS 5182 Part 11 - 2006	3
10	Benz(a)pyrene	µg/m ³	BDL (DL 0.1)	IS 5182 Part 17 - 2004	1
11	Arsenic as As	µg/m ³	BDL (DL 1)	ICS Lab 500 089	6
12	Nickel as Ni	µg/m ³	BDL (DL 1)	IS 5182 Part 24 - 2010	20
BDL - Below Detection Limit DL - Detection Limit					
Remarks: The above sample tested parameters are within the DL/DL limit.					
For Green Chem Solutions Pvt. Ltd					
 Laboratory Division					

End of Report



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Test Report

Report No	GCS/SM/ 3138 A /2023-2024		Report Date	31.10.2023	
Customer Name & Address	M/s. ITO Cementation India Limited Captive POL / LNG Jetty Site, IOCL, KPL, Ennore (DM051922)				
Sample Description	Stack Monitoring - Land Fall - DG Set 125 KVA	Sample Received on	27.10.2023		
Sample Collected by	GCSPL	Test Commenced on	27.10.2023		
Sample Collected Date	26.10.2023	Test Completed on	30.10.2023		
Sl.No	Description	Unit	Results	Reference Method	Limits as per CPCB Specification
1.	Total Stack Height From 'G'level	m	2.74	---	---
2.	Port Hole Height From 'G'Level	m	2.74	---	---
3.	Stack Diameter	m	0.10	---	---
4.	Ambient Temperature	°C	28	IS:11255 Part 3 : 2008 (Reaff:2018)	---
5.	Stack Temperature	°C	123	IS:11255 Part 3 : 2008 (Reaff:2018)	---
6.	Flue gas velocity	m/sec	13.9	IS:11255 Part 3 : 2008 (Reaff:2018)	---
7.	Gaseous Emission	Nm ³ /hr	295	IS:11255 Part 3 : 2008 (Reaff:2018)	---
8.	Particulate Matter (PM)	g/kw-hr	0.046	IS:11255 Part 1:1985 (Reaff:2019)	≤ 0.2
9.	Sulphur Di-Oxide (SO ₂)	mg/ Nm ³	5.2	IS:11255 Part 2:1985 (Reaff:2019)	---
10.	Oxides of Nitrogen (NO _x)	g/kw-hr	0.33	IS:11255 Part 7 : 2005 (Reaff:2017)	4.0 (NO _x +HC)
	Total Hydro Carbon (HC)		BDL(D.L 1.3)	EPA 429	
11.	Carbon Monoxide	g/kw-hr	BDL(D.L 0.2)	IS:13270 . 1992 (Reaff 2019)	≤ 3.5
BDL:- Below Detection Limit DL: Detection Limit					
Remarks: The above tested parameters are within the CPCB limits					
				For Green Chem Solutions Private Limited (Laboratory Division)  Authorized Signatory	

End of Report



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Laboratory Division

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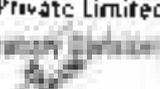
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Test Report

Report No.	GCS/SM/ 3198 B /2023-2024		Report Date	31.10.2023	
Customer Name & Address	M/s. ITD Cementation India Limited Captive POL / LNG Jetty Site, IOCL, KPL, Ennore (DM051922)				
Sample Description	Stack Monitoring - Pict - 1 - DG Set 320 kVA	Sample Received on	27.10.2023		
Sample Collected by	GC5PL	Test Commenced on	27.10.2023		
Sample Collected Date	26.10.2023	Test Completed on	30.10.2023		
Sl.No	Description	Unit	Results	Reference Method	Limits as per CPCB Specification
1.	Total Stack Height From 'G' Level	m	3.66	---	---
2.	Port Hole Height From 'G' Level	m	3.66	---	---
3.	Stack Diameter	m	0.15	---	---
4.	Ambient Temperature	°C	28	IS:11255 Part 3 : 2008 (Reaff:2018)	---
5.	Stack Temperature	°C	164	IS:11255 Part 3 : 2008 (Reaff:2018)	---
6.	Flue gas velocity	m/sec	20.26	IS:11255 Part 3 : 2008 (Reaff:2018)	---
7.	Gaseous Emission	Nm ³ /hr	839	IS:11255 Part 3 : 2008 (Reaff:2018)	---
8.	Particulate Matter (PM)	g/kw-hr	0.059	IS:11255 Part 1:1985 (Reaff:2019)	≤ 0.2
9.	Sulphur Di-Oxide (SO ₂)	mg/ Nm ³	7.3	IS:11255 Part 2:1985 (Reaff:2019)	---
10.	Oxides of Nitrogen (NO _x + HC)	g/kw-hr	0.55	IS:11255 Part 7 : 2005 (Reaff:2017)	4.0 (NO _x + HC)
	Total Hydro Carbon (HC)		BDL(D.L:1.0)	EPA 429	
11.	Carbon Monoxide	g/kw-hr	BDL(D.L:0.2)	IS:13270 : 1992 (Reaff:2019)	≤ 3.5
BDL: Below Detection Limit DL: Detection Limit					
Remarks: The above tested parameters are within the CPCB Limits.					
				For Green Chem Solutions Private Limited (Laboratory Division)	
					
				Authorized Signatory	

End Report



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Laboratory Division

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Test Report

Report No	GCS/SM/ 3138 C /2023-2024		Report Date	31.10.2023	
Customer Name & Address	M/s. ITD Cementation India Limited Captive POL / LNG Jetty Site, IOCL, KPL, Ennore (DM051922)				
Sample Description	Stack Monitoring - 5 Acre - DG Set 320 KVA	Sample Received on	27.10.2023		
Sample Collected by	GCSPL	Test Commenced on	27.10.2023		
Sample Collected Date	26.10.2023	Test Completed on	30.10.2023		
Sl No	Description	Unit	Results	Reference Method	Limits as per CPCB Specification
1.	Total Stack Height from 'G'Level	m	3.66	---	---
2.	Port Hole Height From 'G'Level	m	3.66	---	---
3.	Stack Diameter	m	0.15	---	---
4.	Ambient Temperature	°C	28	IS:11255 Part 3 : 2008 {Reaff:2018}	---
5.	Stack Temperature	°C	181	IS:11255 Part 3 : 2008 {Reaff:2018}	---
6.	Flue gas velocity	m/sec	18.34	IS:11255 Part 3 : 2008 {Reaff:2018}	---
7.	Gaseous Emission	Nm ³ /hr	764	IS:11255 Part 3 : 2008 {Reaff:2018}	---
8.	Particulate Matter (PM)	g/kw-hr	0.052	IS:11255 Part 1:1985 {Reaff:2018}	≤ 0.2
9.	Sulphur Di-Oxide (SO ₂)	mg/ Nm ³	7.9	IS:11255 Part 2:1985 {Reaff:2018}	---
10.	Oxides of Nitrogen (NO _x)	g/kw-hr	0.61	IS:11255 Part 7 : 2005 {Reaff:2018}	4.0 (NO _x +HC)
	Total Hydro Carbon (HC)		BDL(D.L:1.0)	EPA 429	
11.	Carbon Monoxide	g/kw-hr	BDL(D.L:0.2)	IS:13270 : 1992 {Reaff:2019}	≤ 3.5
BDL: Below Detection Limit DL: Detection Limit					
Remarks: The above tested parameters are within the CPCB limits					
				For Green Chem Solutions Private Limited (Laboratory Division)	
				Aut.  Signatory	

End of Report



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Test Report

Report No	GCS/NLM/ 3139 /2023-2024	Report Date	31.10.2023				
Customer Name & Address	M/s. ITD Cementation India Limited Captive PDL / LNG Jetty Site, IOCL, KPL, Ennore (DM051922)						
Survey Description	Ambient Noise Level Monitoring	Survey Date	26.10.2023				
Survey Conducted by	GCSPL	Data Received On	27.10.2023				
S.No.	Locations	Day Time			Night Time		
		L_{eq}	L_{max}	L_{min}	L_{eq}	L_{max}	L_{min}
1	Plot - 1	66.3	71.2	58.1	60.5	64.7	53.8
2	5 Acre	68.2	70.9	63.7	62.1	65.3	56.6
3	Land Fall	67.6	69.3	61.5	61.9	66.1	57.4
Unit	dB(A)						
TNPCB Standards (Industrial Area)	75.0			70.0			
Reference Method	GCS/LAB/SOP/Noise/001						
Remarks: The above sample tested parameters are within the TNPCB limits for the above tested locations.							
							For Green Chem Solutions Pvt. Ltd (Laboratory Division)  Authorized Signatory

End of Report



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Laboratory Division

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Test Report

Report No.	GCS/AAQ/ 3215 A /2023 2024		Report Date	28.11.2023	
Customer Name & Address	M/s. JTD Cementation India Limited Captive POL / LNG Jetty Site, IOCL, KPL, Ennore (DM051922)				
Survey Description	AAQ Monitoring - North Break Water	Sample Received on	23.11.2023		
Survey conducted by	GCSPL	Test Commenced on	23.11.2023		
Survey conducted on	22.11.2023 to 23.11.2023 (24Hrs)	Test Completed on	27.11.2023		
Ambient Temperature °C	29	% Relative Humidity	83		
S.No	PARAMETERS	UNITS	RESULTS	REFERENCE METHODS	NA&O Standards (Industrial, Residential & Rural Area)
1	PM ₁₀	µg/m ³	55	IS 5182 : Part 23 - 2006	100
2	PM _{2.5}	µg/m ³	21	IS 5182 : Part 24 - 2019	60
3	Oxides of Sulphur as SO ₂	µg/m ³	8.9	IS 5182 : Part 2 - 2001	80
4	Oxides of Nitrogen as NO ₂	µg/m ³	17.3	IS 5182 : Part 6 - 2006	80
5	Lead as Pb	µg/m ³	BDL (DL:0.5)	IS 5182 : Part 22 - 2004	1
6	Carbon monoxide as CO	mg/m ³	BDL (DL:1.0)	IS 5182 : Part 10 - 1999	4
7	Ozone as O ₃	µg/m ³	BDL (DL:2.0)	IS 5182 - Part 9 - 1974	180
8	Ammonia as NH ₃	µg/m ³	BDL (DL: 2.0)	IS 5182 : Part 25 - 2018	400
9	Benzene as C ₆ H ₆	µg/m ³	BDL (DL: 1)	IS 5182 : Part 11 - 2006	5
10	Benzo (a) pyrene	ng/m ³	BDL (DL: 0.1)	IS 5182 : Part 12 - 2004	1
11	Arsenic as As	ng/m ³	BDL (DL: 1)	GCS/Lab/SOP/083	6
12	Nickel as Ni	ng/m ³	BDL (DL: 5)	IS 5182 : Part 26 - 2020	20

BDL: Below Detection Limit DL: Detection Limit

Remarks: The above sample tested parameters are within the CPCB Limits

For Green Chem Solutions Pvt. Ltd

(Laboratory Division)

Authorized Signatory

End of Report



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Laboratory Division

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Test Report

Report No	GCS/AAQ/ 3215 B /2023-2024	Report Date	28.11.2023		
Customer Name & Address	M/s. ITO Cementation India Limited Captive POL / LNG Jetty Site, IOCL, KPL, Ennore (DM051922)				
Survey Description	AAQ Monitoring - 5 Acre	Sample Received on	23.11.2023		
Survey conducted by	GCSPL	Test Commenced on	23.11.2023		
Survey conducted on	22.11.2023 to 23.11.2023 (24Hrs)	Test Completed on	27.11.2023		
Ambient Temperature C	29	% Relative Humidity	83		
S.No	PARAMETERS	UNITS	RESULTS	REFERENCE METHODS	AAQ Standards (Industrial, Residential & Rural Area)
1	PM ₁₀	µg/m ³	52	IS 5182 : Part 23 - 2006	100
2	PM _{2.5}	µg/m ³	19	IS 5182 : Part 24 - 2019	60
3	Oxides of Sulphur as SO ₂	µg/m ³	7.4	IS 5182 : Part 2 - 2001	80
4	Oxides of Nitrogen as NO ₂	µg/m ³	16.8	IS 5182 - Part 6 - 2006	80
5	Lead as Pb	µg/m ³	BDL (DL:0.5)	IS 5182 : Part 22 - 2004	1
6	Carbon monoxide as CO	mg/m ³	BDL (DL:1.0)	IS 5182 : Part 10 - 1999	4
7	Ozone as O ₃	µg/m ³	BDL (DL:2.0)	IS 5182 - Part 9 - 1974	180
8	Ammonia as NH ₃	µg/m ³	BDL (DL: 2.0)	IS 5182 : Part 25 - 2018	400
9	Benzene as C ₆ H ₆	µg/m ³	BDL (DL: 1)	IS 5182 : Part 11 - 2006	5
10	Benzo (a) pyrene	ng/m ³	BDL (DL: 0.1)	IS 5182 : Part 12 - 2004	1
11	Arsenic as As	ng/m ³	BDL (DL: 1)	GCS/Lab/SOP/089	6
12	Nickel as Ni	ng/m ³	BDL (DL: 5)	IS 5182 : Part 26 - 2020	20
BDL - Below Detection Limit DL- Detection Limit					
Remarks: The above sample tested parameters are within the CPCB Limits.					
					For Green Chem Solutions Pvt. Ltd (Laboratory Division)
					
					Authorized Signatory

End of Report

Note: The results relate only to the samples tested. This test report shall not be reproduced without approval of the laboratory. The samples will not be retained for more than one month from the date of issue of test report.



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Test Report

Report No.	GCS/AAQ/ 3215 C /2023-2024			Report Date	28.11.2023
Customer Name & Address	M/s. ITD Cementation India Limited Captive POL / LNG Jetty Site, IOCL, KPL, Ennore (DM051922)				
Survey Description	AAQ Monitoring – Land Fall	Sample Received on	23.11.2023		
Survey conducted by	GCSPL	Test Commenced on	23.11.2023		
Survey conducted on	22.11.2023 to 23.11.2023 (24Hrs)	Test Completed on	27.11.2023		
Ambient Temperature °C	29	% Relative Humidity	83		
S.No	PARAMETERS	UNITS	RESULTS	REFERENCE METHODS	NAAQ Standards (Industrial, Residential & Rural Area)
1	PM ₁₀	µg/m ³	48	IS 5182 : Part 23 - 2006	100
2	PM _{2.5}	µg/m ³	16	IS 5182 : Part 24 - 2019	60
3	Oxides of Sulphur as SO ₂	µg/m ³	6.9	IS 5182 : Part 2 - 2001	80
4	Oxides of Nitrogen as NO ₂	µg/m ³	15.7	IS 5182 : Part 6 - 2006	80
5	Lead as Pb	µg/m ³	BDL (DL:0.5)	IS 5182 : Part 22 - 2004	1
6	Carbon monoxide as CO	mg/m ³	BDL (DL:1.0)	IS 5182 : Part 10 - 1999	4
7	Ozone as O ₃	µg/m ³	BDL (DL:2.0)	IS 5182 - Part 9 - 1974	180
8	Ammonia as NH ₃	µg/m ³	BDL (DL: 2.0)	IS 5182 : Part 25 - 2018	400
9	Benzene as C ₆ H ₆	µg/m ³	BDL (DL: 1)	IS 5182 : Part 11 - 2006	5
10	Benzo (a) pyrene	ng/m ³	BDL (DL: 0.1)	IS 5182 : Part 12 - 2004	1
11	Arsenic as As	ng/m ³	BDL (DL: 1)	GCS/Lab/SOP/C89	6
12	Nickel as Ni	ng/m ³	BDL (DL: 5)	IS 5182 : Part 26 - 2020	20
BDL: Below Detection Limit DL: Detection Limit					
Remarks: The above said tested parameters are within the CPCB Limits.					
					For Green Chem Solutions Pvt. Ltd Laboratory Division
					 Author Test Signatory

End of Report



GREEN CHEM SOLUTIONS PVT LTD

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Laboratory Division

Plot No.4, Rajiv Gandhi Street, Bataji Avenue, A N. Elumbal Road (Oil Mill Road), Iyyappanthangal, Chennai - 600058.

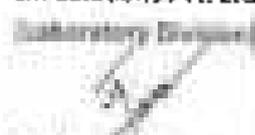
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Test Report

Report No	GCS/NLM/ 3216 /2023-2024			Report Date	28.11.2023		
Customer Name & Address	M/s. ITD Cementation India Limited Captive POL / LNG Jetty Site, IOCL, KPL, Ennore (DM051922)						
Survey Description	Ambient Noise Level Monitoring			Survey Date	23.11.2023		
Survey Conducted by	GCSPL			Data Received On	23.11.2023		
S No	Locations	Day Time			Night Time		
		L_{eq}	L_{max}	L_{min}	L_{eq}	L_{max}	L_{min}
1	Plot - 1	64.0	70.5	55.3	59.9	63.6	51.7
2	\$ Acre	67.1	69.7	62.9	61.2	64.9	56.3
3	Land Fall	68.3	71.4	61.0	62.6	65.4	58.1
Unit	dB(A)						
TNPSB Standards (Industrial Area)	75.0			70.0			
Reference Method	GCS/LAB/SOP/Noise/001						
Remarks:	The above tested parameters are within the TNPSB Limits for the above tested locations.						
For Green Chem Solutions Pvt. Ltd							 Laboratory Division Authorized Signatory

End of Report

Note: The results relate only to the samples tested. This test report shall not be reproduced without approval of the laboratory. The samples will not be retained for more than one month from the date of issue of test report.

TIONS PVT LTD

Certified)

Division

(Old Mill Road), Myyappanhangal, Chennai - 600056.

Email: info@greenchemsolutions.in
greenchemsolutions@gmail.com

Test Date	28.11.2023
Sample Received on	23.11.2023
Test Commenced on	23.11.2023
Test Completed on	27.11.2023
Reference Method	Limits as per CPCB Specification
IS:11255 Part 3:2008 (RA:2018)	---
IS:11255 Part 1:1985 (RA:2019)	≤ 0.2
IS:11255 Part 2:1985 (RA:2019)	---
IS:11255 Part 7:2005 (RA:2019)	4.0 (NO _x + HC)
EPA 429	
IS:13270:1992 (RA:2019)	≤ 3.5
For Green Chem Solutions Private Limited (Laboratory Division)	
Authorized Signatory	

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the date of issue of this report



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Laboratory Division

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Tel: 044 42512101

Email: info@greenchemsolutions.in
greenchemsolutions@gmail.com

Test Report

Report No.	GCS/AAQ/ 3266 A /2023-2024		Report Date	03.01.2024	
Customer Name & Address	M/s. ITD Cementation India Limited Captive PDL / LNG Jetty Site, IOCL, KPL, Ennore (DM051922)				
Survey Description	AAQ Monitoring – North Break Water	Sample Received on	30.12.2023		
Survey conducted by	GCSPL	Test Commenced on	30.12.2023		
Survey conducted on	29.12.2023 to 30.12.2023 (24Hrs)	Test Completed on	03.01.2024		
Ambient Temperature °C	29	% Relative Humidity	79		
S.No	PARAMETERS	UNITS	RESULTS	REFERENCE METHODS	NAAC Standards (Industrial, Residential & Rural Area)
1	PM ₁₀	µg/m ³	58	IS 5182 : Part 23 - 2006	100
2	PM _{2.5}	µg/m ³	23	IS 5182 : Part 24 - 2019	nD
3	Oxides of Sulphur as SO ₂	µg/m ³	9.1	IS 5182 : Part 2 - 2001	80
4	Oxides of Nitrogen as NO ₂	µg/m ³	17.9	IS 5182 : Part 6 - 2006	80
5	Lead as Pb	µg/m ³	BDL (DL:0.5)	IS 5182 : Part 22 - 2004	1
6	Carbon monoxide as CO	mg/m ³	BDL (DL:1.0)	IS 5182 : Part 10 - 1990	4
7	Ozone as O ₃	µg/m ³	BDL (DL:2.0)	IS 5182 - Part 9 - 1974	180
8	Ammonia as NH ₃	µg/m ³	BDL (DL: 2.0)	IS 5182 : Part 25 - 2018	400
9	Benzene as C ₆ H ₆	µg/m ³	BDL (DL: 1)	IS 5182 : Part 11 - 2006	5
10	Benzo (a) pyrene	ng/m ³	BDL (DL: 0.1)	IS 5182 : Part 17 - 2004	1
11	Arsenic as As	ng/m ³	BDL (DL: 1)	GCS/Lab/SDP/089	6
12	Nickel as Ni	ng/m ³	BDL (DL: 5)	IS 5182 : Part 26 - 2020	20
BDL: Below Detection Limit; DL: Detection Limit					
Remarks: The above sample test results are within the CPCB limits.					
For Green Chem Solutions Pvt. Ltd (Laboratory Division)					
					
Authorized Signatory					

End of Report

Note: The results are only for the samples tested. This report may not be reproduced without approval of the laboratory. For samples collection, please refer to our website from the date of issue of this report.



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Laboratory Division

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Tel: 044 42612103

Email: info@greenchemsolutions.in
greenchemsolutions@gmail.com

Test Report

Report No.	GCS/AAQ/ 3266 B /2023-2024			Report Date	03.01.2024
Customer Name & Address	M/s. ITO Cementation India Limited Captive PDL / LNG Jetty Site, IOCL, KPL, Ennore (DM051922)				
Survey Description	AAQ Monitoring - 5 Acre	Sample Received on	30.12.2023		
Survey conducted by	GCSPL	Test Commenced on	30.12.2023		
Survey conducted on	29.12.2023 to 30.12.2023 (24hrs)	Test Completed on	03.01.2024		
Ambient Temperature °C	29	% Relative Humidity	79		
S No	PARAMETERS	UNITS	RESULTS	REFERENCE METHODS	NAAQ Standards(Industrial, Residential & Rural Area)
1	PM ₁₀	µg/m ³	52	IS 5182 : Part 23 - 2006	100
2	PM _{2.5}	µg/m ³	20	IS 5182 : Part 24 - 2019	60
3	Oxides of Sulphur as SO ₂	µg/m ³	7.7	IS 5182 : Part 2 - 2001	80
4	Oxides of Nitrogen as NO ₂	µg/m ³	17.5	IS 5182 : Part 6 - 2006	80
5	Lead as Pb	µg/m ³	BDL (DL:0.5)	IS 5182 : Part 22 - 2004	1
6	Carbon monoxide as CO	mg/m ³	BDL (DL:1.0)	IS 5182 : Part 10 - 1999	4
7	Ozone as O ₃	µg/m ³	BDL (DL:2.0)	IS 5182 - Part 9 - 1974	180
8	Ammonia as NH ₃	µg/m ³	BDL (DL: 2.0)	IS 5182 : Part 25 - 2018	400
9	Benzene as C ₆ H ₆	µg/m ³	BDL (DL: 1)	IS 5182 : Part 11 - 2006	5
10	Benzo (a) pyrene	ng/m ³	BDL (DL: 0.1)	IS 5182 : Part 12 - 2004	1
11	Arsenic as As	ng/m ³	BDL (DL: 1)	GCS/Lab/SOP/089	6
12	Nickel as Ni	ng/m ³	BDL (DL: 5)	IS 5182 : Part 26 - 2020	20
BDL: Below Detection Limit DL: Detector Limit					
Remarks: The above sample tested are within the CPCB Limits.					
For Green Chem Solutions Pvt. Ltd (Laboratory Division)					
					Authorized Signatory

End of Report



GREEN CHEM SOLUTIONS PVT LTD

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Laboratory Division

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greenchemsolutions@gmail.com

Test Report

Report No.	GCS/AAQ/ 3265 C/2023-2024		Report Date	03.01.2024	
Customer Name & Address	M/s. ITD Cementation India Limited Captive POL / LNG Jetty Site, IOCL, KPL, Ennore (DM051922)				
Survey Description	AAQ Monitoring - Land Fall	Sample Received on	30.12.2023		
Survey conducted by	GCSPL	Test Commenced on	30.12.2023		
Survey conducted on	29.12.2023 to 30.12.2023 (24Hrs)	Test Completed on	03.01.2024		
Ambient Temperature °C	29	% Relative Humidity	79		
S.No	PARAMETERS	UNITS	RESULTS	REFERENCE METHODS	AAQ Standards (Industrial, Residential & Rural Area)
1	PM ₁₀	µg/m ³	46	IS 5182 : Part 23 - 2006	100
2	PM _{2.5}	µg/m ³	18	IS 5182 : Part 24 - 2019	60
3	Oxides of Sulphur as SO ₂	µg/m ³	7.1	IS 5182 : Part 2 - 2001	80
4	Oxides of Nitrogen as NO ₂	µg/m ³	16.3	IS 5182 : Part 6 - 2006	80
5	Lead as Pb	µg/m ³	BDL (DL:0.5)	IS 5182 : Part 22 - 2004	1
6	Carbon monoxide as CO	mg/m ³	BDL (DL:1.0)	IS 5182 : Part 10 - 1999	4
7	Ozone as O ₃	µg/m ³	BDL (DL:7.0)	IS 5182 - Part 9 - 1974	180
8	Ammonia as NH ₃	µg/m ³	BDL (DL: 2.0)	IS 5182 : Part 25 - 2018	400
9	Benzene as C ₆ H ₆	µg/m ³	BDL (DL: 1)	IS 5182 : Part 11 - 2006	5
10	Benzo (a) pyrene	ng/m ³	BDL (DL: 0.1)	IS 5182 - Part 12 - 2004	1
11	Arsenic as As	ng/m ³	BDL (DL: 1)	GCS/Lab/SOP/089	6
12	Nickel as Ni	ng/m ³	BDL (DL: 5)	IS 5182 : Part 26 - 2020	20
BDL: Below Detection Limit DL: Detection Limit					
Remarks: The above sample tested parameters are within the CPCB limits.					
				For Green Chem Solutions Pvt. Ltd (Laboratory Division)	
					
				Authorized Signatory	

End of Report

Note: The results relate only to the samples tested. This test report should be re-issued only with approval of the laboratory.
The validity will not be retained for more than one Month from the date of issue of test report.



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Laboratory Division

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Tel: 044 42612103

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greenchemsolutions@gmail.com

Test Report

Report No	GCS/NLM/3268 /2023-2024	Report Date	03.01.2024				
Customer Name & Address	M/s. ITD Cementation India Limited Captive POL / LNG Jetty Site, IOCL, KPL, Ennore (DM051922)						
Survey Description	Ambient Noise Level Monitoring	Survey Date	30.12.2023				
Survey Conducted by	GCSPL	Data Received On	30.12.2023				
S.No	Locations	Day Time			Night Time		
		L_{eq}	L_{10}	L_{50}	L_{eq}	L_{10}	L_{50}
1	Plot - 1	65.7	70.3	55.1	58.6	64.1	50.0
2	5 Acre	66.9	69.5	61.7	60.3	63.8	54.1
3	Land Fall	67.4	71.2	60.9	61.5	65.0	56.7
Unit:	dB(A)						
TNPCB Standards (Industrial Area)	75.0			70.0			
Reference Method	GCS/LAB/SOP/Noise/001						
Remarks:	The above sample tested parameters are within the TNPCB Limits for the above tested locations.						
For Green Chem Solutions Pvt. Ltd (Laboratory Division)  Authorized Signatory							

End of Report



GREEN CHEM SOLUTIONS PVT LTD

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Laboratory Division

Plot No.4, Rajiv Gandhi Street, Balaji Avenue, A.N.Elumalai Road (Oil Mill Road), Iyyappanhangal, Chennai - 600056

Tel: 044-42612103

Email: info@greenchemsolutions.in
greenchemsolutions@gmail.com

Test Report

Report No.	GCS/SM/3267 A /2023-2024		Report Date	03.01.2024	
Customer Name & Address	M/s. ITD Cementation India Limited Captive POL / LNG Jetty Site, IDCL, KPL, Ennore (DM051922)				
Sample Description	Stack Monitoring - Plot - 1 - DG Set 200 KVA	Sample Received on	30.12.2023		
Sample Collected by	GCSPL	Test Commenced on	30.12.2023		
Sample Collected Date	30.12.2023	Test Completed on	03.01.2024		
Sl.No	Description	Unit	Results	Reference Method	Limits as per CPCB Specification
1.	Total Stack Height From 'G' Level	m	3.66	---	---
2.	Port Hole Height From 'G' Level	m	3.66	---	---
3.	Stack Diameter	m	0.15	---	---
4.	Ambient Temperature	°C	29	IS:11255 Part 3:2008 (RA:2018)	---
5.	Stack Temperature	°C	164	IS:11255 Part 3:2008 (RA:2018)	---
6.	Flue gas velocity	m/sec	14.88	IS:11255 Part 3:2008 (RA:2018)	---
7.	Gaseous Emission	Nm ³ /hr	644	IS:11255 Part 3:2008 (RA:2018)	---
8.	Particulate Matter (PM ₁₀)	g/kw-hr	0.047	IS:11255 Part 1:1985 (RA:2019)	≤ 0.2
9.	Sulphur Di-Oxide (SO ₂)	mg/Nm ³	6.1	IS:11255 Part 2:1985 (RA:2019)	---
10.	Oxides of Nitrogen (NO _x)	g/kw-hr	0.52	IS:11255 Part 7:2005 (RA:2019)	4.0 (NO _x + HC)
	Total Hydro Carbon (HC)		BDL(D.L.:1.0)	EPA 429	
11.	Carbon Monoxide	g/kw-hr	BDL(D.L.:0.2)	IS:13270:1992 (RA:2019)	≤ 3.5

BDL: Below Detection Limit, DL: Detection Limit

Remarks: The above tested parameters are within the CPCB Limits

For Green Chem Solutions Private Limited
(Laboratory Division)

Authorized Signatory

*** End of Report ***



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greenchemsolutions@gmail.com

Test Report

Report No	GCS/SM/ 3267 B /2023-2024			Report Date	03.01.2024
Customer Name & Address	M/s. ITD Cementation India Limited Captive PDL / LNG Jetty Site, IGCL, KPL, Ennore (DM051922)				
Sample Description	Stack Monitoring – Land Fall DG Set 125 KVA	Sample Received on	30.12.2023		
Sample Collected by	GCSPL	Test Commenced on	30.12.2023		
Sample Collected Date	30.12.2023	Test Completed on	03.01.2024		
Sl No	Description	Unit	Results	Reference Method	Limits as per CPCB Specification
1	Total Stack Height From 'G' Level	m	2.74	---	---
2	Pan Hole Height From 'G' Level	m	2.74	---	---
3	Stack Diameter	m	0.10	---	---
4	Ambient Temperature	°C	29	IS:11255 Part 3:2008 (RA:2018)	---
5	Stack Temperature	°C	140	IS:11255 Part 3:2008 (RA:2018)	---
6	Flue gas velocity	m/sec	15.43	IS:11255 Part 3:2008 (RA:2018)	---
7	Gaseous Emission	Nm ³ /hr	314	IS:11255 Part 3:2008 (RA:2018)	---
8	Particulate Matter (PM)	g/kw-hr	0.053	IS:11255 Part 1:1985 (RA:2019)	≤ 0.2
9	Sulphur Di-Oxide (SO ₂)	mg/Nm ³	6.2	IS:11255 Part 2:1985 (RA:2019)	---
10.	Oxides of Nitrogen (NO _x)	g/kw-hr	0.44	IS:11255 Part 7:2005 (RA:2019)	4.0 (NO _x + HC)
	Total Hydro Carbon (HC)		BDL(D.L:0)	EPA 429	
11	Carbon Monoxide	g/kw-hr	BDL(D.L:0.2)	IS:13270 : 1992 (RA:2019)	≤ 3.5
BDL: Below Detection Limit D.L: Detection Limit					
Remarks: The above tested parameters are within the CPCB Limits.					
				For Green Chem Solutions Private Limited (Laboratory Division)	
				Authorized Signatory	

End of Report



GREEN CHEM SOLUTIONS PVT LTD

(ISO 14001:2015 Certified)

Laboratory Division

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Test Report

Report No.	GCS/SM/3267 C / 03.01.2024			Report Date	03.01.2024
Customer Name & Address	M/s. ITD Cementation India Limited Captive POL / LNG Jetty Site, IOCL, KPL, Ennore (DM051922)				
Sample Description	Stack Monitoring - 5 Acre - DG Set 320 KVA	Sample Received on	30.12.2023		
Sample Collected by	GCSPL	Test Commenced on	30.12.2023		
Sample Collected Date	30.12.2023	Test Completed on	03.01.2024		
Sl.No	Description	Unit	Results	Reference Method	Limits as per CPCB Specification
1.	Total Stack Height From 'G' Level	m	3.56	---	---
2.	Port Hole Height From 'G' Level	m	3.56	---	---
3.	Stack Diameter	m	0.15	---	---
4.	Ambient Temperature	°C	29	IS-11255 Part 3:2008 (RA:2018)	---
5.	Stack Temperature	°C	151	IS-11255 Part 3:2008 (RA:2018)	---
6.	Flue gas velocity	m/sec	16.72	IS-11255 Part 3:2008 (RA:2018)	---
7.	Gaseous Emission	Nm ³ /hr	746	IS-11255 Part 3:2008 (RA:2018)	---
8.	Particulate Matter (PM)	g/kw-hr	0.044	IS-11255 Part 1:1985 (RA:2019)	≤ 0.2
9.	Sulphur Di-Oxide (SO ₂)	mg/Nm ³	7.1	IS-11255 Part 2:1985 (RA:2019)	---
10.	Oxides of Nitrogen (NO _x)	g/kw hr	0.57	IS-11255 Part 7:2005 (RA:2019)	4.0 (NO _x + HC)
	Total Hydro Carbon (HC)		BDL(DL:1.0)	EPA 429	
11.	Carbon Monoxide	g/kw-hr	BDL(DL:0.2)	IS-13270-1992 (RA:2019)	≤ 3.5
BDL: Below Detection Limit DL: Detection Limit					
Remarks: The above tested parameters are within the CPCB Limits.					
				For Green Chem Solutions Private Limited (Laboratory Division)	
				Authorised Signatory	

End of Report



Kamarajar Port Limited

Vallur Post, Chennai-600 120, Tamil Nadu, India

Reports on Environmental Monitoring of Kamarajar Port Limited



Study Period: July 2023

Prepared By



NITYA LABORATORIES

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BUILDING & ROAD, MATERIAL, SOIL, ENVIRONMENTAL & CALIBRATION TESTING LAB

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Test Reports of Ambient Air Quality Monitoring



BUREAU OF INDIAN STANDARDS
(ISIRI 11329)

NOTE: This certificate is valid only for the test results mentioned in this certificate. It is not valid for any other test results. The certificate is valid only for the test results mentioned in this certificate. It is not valid for any other test results. The certificate is valid only for the test results mentioned in this certificate. It is not valid for any other test results.

CORPORATE OFFICE & CENTRAL LABORATORY -

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BUILDING & ROAD, MATERIAL, SOIL, ENVIRONMENTAL & CALIBRATION TESTING LAB



Issued To: **M/s. Karamveer Plast Private
Water Plant, Chander Prasth**

Test Report No.: **QA/2022/02**

Sample Particulars

Nature of the Sample

Purpose of Monitoring

Sampling Location

Method of Sampling

Monitoring Conducted By

Sampling Duration (hrs.)

- 1. Ambient Air Quality Monitoring
- 2. To Check the Pollution Level
- 3. Hourly Data
- 4. IS 1162 (Part 14)
- 5. As Stipulated
- 6. 24 hrs.

Analysis Report

Sl. No.	Date of Sampling	G/A/R No.	Concentration				
			Particulate Matter (PM10) (ug/m ³)	Particulate Matter (PM2.5) (ug/m ³)	Sulphur Dioxide (SO ₂) (ug/m ³)	Nitrogen Dioxide (NO ₂) (ug/m ³)	Carbon Monoxide (CO) (mg/m ³)
1	18/07/2022	TC/2022/0001/001	71.00	42.41	12.30	24.12	ND
2	18/07/2022	TC/2022/0001/002	74.25	42.30	11.40	22.30	ND
3	18/07/2022	TC/2022/0001/003	74.40	41.40	8.40	21.40	ND
4	18/07/2022	TC/2022/0001/004	76.45	46.40	12.30	19.40	ND
5	18/07/2022	TC/2022/0001/005	87.70	49.30	13.40	24.30	ND
6	18/07/2022	TC/2022/0001/006	88.90	50.40	12.40	24.30	ND
7	18/07/2022	TC/2022/0001/007	87.40	47.20	9.30	23.40	ND
8	18/07/2022	TC/2022/0001/008	85.90	41.30	11.30	21.30	ND
9	18/07/2022	TC/2022/0001/009	87.40	46.40	12.30	24.40	ND
MAXIMUM PERMISSIBLE			85	50	80	80	5
Test Method			IS 1162 Appendix 1 PART 14 CPCV Condition	IS 1162 PART 14 PART 14	IS 1162 PART 14 PART 14	IS 1162 PART 14 PART 14	IS 1162 PART 14 PART 14

Report generated by Nitya Laboratories Pvt. Ltd. on 18/07/2022 at 10:00 AM. The report is valid for 30 days from the date of sampling. The report is generated by Nitya Laboratories Pvt. Ltd. on 18/07/2022 at 10:00 AM. The report is valid for 30 days from the date of sampling.



Report generated by Nitya Laboratories Pvt. Ltd. on 18/07/2022 at 10:00 AM. The report is valid for 30 days from the date of sampling. The report is generated by Nitya Laboratories Pvt. Ltd. on 18/07/2022 at 10:00 AM. The report is valid for 30 days from the date of sampling.

BUILDING & ROAD, MATERIAL, SOIL, ENVIRONMENTAL & CALIBRATION TESTING LAB



Report To: Mr. Kamaljeet Paul Triast
Vihar Road, Gurgaon, India

Test Report No.: NLAB/2023

Sample Particulars:

Name of the Sample

Purpose of Monitoring

Sampling Location

Method of Sampling

Monitoring Conducted By

Sampling Duration (Ifs)

Reference for Quality Monitoring

Test Method and Reference Limit

Moisture

IS 2720 (Part 1)

0% - 20%

0% - 10%

Analysis Report

Sl. No.	Date of Sampling	L.R. No.	Concentration	
			Moisture (%)	
1	01/01/2023	001/01/001/19	10	10
2	01/02/2023	002/02/002/19	10	10
3	15/03/2023	003/03/003/19	10	10
4	14/04/2023	004/04/004/19	10	10
5	10/05/2023	005/05/005/19	10	10
6	24/06/2023	006/06/006/19	10	10
7	28/07/2023	007/07/007/19	10	10
8	28/08/2023	008/08/008/19	10	10
9	11/09/2023	009/09/009/19	10	10

Test Method

PC Based Moisture Analyser

Notes:
1. All test results are subject to change if any error is detected in the test procedure and/or if any change is made in the test procedure. It is recommended that samples should not be kept for extended periods before and after the test. 2. For more information, please visit our website: www.nityalab.com



DISCLAIMER: The test results are subject to change if any error is detected in the test procedure and/or if any change is made in the test procedure. It is recommended that samples should not be kept for extended periods before and after the test. For more information, please visit our website: www.nityalab.com

BUILDING & ROAD, MATERIAL, SOIL, ENVIRONMENTAL & CALIBRATION TESTING LAB



Issued To: Mr. Hemanga Patil Trust
Vidya Post, Channarayana, India

Test Report Date: 08/04/2023

Sample Particulars

Name of the Sample:

Purpose of Monitoring:

Sampling Location:

Method of Sampling:

Monitoring Conducted In:

Sampling Duration (hrs):

Ambient Air Quality Monitoring

To Check the Pollution Level

Over 24 hrs

24 Hrs (over 14)

At 10:00 hrs

24 Hrs

Analysis Report

Sl. No.	Date of Sampling	ULN No.	Concentration
			Microg/m ³
1	08/04/2023	2023070011	60
2	08/04/2023	2023070012	60
3	08/04/2023	2023070013	60
4	08/04/2023	2023070014	60
5	08/04/2023	2023070015	60
6	08/04/2023	2023070016	60
7	08/04/2023	2023070017	60
8	08/04/2023	2023070018	60
9	08/04/2023	2023070019	60
Total Method			PM 10 Based Method Report

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BUILDING & ROAD, MATERIAL, SOIL, ENVIRONMENTAL & CALIBRATION TESTING LAB



Issued To: **M/s Ramcharan Road Trust**
 Vaidh Nagar, Gurgaon, INDIA

Test Report No.: **00000002**

Sample Particulars

Nature of the Sample:

Purpose of Monitoring:

Sampling Location:

Method of Sampling:

Monitoring Conducted By:

Sampling Duration (hrs):

Ambient Air Quality Monitoring

(To Check the Pollution Level)

Ambient Building

IS 15787 Part 1A

Mr. Shreshth

24/10/2024

Analysis Report

Sl. No.	Date of Sampling	SAR No	Concentration	
			Microg/m ³	
1	04/10/2024	000000001E	ND	
2	07/10/2024	000000001E	ND	
3	10/10/2024	000000001E	ND	
4	14/10/2024	000000001E	ND	
5	17/10/2024	000000001E	ND	
6	21/10/2024	000000001E	ND	
7	24/10/2024	000000001E	ND	
8	28/10/2024	000000001E	ND	
9	31/10/2024	000000001E	ND	
Test Method			PM 10 Based Mettore Analyser	

Note:

1. This report is valid only for the purpose mentioned. It is not valid for any other purpose.
 2. The results are subject to the accuracy of the equipment used and the quality of the sample.
 3. The results are subject to the accuracy of the equipment used and the quality of the sample.



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BUILDING & ROAD, MATERIAL, SOIL, ENVIRONMENTAL & CALIBRATION TESTING LAB

Issued To: M/s Ramnagar Plast Plast
Water Pipe, Chennai, India

Test Report (Date): 08/08/2022

Sample Particulars
Name of the Sample
Purpose of Monitoring
Sampling Location
Method of Sampling
Monitoring Conducted By
Sampling Duration (Hrs.)

- 1. **Ambient Air Quality Monitoring**
- 2. To Check the Pollution Level
- 3. **Signal Station**
- 4. **IS 3102 (Part 14)**
- 5. **M. Sharma**
- 6. **24 Hrs**

Analysis Report

Sl. No.	Date of Sampling	G.P. No.	Concentration				
			Particulate Matter (PM ₁₀) (µg/m ³)	Particulate Matter (PM _{2.5}) (µg/m ³)	Ozone (as O ₃) (ppb)	Ozone Dioxide (as SO ₂) (ppb)	Carbon Monoxide (as CO) (ppm)
1	08/08/2022	Tamil Nadu	75.42	49.28	12.82	20.12	90
2	08/08/2022	Tamil Nadu	70.48	52.28	11.40	18.44	90
3	08/08/2022	Tamil Nadu	78.42	47.28	12.20	21.22	90
4	08/08/2022	Tamil Nadu	70.42	47.28	12.20	18.18	90
5	10/08/2022	Tamil Nadu	78.31	47.28	12.18	18.88	90
6	10/08/2022	Tamil Nadu	78.38	48.32	12.20	20.42	90
7	08/08/2022	Tamil Nadu	80.38	44.28	12.18	20.42	90
8	08/08/2022	Tamil Nadu	80.42	47.28	11.60	20.12	90
9	10/08/2022	Tamil Nadu	78.38	48.28	12.18	21.42	90
NAAQM Standards			88	100	80	80	8
Test Method			IS 3102 (Part 14) IS 3102 (Part 14)	IS 3102 (Part 14)	IS 3102 (Part 14)	IS 3102 (Part 14)	IS 3102 (Part 14)

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BUILDING & ROAD, MATERIAL, SOIL, ENVIRONMENTAL & CALIBRATION TESTING LAB

1

Issued To: M/s Ramanga Plast Test
 Water Proof Chemical, India

Test Report No.: 2019/0001

Sample Particulars

Nature of the Sample:
Purpose of Monitoring:
Sampling Location:
Method of Sampling:
Monitoring Conducted By:
Sampling Duration (No.):

- 1. Ambient Air Quality Monitoring
- 2. To Check the Pollution Level
- 3. Report Issue
- 4. IS 3102 (Part 14)
- 5. Mr. Shrihar
- 6. 2019

Analysis Report

Sl. No.	Date of Sampling	S.A. No.	Concentration	
			Microg (µg)	
1	01/01/2019	0000000111		60
2	01/01/2019	0000000112		60
3	11/01/2019	0000000113		60
4	14/01/2019	0000000114		60
5	17/01/2019	0000000115		60
6	20/01/2019	0000000116		60
7	24/01/2019	0000000117		60
8	28/01/2019	0000000118		60
9	31/01/2019	0000000119		60
Test Method			PM 10 Gravimetric Analysis	

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(PROFESSOR SHARAD KUMAR)
(MANAGER NITYA)

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BUILDING & ROAD, MATERIAL, TOL, ENVIRONMENTAL & CALIBRATION TESTING LAB

11/2024

Issued To: M/s. Kameshwar Pest Treat
 Water Pest Control Unit

Test Report No.: 2024/0001

Sample Particulars

Name of the Sample:
Purpose of Monitoring:
Sampling Location:
Method of Sampling:
Monitoring Conducted By:
Sampling Duration (hrs.):

Reference Air Quality Monitoring

To Check the Pollution Load

Frequency:
IS 1152 (Part 14)
At. Siting:
24 hrs.

Analysis Report

Sl. No.	Date of Sampling	ISRN No.	Concentration	
			Microg (µg)	
1	18/07/2024	2024/0001/14		90
2	21/07/2024	2024/0001/14		90
3	18/07/2024	2024/0001/14		90
4	19/07/2024	2024/0001/14		90
5	21/07/2024	2024/0001/14		90
6	21/07/2024	2024/0001/14		90
7	24/07/2024	2024/0001/14		90
8	25/07/2024	2024/0001/14		90
9	21/07/2024	2024/0001/14		90

Test Method: **PM 10 Based Malvern Analyser**

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BUILDING & ROAD, MATERIAL, SOIL, ENVIRONMENTAL & CALIBRATION TESTING LAB



Issued To: **M/s. Karamveer Plast Trade**
Water Proof, Chemical, India

Test Report No.: **00000000**

Sample Particulars

Nature of the Sample:

Purpose of Monitoring:

Sampling Location:

Method of Sampling:

Monitoring Conducted By:

Sampling Duration (hrs.):

Ambient Air Quality Monitoring

PC Chem. No. (Reference No.):

General Usage Book:

IS 11032 (Part 14)

M. Sample:

20 hrs.

Analysis Report

Sl. No.	Date of Sampling	Location	Concentration	
			Method (%)	
1	01/01/2021	0000000011	90	
2	02/01/2021	0000000012	90	
3	03/01/2021	0000000013	90	
4	04/01/2021	0000000014	90	
5	05/01/2021	0000000015	90	
6	06/01/2021	0000000016	90	
7	07/01/2021	0000000017	90	
8	08/01/2021	0000000018	90	
9	09/01/2021	0000000019	90	
Test Method:			PC Based Reference Analyser	

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Issued To: **Mr. Parvatharaj Reddy Prasad**
 Water Dept. Chennai Water

Test Report Date: **05/06/2024**

01

Sample Particulars

Name of the Sample:
 Purpose of Monitoring:
 Sampling Location:
 Method of Sampling:
 Monitoring Conducted By:
 Sampling Duration (hrs):

- Ambient Air Quality Monitoring
- To Check PM Pollution Level
- Car Parking
- In Street (near T-junction)
- In Street
- In City

Analysis Report

Sl. No.	Date of Sampling	L&N No.	Concentration
			Microgram (µg)
1	04/06/2024	000437000116	ND
2	04/06/2024	000437000116	ND
3	04/06/2024	000437000116	ND
4	04/06/2024	000437000116	ND
5	04/06/2024	000437000116	ND
6	04/06/2024	000437000116	ND
7	04/06/2024	000437000116	ND
8	04/06/2024	000437000116	ND
9	04/06/2024	000437000116	ND
Test Method			PM 10 Based Method Analysis

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BUILDING & ROAD, MATERIAL, SOIL, ENVIRONMENTAL & CALIBRATION TESTING LAB

Issued To: M/s Beverage Park Trust
 10/10 Park, Chennai, India.

Test Report Date: 08/08/2024

Sample Particulars

Nature of the Sample:

Process of Monitoring:

Sampling Location:

Method of Sampling:

Monitoring Conducted By:

Sampling Operator (Name):

- Ambient Air Quality Monitoring
- To Check for Polluted Load
- Free Station
- IS 3585 (Part 1A)
- Mr. Prakash
- 24 hrs

Analysis Report

Sr. No.	Date of Sampling	SLR No.	Concentration	
			Microg (µg)	
1	08/08/2024	20240808101	ND	
2	08/08/2024	20240808102	ND	
3	08/08/2024	20240808103	ND	
4	08/08/2024	20240808104	ND	
5	08/08/2024	20240808105	ND	
6	08/08/2024	20240808106	ND	
7	08/08/2024	20240808107	ND	
8	08/08/2024	20240808108	ND	
9	08/08/2024	20240808109	ND	

Test Method: **FID Based Methane Analyzer**

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Test Reports of Wastewater (STP)



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Kamarajar Port Limited

Vallur Post, Chennai-600 120, Tamil Nadu, India

Reports on Environmental Monitoring of Kamarajar Port Limited



Study Period: August 2023

Prepared By



NITYA LABORATORIES

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Test Reports of Ambient Air Quality Monitoring



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Issued To: Mr. Anandhar Puri Trust
 Vihar Post, Chandra, India

Test Report No.: 154000001

Sample Particulars

Name of the Sample:

Purpose of Monitoring:

Sampling Location:

Method of Sampling:

Monitoring Conducted By:

Sampling Duration (Days):

Air Quality Monitoring

To Check the Pollution Level

Mon. Date:

02/08/2020 (Mon 14)

At. Station:

14/10

Analysis Report

Sr. No.	Date of Sampling	Lab. No.	Concentration
			Microg/m ³
1	24/08/2020	10000804110	60
2	27/08/2020	10000805110	60
3	17/09/2020	10000810110	60
4	18/09/2020	10000814110	60
5	18/09/2020	10000818110	60
6	20/09/2020	10000822110	60
7	20/09/2020	10000826110	60
8	20/09/2020	10000830110	60
9	24/09/2020	10000834110	60
Test Method			FD Based Nephelometry

Notes:

1. Report is valid only for the sampling period. 2. Report is valid only for the sampling period. 3. Report is valid only for the sampling period. 4. Report is valid only for the sampling period. 5. Report is valid only for the sampling period. 6. Report is valid only for the sampling period. 7. Report is valid only for the sampling period. 8. Report is valid only for the sampling period. 9. Report is valid only for the sampling period. 10. Report is valid only for the sampling period.



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Send To: M/s. Narmada Port Trust
 (Water Plant, Chennai, India)

Test Report No.: 19/00001

Sample Particulars

Nature of the Sample
 Purpose of Monitoring
 Sampling Location
 Method of Sampling
 Monitoring Conducted By
 Sampling Duration (hrs.)

Ambient Air Quality Monitoring
 To Check the Pollution Level
 Date: 19/01/2019
 @ 10:00 (Post 1st)
 At: Gurgaon
 24 hrs.

Analysis Report

Sl. No.	Date of Sampling	SLR No.	Concentration
			Microg/m ³
1	19/01/2019	19/00001/1	ND
2	19/01/2019	19/00001/2	ND
3	19/01/2019	19/00001/3	ND
4	19/01/2019	19/00001/4	ND
5	19/01/2019	19/00001/5	ND
6	19/01/2019	19/00001/6	ND
7	19/01/2019	19/00001/7	ND
8	19/01/2019	19/00001/8	ND
Total Method			ND (Good)

Note: Sample taken subject to local standards. Results for 24 hrs. monitoring may be higher than the standard limit. The above information is a general statement. However, the quality of the sample depends on the sampling method used. The results are subject to the accuracy of the equipment used.



BUILDING & ROAD, MATERIAL, SOIL, ENVIRONMENTAL & CALIBRATION TESTING LAB

Send To: **M/s Kumbhraj Fort Trust**
 Vardhola, Chennai, 600

Test Report No: **19000002**

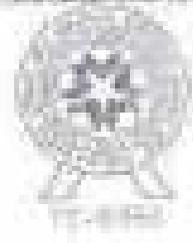
Sample Particulars
 Name of the Sample
 Purpose of Monitoring
 Sampling Location
 Method of Sampling
 Monitoring Conducted by
 Sampling Duration (hrs)

Ambient Air Quality Monitoring
 To Check the Pollution Load
 Area: Building
 IS 5162 (Part-1A)
 24 Hr.

Analysis Report

Sl. No.	Date of Sampling	L&R No.	Concentration				
			Particulate Matter (PM10) (µg/m ³)	Particulate Matter (PM2.5) (µg/m ³)	Sulphur Dioxide (as SO ₂) (µg/m ³)	Nitrogen Dioxide (as NO ₂) (µg/m ³)	Carbon Monoxide (as CO) (mg/m ³)
1	04/08/2023	TCR/2023/00000001/001	27.40	40.10	11.20	27.50	50
2	07/08/2023	TCR/2023/00000002/001	26.70	37.20	10.50	26.80	50
3	11/08/2023	TCR/2023/00000003/001	27.40	39.40	9.80	28.50	50
4	14/08/2023	TCR/2023/00000004/001	27.20	40.10	10.50	26.40	50
5	18/08/2023	TCR/2023/00000005/001	26.80	41.50	10.20	24.80	50
6	22/08/2023	TCR/2023/00000006/001	24.80	36.20	11.20	26.40	50
7	24/08/2023	TCR/2023/00000007/001	24.50	34.20	8.80	27.50	50
8	28/08/2023	TCR/2023/00000008/001	26.40	37.80	8.50	26.50	50
IS:5162 Standard			50	100	80	80	5
Test Method			IS:5162 Appendix 1 Part 03: CPCN Guidelines	IS:5162 (P-10)	IS:5162 (P-1)	IS:5162 (P-6)	IS:5162 (P-10)

NOTE: These values are based on the test results recorded in the test report. The values are subject to change without any notice.
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Client To: M/s. Nangrajee Port Trust
 Joka Road, Chennai, India

Test Report No.: NR/17022

Sample Particulars

Name of the Sample:
Purpose of Monitoring:
Sampling Location:
Method of Sampling:
Monitoring Conducted by:
Sampling Station (If any):

Ambient Air Quality Monitoring

To Check the Pollution Level
Area: Building
(If Road / Port / etc.)
At: Street
(If any)

Analysis Report

Sl. No.	Date of Sampling	S/L No.	Concentration
			Microg/m ³
1	14/02/2017	0000000110	40
2	00/00/0000	0000000112	50
3	11/00/0001	0000010011	50
4	14/02/2017	0000010011	40
5	14/02/2017	0000010011	40
6	00/00/0000	0000010011	40
7	00/00/0000	0000010011	40
8	00/00/0000	0000010011	40
Test Method			ISO Standard Method: Analyser

NOTE: Results shown on this report are based on the test(s) performed on the sample(s) as described. The laboratory is not responsible for results from any additional testing not specified on the report. Results shown on this report are for the use of the client only. © 2017 Nitya Laboratories.



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BUILDING & ROAD, MATERIAL, SOIL, ENVIRONMENTAL & CALIBRATION TESTING LAB



Issued To: Mr. Manojan PPT Trust
 Vadar Post, Changan, India

Test Report Date: 04/04/2024

Sample Particulars

Name of the Sample

Purpose of Monitoring

Sampling Location

Method of Sampling

Monitoring Configuration for

Sampling Duration (hrs)

Addressed Air Quality Monitoring

To Check the Particulate Load

Signal Station

IS 3025 (Part 1a)

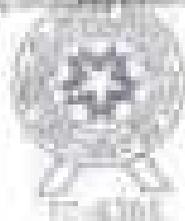
At: Street

At: No.

Analysis Report

Sl. No.	Date of Sampling	L&T No.	Concentration				
			Particulate Matter (PM10) (µg/m ³)	Particulate Matter (PM2.5) (µg/m ³)	Sulphur Dioxide (SO ₂) (µg/m ³)	Nitrogen Dioxide (NO ₂) (µg/m ³)	Carbon Monoxide (CO) (ppm)
1	04/04/2024	TCMBL200000000101	24.41	42.22	11.2	12.15	60
2	07/04/2024	TCMBL200000000102	24.72	42.41	9.8	12.22	60
3	11/04/2024	TCMBL200000000103	18.52	47.22	11.22	12.42	60
4	14/04/2024	TCMBL200000000104	18.52	44.22	12.22	12.42	60
5	18/04/2024	TCMBL200000000105	16.72	51.22	12.22	12.42	60
6	21/04/2024	TCMBL200000000106	17.22	52.42	9.72	12.42	60
7	24/04/2024	TCMBL200000000107	22.42	47.22	11.72	12.72	60
8	27/04/2024	TCMBL200000000108	17.22	44.22	11.72	12.42	60
NAACB Standards			60	100	80	60	2
Test Method			IS 3025 Appendix 1, Part 12-CPOB Guidelines	IS 3025 (P-22)	IS 3025 (P-2)	IS 3025 (P-4)	IS 3025 (P-10)

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(NAME OF NITYA)

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BUILDING & ROAD, MATERIAL, SOIL, ENVIRONMENTAL & CALIBRATION TESTING LAB

1/2024

Issued To: Mr. Kamranjot Singh
Nitya Labs, Gurgaon, India

Test Report No.: 1900002

Sample Particulars

Nature of the Sample:
Number of Monitoring:
Sampling Location:
Method of Sampling:
Monitoring Conducted by:
Sampling Duration (hrs.):

Ambient Air Quality Monitoring

To Check the Pollution Level

Signal Station

IS 5182 (Part 14)

Mr. Kamranjot

24 hrs.

Analysis Report

Sl. No.	Date of Sampling	LAB No.	Concentration
			Microgram / m ³
1	01/08/2024	000004119	ND
2	07/08/2024	000001219	ND
3	14/08/2024	000001319	ND
4	21/08/2024	000001419	ND
5	28/08/2024	000001519	ND
6	04/09/2024	000001619	ND
7	11/09/2024	000001719	ND
8	18/09/2024	000001819	ND
Total Number			ND (Based on Method Analyzed)

This report is prepared based on the test results obtained from the samples submitted to the laboratory. It is subject to the accuracy of the data provided by the client and the laboratory's adherence to the applicable standards and procedures. The laboratory is not responsible for any errors or omissions in the report.



BUILDING & ROAD, MATERIAL, SOIL, ENVIRONMENTAL & CALIBRATION TESTING LAB

Send To: **M/s. Damodar Port Trust**
Water Test, Chennai, India

Test Report Date: 09/08/2023

Sample Particulars
Nature of the Sample
Nature of Monitoring
Sampling Location
Method of Sampling
Monitoring Conducted By
Sampling Duration (hrs)

Ambient Air Quality Monitoring
To check the Pollution Level
From July
25:00 (For 1 Hr)
By: Analyst
On: 09/08/2023

Analysis Report

Sl. No.	Date of Sampling	LAT No.	Concentration				
			Particulate Matter (PM10) (µg/m ³)	Particulate Matter (PM2.5) (µg/m ³)	Sulphur Dioxide (as SO ₂) (ppm)	Ozone (as O ₃) (ppm)	Carbon Monoxide (as CO) (ppm)
1	09/08/2023	12.982230000000000	25.12	22.52	17.89	19.26	40
2	09/08/2023	12.982230000000000	24.94	22.40	18.20	19.84	40
3	09/08/2023	12.982230000000000	15.88	16.40	22.54	19.84	40
4	09/08/2023	12.982230000000000	19.00	17.84	18.74	19.84	40
5	09/08/2023	12.982230000000000	16.72	17.60	19.84	19.84	40
6	09/08/2023	12.982230000000000	20.40	18.72	18.94	19.84	40
7	09/08/2023	12.982230000000000	22.40	20.80	18.94	19.84	40
8	09/08/2023	12.982230000000000	21.28	17.60	18.94	19.84	40
NAACM Standard			40	100	80	80	5
Test Method			IS 3025 Appendix 1, Part 20 (CPCB Guidelines)	IS 3025 (P-02)	IS 3025 (P-01)	IS 3025 (P-04)	IS 3025 (P-03)

NOTE: NITYA LABORATORIES IS AN ISO 9001:2015 CERTIFIED QUALITY MANAGEMENT SYSTEM PROVIDER. THE TEST REPORT IS VALID ONLY IF THE SAMPLE IS RECEIVED WITHIN THE VALIDITY PERIOD OF THE TEST METHOD. THE TEST REPORT IS VALID ONLY IF THE SAMPLE IS RECEIVED WITHIN THE VALIDITY PERIOD OF THE TEST METHOD. THE TEST REPORT IS VALID ONLY IF THE SAMPLE IS RECEIVED WITHIN THE VALIDITY PERIOD OF THE TEST METHOD.





Issued To: **M/s Karamveer Plast Trust**
 Labo. No. 02/001, NDA

Test Report Date: 24/05/2014

Sample Particulars

History of the Sample
 Purpose of Monitoring
 Sampling Location
 Method of Sampling
 Monitoring Conducted By
 Sampling Duration (Yrs.)

- Ambient Air Quality Monitoring
- To Check for Pollution Level
- From July
- 15.0102 (Part 14)
- 10' Stack
- 24/7rs

Analysis Report

Sr. No.	Date of Sampling	S.R. No.	Concentration
			Microg/m ³
1	24/05/2014	2020000114	90
2	27/05/2014	2020000214	80
3	31/05/2014	2020000314	80
4	03/06/2014	2020000414	80
5	06/06/2014	2020000514	80
6	09/06/2014	2020000614	80
7	12/06/2014	2020000714	80
8	15/06/2014	2020000814	80
Test Method			ISO 9001 Method Analyzer

NOTE: All test results are subject to change without notice. The results are valid only for the purpose and conditions specified. The results are not to be used for any other purpose. The results are not to be used for any other purpose. The results are not to be used for any other purpose.



BUILDING & ROAD, MATERIAL, SOIL, ENVIRONMENTAL & CALIBRATION TESTING LAB

Send To: Mr. Manoj Kumar Reddy
Water For: Chemical, HCL

Test Report No.: 16-04-2019

Sample Particulars

- ✓ Name of the Sample
- ✓ Purpose of Monitoring
- ✓ Sampling Location
- ✓ Method of Sampling
- ✓ Monitoring Conducted By
- ✓ Sampling Number (P/N)

Assess Air Quality Monitoring

- ✓ To Check the Pollution Level
- ✓ General Usage Area
- ✓ IS: 1032 (Part 14)
- ✓ In: Street
- ✓ In: Park

Analysis Report

Sl. No.	Date of Sampling	SLR No.	Concentration
			Microg/m ³
1	20/04/2019	2000001019	90
2	20/04/2019	2000002019	90
3	21/04/2019	2000003019	90
4	22/04/2019	2000004019	90
5	23/04/2019	2000005019	90
6	24/04/2019	2000006019	90
7	25/04/2019	2000007019	90
8	26/04/2019	2000008019	90
Test Method			90 Based Method Applied

Notes:
 1. The test results shown in this report are based on the test results of the sample as received.
 2. The test results are subject to the accuracy of the test methods used and the quality of the sample.
 3. The test results are subject to the accuracy of the test methods used and the quality of the sample.



BUILDING & ROAD, MATERIAL, CIVIL, ENVIRONMENTAL & CALIBRATION TESTING LAB



Issued To: **M/s Kaveripal Post Trust**
 Water Test Chennai 1000

Test Report Date: **05/05/2024**

Sample Particulars
 Nature of the Sample
 Purpose of Monitoring
 Sampling Location
 Method of Sampling
 Monitoring Conducted By
 Sampling Duration (hrs)

Resident Air Quality Monitoring
 To Check Air Pollution Level
 Car Parking
 10' x 10' (Post 10)
 Air Standard
 24 hrs

Analysis Report

Sr. No.	Date of Sampling	SLE No.	Concentration
			Microg (µg)
1	05/05/2024	0000000110	60
2	05/05/2024	0000000210	60
3	05/05/2024	0000000310	60
4	05/05/2024	0000000410	60
5	05/05/2024	0000000510	60
6	05/05/2024	0000000610	60
7	05/05/2024	0000000710	60
8	05/05/2024	0000000810	60
Test Method			FD Based Nephelometer Analyser

NOTE: Values reported here are for information only. Results are only valid for the purpose for which they are intended.
 It should not be used for any other purpose. It is subject to the accuracy of the methods used. Sample collection and analysis should be done in accordance with the relevant standards. (NITYA) (IN) 044 2661 7666


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BUILDING & ROAD, MATERIAL, SOIL, ENVIRONMENTAL & CALIBRATION TESTING LAB



Issued To: Mrs. Manojdeepa Paul Vaid
 Address: Sector 44, Gurgaon, India

Test Report Code: 15496222

Sample Particulars
 Name of the Sample
 Purpose of Monitoring
 Sampling Location
 Method of Sampling
 Monitoring Component No.
 Sampling Duration (Yr)

Analyzed As: Quality Monitoring
 To Check the Pollution Level
 For Station
 Station (Part No)
 M. Station
 24 hrs

Analysis Report

Sl. No.	Date of Sampling	L&R No.	Concentration
			Microg/m ³
1	14/06/2022	20220614111	40
2	15/06/2022	20220615111	40
3	16/06/2022	20220616111	40
4	17/06/2022	20220617111	40
5	18/06/2022	20220618111	40
6	19/06/2022	20220619111	40
7	20/06/2022	20220620111	40
8	21/06/2022	20220621111	40

Test Method: IS 5950 Method 4000

Notes:
 1. Sample received and tested as per the details mentioned in the report. The test results are subject to the accuracy of the sample.
 2. The laboratory is not responsible for the accuracy of the results if the sample is not properly preserved and handled.
 3. Sample preservation and handling should be as per the IS 5950 Method 4000.



NITYA LABORATORIES is a leading provider of quality testing services. We are ISO 9001:2015 certified and ISO 17025:2017 accredited. Our services include Building & Road, Material, Soil, Environmental & Calibration Testing. We are committed to providing accurate and reliable results to our clients. For more information, please contact us at +91-122-4000077 or visit our website at www.nitya.com.



Test Reports of Wastewater (STP)



NOTE: The information provided in this report is based on the samples received and tested as per the test methods specified in the report. The information is provided for your reference only and is not intended to be used for any other purpose. The information is provided for your reference only and is not intended to be used for any other purpose. The information is provided for your reference only and is not intended to be used for any other purpose.

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Kamarajar Port Limited

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Reports on Environmental Monitoring of Kamarajar Port Limited



Study Period: September 2023

Prepared By



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Test Reports of Ambient Air Quality Monitoring



(AUTHENTIC SIGNATURE)
(DR. VIKAS MITAL)

FOR INFORMATION PURPOSES ONLY. IT IS NOT INTENDED FOR OFFICIAL USE. THIS REPORT IS VALID ONLY FOR THE TESTS SPECIFIED IN THE REPORT. IT IS NOT VALID FOR OTHER TESTS OR FOR OTHER PURPOSES. IT IS NOT VALID FOR OTHER PURPOSES. IT IS NOT VALID FOR OTHER PURPOSES.

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BUILDING & ROAD, MATERIAL, SOIL, ENVIRONMENTAL & CALIBRATION TESTING LAB

Issued To: **M/s. Kalyanraj Plast. Pipes**
 (Water Proof, Chemical, India)

Test Report No: **NTY/00002**

Sample Particulars

Nature of the Sample:

Purpose of Monitoring:

Sampling Location:

Method of Sampling:

Monitoring Conducted By:

Sampling Division (if any):

1. Ambient Air Quality Monitoring

2. To Check the Pollution Load

3. Map Data

4. IS 3100 (Part 14)

5. Mr. Praveen

6. 24 hrs.

Analysis Report:

Sl. No.	Date of Sampling	Test Report No.	Concentration
			Within (%)
1	24/06/2021	2020000010	40
2	24/06/2021	2020000010	40
3	24/06/2021	2020000010	40
4	24/06/2021	2020000010	40
5	24/06/2021	2020000010	40
6	24/06/2021	2020000010	40
7	24/06/2021	2020000010	40
8	24/06/2021	2020000010	40
Test Method			ISO Based Wetness Analyser

NOTE: 1. All test results are based on the test results of the sample received at the laboratory. 2. The laboratory is not responsible for the accuracy of the results if the sample is not properly labeled and stored. 3. The laboratory is not responsible for the accuracy of the results if the sample is not properly labeled and stored.



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(HARIDWAR, UTTARAKHAND)

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Issued To: **M/s Ramrajgarh Port Trust**
Sector 17, Faridkot, India

Test Report No: **NTYR0002**

Sample Particulars

Name of the Sample:

Purpose of Monitoring:

Sampling Location:

Method of Sampling:

Monitoring Conducted By:

Sampling Duration (hrs.):

- Ambient Air Quality Monitoring
- To Check the Pollution Level
- Good House
- IS 3100 (Part 1)
- As Specified
- 24 hrs

Analysis Report

Sr. No.	Date of Sampling	Test Report No.	Concentration
			Methane (%)
1	08/06/2025	0020000011	ND
2	08/06/2025	0020000021	ND
3	08/06/2025	0020000031	ND
4	10/06/2025	0020001011	ND
5	14/06/2025	0020001411	ND
6	20/06/2025	0020002011	ND
7	20/06/2025	0020002021	ND
8	20/06/2025	0020002031	ND
Test Method			ND Based Methane Analyzer

Note: The test method used for this analysis is as per IS 3100 (Part 1) 2015, and the results are reported as per the method. The test results are reported as per the method used. The test results are reported as per the method used. The test results are reported as per the method used.



(AUTHORIZED SIGNATORY)
(RAVINDER NITTA)

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BUILDING & ROAD, MATERIAL, SOIL, ENVIRONMENTAL & CALIBRATION TESTING LAB

Issued To: **Mrs Namangal Pooj Thakur**
Vafar Road, Chandra, India

Test Report Date: 27/10/2023

Sample Particulars

Nature of the Sample:

Purpose of Monitoring:

Sampling Location:

Method of Sampling:

Monitoring Conducted By:

Sampling Duration (hrs.):

Ambient Air Quality Monitoring

To Check the Pollution Load

Admin Building

60 Area (Plot 110)

60, Gurgaon

24 hrs

Analysis Report

Sl. No.	Date of Sampling	Test Report No.	Concentration
			Methane (%)
1	26/10/2023	202306040110	40
2	26/10/2023	202306040110	40
3	26/10/2023	202306040110	40
4	12/09/2023	202301180110	40
5	12/09/2023	202301180110	40
6	27/09/2023	202301200110	40
7	20/09/2023	202301200110	40
8	20/09/2023	202301200110	40
Test Method			FTIR based Methane Analyser

Notes

All test results depend on data provided. Laboratory does not take any responsibility for any error or omission due to lack of information of a suitable test or incorrectly obtained data. The test method used is standardized and approved by the concerned regulatory authority.



(AUTHOGRAPHED SIGNATURE)

(NAMANGAL MITTAL)

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BUILDING & ROAD, MATERIAL, SOIL, ENVIRONMENTAL & CALIBRATION TESTING LAB



Issued To: **M/s Karamveer Road Trust**
 Vaidh Road, Chennai, India

Test Report Code: **011000001**

Sample Particulars

- ✓ Nature of the Sample
- ✓ Purpose of Monitoring
- ✓ Sampling Location
- ✓ Method of Sampling
- ✓ Monitoring Conducted by
- ✓ Sampling Duration (hrs)

- ✓ Ambient Air Quality Monitoring
- ✓ To Check the Pollution Level
- ✓ Report Status
- ✓ IS:1182 (Part 1)
- ✓ Mr. Anand
- ✓ 24 hrs

Analysis Report

Sr. No.	Date of Sampling	SAR No.	Concentration				
			Particulate Matter (PM ₁₀) (µg/m ³)	Particulate Matter (PM _{2.5}) (µg/m ³)	Ozone (as O ₃) (ppb)	Ammonia (as NH ₃) (ppb)	Total Microbials (as CFU/mpl)
1	10/06/2024	TC000100000000011	12.10	15.10	12.50	17.20	60
2	10/06/2024	TC000100000000012	11.20	15.20	14.10	16.10	60
3	10/06/2024	TC000100000000013	11.40	14.70	14.80	16.70	60
4	11/06/2024	TC000100000000014	11.50	14.30	17.20	16.60	60
5	11/06/2024	TC000100000000015	11.40	14.50	14.20	16.10	60
6	11/06/2024	TC000100000000016	11.50	14.10	13.70	15.40	60
7	12/06/2024	TC000100000000017	11.20	13.40	11.20	17.60	60
8	12/06/2024	TC000100000000018	11.50	14.10	14.40	14.70	60
NALM Standard			40	40	60	50	2
Test Method			IS:1182 Appendix 1 Part 12 (PM ₁₀) Guidelines	IS:1182 (PM _{2.5})	IS:1182 (O ₃)	IS:1182 (NH ₃)	IS:1182 (PM ₁₀)

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Issued To: **M/s. Kamangal Port Trust**
Vidya Road, Chennai, India

Test Report No: **021000002**

Sample Particulars

Nature of the Sample:

Purpose of Monitoring:

Sampling Location:

Method of Sampling:

Monitoring Conducted by:

Sampling Station (If Any):

Air Quality Monitoring

To Check the Pollutant Load

From: 01/01/2014

to: 31/03/2014

By: Director

at: 01/01/2014

Analysis Report

Sr. No.	Date of Sampling	Test Report No.	Concentration
			Microg/m ³
1	01/01/2014	02100000114	45
2	01/01/2014	02100000114	45
3	01/01/2014	02100000114	45
4	01/01/2014	02100000114	45
5	01/01/2014	02100000114	45
6	01/01/2014	02100000114	45
7	01/01/2014	02100000114	45
8	01/01/2014	02100000114	45
Test Method			ISO Based Microg Analyzer

Notes:

1. All test results are subject to change if any discrepancy is found during the course of the test. 2. The test results are subject to change if any discrepancy is found during the course of the test. 3. The test results are subject to change if any discrepancy is found during the course of the test.



(NITYA LABORATORIES)

(RAYSEER MITTAL)

BUILDING & ROAD, MATERIAL, SOIL, ENVIRONMENTAL & CALIBRATION TESTING LAB

12/2024

Issued To: **M/s. Kaverajpur Path Trust**
Vijay Nagar, Gurgaon, India

Test Report No.: **2024000001**

Sample Particulars

Name of the Sample:

Purpose of Monitoring:

Sampling Location:

Method of Sampling:

Monitoring Conducted by:

Sampling Duration (hrs.):

- Ambient Air Quality Monitoring
- To Check the Pollutant Load
- General Check from
- IS 4160 (Part 1)
- IS 4160
- IS 4160

Analysis Report

Sl. No.	Date of Sampling	Test Report No.	Concentration
			Microg / m ³
1	12/20/2024	2024000001	40
2	12/20/2024	2024000001	50
3	12/20/2024	2024000001	40
4	12/20/2024	2024000001	50
5	12/20/2024	2024000001	40
6	12/20/2024	2024000001	40
7	12/20/2024	2024000001	40
8	12/20/2024	2024000001	40
Test Method			PM Based Method - Ambient

Notes:

1. Sample collection should be strictly according to IS 4160 (Part 1) and IS 4160 (Part 2) as per the method.
2. Sampling and the analysis should be done according to the standard test methods and standard instrument/analytical equipment.
3. Sample keeping time should be as per the test method. IS 4160 (Part 1) and IS 4160 (Part 2) as per the method.



(AUTHENTICATED SIGNATURE)

(RAVINDRA MITTAL)

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BUILDING & ROAD, MATERIAL, SOIL, ENVIRONMENTAL & CALIBRATION TESTING LAB

Issued To: M/s. Anandraj Park Trust
Village Road, Chandra, Haryana

Test Report Date: 07/07/2022

Sample Particulars

Nature of the Sample:

Purpose of Monitoring:

Sampling Location:

Method of Sampling:

Monitoring Conducted By:

Sampling Duration (hrs.):

Apparent Air Quality Monitoring

To Check the Pollution Level

For Station

IS 15859 Part 1A

At: Station

24 hrs

Analysis Report

Sl. No.	Date of Sampling	Test Report No.	Concentration
			Microg/m ³
1	07/07/2022	202207070113	40
2	07/07/2022	202207070114	40
3	07/07/2022	202207070115	40
4	07/07/2022	202207070116	40
5	07/07/2022	202207070117	40
6	07/07/2022	202207070118	40
7	07/07/2022	202207070119	40
8	07/07/2022	202207070120	40
Test Method			FD Based Method Analyser

NOTE: This report is valid only for the purpose mentioned above. It is not valid for any other purpose. The client is responsible for the accuracy of the data provided. The laboratory is not responsible for the accuracy of the data provided. The laboratory is not responsible for the accuracy of the data provided.



Test Reports of Noise Monitoring



Issued To: **M/s. Karamdeep Pulp Board**
 Water Plant, Chinnai, India

Lab No: **TC084000004/TOP-01/007**
 Test Report Date: **18/08/2018**

Sample Particulars
 Nature of the Sample:
 Parameter Tested:
 Instrument Used:
 Sampling Location (Ifs):

Analyst Name:
 Name Level: **Log 05 (A)**
 Sound Level Meter:
 01116

Analysis Report

Sl. No.	Location	Date of Sampling	Test Result (dBA) Day Time	Test Result (dBA) Night Time
1	Main Gate	12/08/2018	61.88	62.76
2	Gate House	12/08/2018	56.88	60.12
3	Admin Building	12/08/2018	62.48	63.68
4	Signal Station	12/08/2018	67.76	68.41
5	Filter Jety	12/08/2018	68.42	68.88
6	Reservoir Catch Basin	12/08/2018	62.14	62.88
7	Car Parking	12/08/2018	64.97	66.32
8	Fire Station	12/08/2018	62.88	63.88
Permissible Limit as per IS:1629 for Industrial Area			75 (dBA)	70 (dBA)

1. All the measurements were taken at the location specified in the above table. 2. All the measurements were taken during the day time. 3. All the measurements were taken during the night time.

Note: The Noise Limits for Quality Standards are given for reference.

Area Class	Category of Area	Limits (dB (A)) Limit	
		Day Time (8AM - 6PM)	Night Time (10PM - 6AM)
A	Industrial Area	75	70
B	Commercial Area	65	60
C	Residential Area	55	50
D	Source Area	55	50



Test Reports of Wastewater (STP)



(AUTHORISED SIGNATORY)

(NAME OF NITYA)

Test Reports of Surface Water





Issued To: **M/s. Narmada Port Trust**
 Water Road, Okhla, Delhi

SLP No.: **SC/2024/00001/1000-01/100**
 Test Report Date: **2024/05/20**

Sample Particulars

Station of the Sample:
 Sample Quantity & Packaging:
 Sample Received at Lab:
 Test Started On:
 Test Completed On:
 Method of Sampling:
 Date of Sampling:
 Monitoring Conducted By:
 Sample Retention:

Surface Water
 1000 ml, Sterilized Pet Bottle (Dist)
 10000002
 10000003
 20000005
 60000001
 10000002
 Mr. Shreshth
 09401 60001000
 09401 60001000
 10001 60001000
Analysis Report

Sl. No.	Parameters	Unit	Test Results			Protocol
			Run-1	Run-2	Avg	
1	pH	-	7.88	7.20	7.54	IS 3025 (P-1)
2	Temperature	°C	26.1	26.2	26.1	IS 3025 (P-4)
3	Electrical Conductivity	µmhos	20100	16000	18050	IS 3025 (P-10)
4	Turbidity	NTU	4.1	2.7	3.4	APHA 2170A
5	Total Dissolved Solids	mg/l	2000	800	1400	IS 3025 (P-16)
6	Ammonia as NH ₃	mg/l	0.11	0.05	0.08	APHA 2170A
7	Nitrate as NO ₃	mg/l	0.35	4.27	4.30	IS 3025 (P-24)
8	Total Ammonia	mg/l	0.38	4.62	4.20	IS 3025 (P-24)
9	Total Suspended Solids	mg/l	25	10	17	IS 3025 (P-17)
10	Dissolved Oxygen as DO	mg/l	4.1	6.2	5.1	IS 3025 (P-18)
11	Biological Oxygen Demand	mg/l	25	5	15	IS 3025 (P-19)
12	Chemical Oxygen Demand	mg/l	110	10	71	IS 3025 (P-20)
13	Copper as Cu	mg/l	0.08	0.02	0.05	APHA 2170A
14	Iron as Fe	mg/l	20.18	40	30.09	APHA 2170A
15	Zinc as Zn	mg/l	0.08	40	40	APHA 2170A
16	Manganese as Mn	mg/l	ND (DL-0.05)	ND (DL-0.05)	ND (DL-0.05)	APHA 2170A
17	Arsenic as As	mg/l	ND (DL-0.05)	ND (DL-0.05)	ND (DL-0.05)	APHA 2170A
18	Cadmium as Cd	mg/l	ND (DL-0.05)	ND (DL-0.05)	ND (DL-0.05)	APHA 2170A
19	Cobalt as Co	mg/l	40	40	40	APHA 2170A
20	Fecal Coliform	MPN/100ml	10	40	15	IS 1502

Report No: 2024/05/20/001

(AUTHORIZED SIGNATORY)
 (JYOTI BHASORIA)



(AUTHORIZED SIGNATORY)
 (PRAVIN KUMAR MITTAL)

BUILDING & ROAD, MATERIAL, SOIL, ENVIRONMENTAL & CALIBRATION TESTING LAB



Issued To: **M/s. Naveenagar Port Trust**
 Malviya Road, Okhla, India

Test Report No.: **NDL/2019/110**
 Test Report Date: **22/08/2019**

Sample Particulars:

- 1. Nature of the Sample
- 2. Sample Quantity & Packaging
- 3. Sample Received at Lab
- 4. Test Started On
- 5. Test Completed On
- 6. Method of Sampling
- 7. Date of Sampling
- 8. Monitoring Conducted by
- 9. Sample Description

- 1. **Surface Water**
- 2. **5 L Liter, Decanted For BOD & DO**
- 3. **INDIA/2019**
- 4. **INDIA/2019**
- 5. **INDIA/2019**
- 6. **INDIA/2019**
- 7. **Mr. Naveen**
- 8. **Plot 118, Church Road**
- 9. **Plot 118, Church Road**

Analysis Report

Sl. No.	Parameters	Unit	Test Results			Remark
			Run 1	Run 2	Run 3	
1	Temperature (Temperature)	°C	ND (20.0 ± 0.1)	ND (20.0 ± 0.1)	ND (20.0 ± 0.1)	APHA 2019
2	Dissolved O ₂	mg/l	1.10	0.90	0.90	APHA 2019
3	Phosphate	mg/l	10.00	10.00	10.00	APHA 2019
4	Salinity	ppt	0.75	1.00	1.00	IC Meter
5	Water in Oil	mg/l	ND (20.0 ± 0.1)	ND (20.0 ± 0.1)	ND (20.0 ± 0.1)	IS 3025 (2014)
6	Total Nitrogen as N	mg/l	0.10	0.00	0.00	IS 3025 (2014)
7	Inorganic Phosphate	mg/l	0.00	0.00	0.00	IS 3025 (2014)
8	Total Phosphate as P	mg/l	0.00	0.00	0.00	IS 3025 (2014)

Method: IS 3025 (2014)

(Signature)
(AUTHORIZED SIGNATORY)
(NITYA LABS)



(AUTHORIZED SIGNATORY)
(RANJAN NITYA)

COMPANY OFFICE & CENTRAL LABORATORIES:

Plot No. 118, Church Road, Behind Railway Station, Market Area, Malviya Nagar, New Delhi - 110017, India

Ph: +91-11-26466001

Ph: +91-9810038888, +91-9810038877

Email: info@nityalab.com

www.nityalab.com



Issued To: **M/s Kanchan Park Trust**
Vastu Plan, Chennai, India

Test Request No.: **202307010142**
Test Report No.: **20230701**

Sample Particulars:

Nature of the Sample
Sample Quantity & Packaging
Sample Received at Lab
Test Request On
Test Completed On
Method of Sampling
Name of Sampling
Monitoring Conducted By
Sample Description:

Surface Water

1.1 Ltr. Provided for Surface Water
18/07/2023
18/07/2023
18/07/2023
18/07/2023
18/07/2023
Mr. Anshu
BPT, Gurgaon, Haryana
BPT, Time to Mkt. Code
BPT, Day to Print Date
Analysis Report

Sl. No.	Parameters	Test Results			Protocol
		SW-1	SW-2	SW-3	
1	Physicochemical (24 parameters)				
	Colour	2.0	2.0	2.0	APHA 215 P4
	Turbidity	2.4	1.8	2.0	ISO 7027/2012
	TSS ₂₅₀	Exceeding Maximum Allowable Limit. Consists of coarse particles	Particulate Matter (Total Suspended Solids)	Microplastics along with Fragments, Inorganic, Polymeric particles	APHA 254.2
2	Bacteriological (20 parameters)				
	Coliform	610	600	620	APHA 21114
	Faecal Coliform	1.0	2.0	2.0	ISO 10714/2015
	Spores	Adenovirus, rotavirus, Rotavirus, norovirus, Parvovirus, etc.	Campylobacterium, Streptococcus, etc.	Colony culture, Fermentation, Incubation, Microscopic analysis	APHA 21114
3	Residual				
	Chlorine	Major Amounts Consistently maintained	Free Chlorine Residual/Average	Residual chlorine, Initial Chlorine	APHA 21114

(AUTHORIZED SIGNATORY)
(NITYA BHATNAGAR)

(AUTHORIZED SIGNATORY)
(ANSHU MITTAL)

Information regarding the test results shall be provided to the client within the stipulated time frame. The client is advised to check the test results and take necessary actions. The laboratory is not responsible for any loss or damage to the sample or any other material. The client is advised to provide accurate and complete information regarding the sample and the test. The laboratory is not responsible for any error or omission in the test results. The client is advised to provide accurate and complete information regarding the sample and the test. The laboratory is not responsible for any error or omission in the test results.

Test Reports of Marine Water





Issued To: **Mr. Harpreet Paul Singh**
 Water Dept. Chemist, India

Test Report No.: **2024070001-101**
 Test Report Date: **2024/07/01**

Sample Particulars

Nature of the Sample
 Sample Quantity & Packaging
 Sample Preservation Info
 Test Started On
 Test Completed On
 Method of Sampling
 Date of Reporting
 Monitoring / Detected By
 Sample Description

Water Water
 1.5 Liter, Sterilized Pet Bottle (Ready)
 1000000
 1000000
 1000000
 1000000
 1000000
 1000000
 Mr. Harpreet
 4000, Near OCB (Bafra)
 4000, Near OCB (Bafra 1, Ind)

Analysis Report

Sl. No.	Parameters	Unit	Test Results		Method	IS/Class/IS reference Standard
			MR 1	MR 2		
1	pH	-	8.05	8.04	IS 3025 (P-15)	5.5-8.5
2	Temperature	°C	28.4	28.7	IS 3025 (P-16)	-
3	Electrical Conductivity	µmhos	29100	28800	IS 3025 (P-18)	-
4	Turbidity	NTU	11	11	IS 3025 (P-19)	-
5	Total Dissolved Solids	mg/l	23540	23800	IS 3025 (P-20)	-
6	Sulphate as SO ₄	mg/l	1000	1000	IS 3025 (P-21)	-
7	Chloride as Cl ₂	mg/l	740	730	IS 3025 (P-22)	-
8	Total Arsenic	mg/l	0.12	0.11	IS 3025 (P-23)	-
9	Total Suspended Solids	mg/l	4	11	IS 3025 (P-24)	-
10	Dissolved Oxygen as O ₂	mg/l	8.7	8.5	IS 3025 (P-25)	7.5
11	Biological Oxygen Demand	mg/l	10	8	IS 3025 (P-26)	3.0
12	Chemical Oxygen Demand	mg/l	60	60	IS 3025 (P-27)	-
13	Iron as Fe	mg/l	0.04	0.03	IS 3025 (P-28)	-
14	Nickel as Ni	mg/l	0.11	0.12	IS 3025 (P-29)	-
15	Zinc as Zn	mg/l	0.70	0.20	IS 3025 (P-30)	-
16	Manganese as Mn	mg/l	ND (DL: 0.05)	ND (DL: 0.05)	IS 3025 (P-31)	-
17	Arsenic as As	mg/l	ND (DL: 0.01)	ND (DL: 0.01)	IS 3025 (P-32)	-
18	Cadmium as Cd	mg/l	ND (DL: 0.01)	ND (DL: 0.01)	IS 3025 (P-33)	-
19	Chromium as Cr	mg/l	ND	ND	IS 3025 (P-34)	-
20	Fluoride as Fluoride	mg/l	ND (DL: 0.05)	ND (DL: 0.05)	IS 3025 (P-35)	-
21	Copper as Cu	mg/l	1.20	1.24	IS 3025 (P-36)	-
22	Phosphate	mg/l	10	10.00	IS 3025 (P-37)	-
23	Sodium	mg/l	27.0	26.5	IS 3025 (P-38)	-
24	Mercury as Hg	mg/l	0.00	ND (DL: 0.01)	IS 3025 (P-39)	-
25	Total Nitrogen as N	mg/l	0.70	0.60	IS 3025 (P-40)	-
26	Nitrate as Nitrate	mg/l	0.40	0.70	IS 3025 (P-41)	-
27	Total Phosphate as P	mg/l	0.00	0.00	IS 3025 (P-42)	-
28	Fecal Coliform	MPN/100 ml	000	000	IS 3025 (P-43)	0

(AUTHORIZED SIGNATORY)
(NITYA LABS)



NOTE: This report is valid only for the purpose mentioned. It is not valid for any other purpose. The results are based on the sample received and the method used. The laboratory is not responsible for any error or omission. The results are subject to change without notice. The laboratory is not responsible for any damage or loss of sample. The results are subject to change without notice. The laboratory is not responsible for any damage or loss of sample.

BUILDING & ROAD, MATERIAL, SOIL, ENVIRONMENTAL & CALIBRATION TESTING LAB

Issued To: **Mrs. Namratha Patel (Treasurer)**
Vastav Prasth, Chennai - India

Test Request No.: **20240412001102**
Test Report Date: **20240408**

Sample Particulars:

Nature of the Sample:
Sample Quantity & Packaging:
Sample Received at Lab:
Test Requested On:
Test Completed On:
Method of Sampling:
Date of Sampling:
Monitoring/Compliance By:
Sample Description:

Marine Water
1 Liter (Filtered Polythene Jar)
1200003
1200003
20240408
20240408
1200003
M. Sharma
SWT - Near PCB (Surface)
SWC - Near PCB (Depth 1.5 m)

Analysis Report

Sl. No.	Parameters	Test Results		Remarks
		Std. I	Std. II	
1	Physicochemical (200 ml water)			
	Biomass	0.0	0.0	APHA 2015E
	Dissolved	0.1	0.0	
	Spores	Particular spores Total count positive		
2	Biological (200 ml water)			
	Biomass	0.00	0.00	APHA 2015E
	Dissolved	0.0	0.0	
	Spores	Fungi Bacteria, Helicobacter Large, Amorphous spores		
3	Bacterial			
	Spores	Aerobic anaerobic, Psychrotrophic, Gram negative		APHA 2015E Microscopic method, Negative result. Agar based culture


(AUTHORISED SIGNATORY)
(NITYA LABORATORY)


(AUTHORISED SIGNATORY)
(NITYA LABORATORY)



Issued To: **M/s. Kanchan Part Plast**
Water Test, Ghaziabad, India

Test Report No.: **20220920124-04**
Test Report Date: **20/09/2022**

Sample Particulars

Nature of the Sample
Sample Quantity & Packaging
Sample Received at Lab
Test Station ID
Test Completed On
Method of Sampling
Date of Sampling
Workshop Conducted By
Name Designer

Source Water:

1.5 Liter, Ground Water (Bore)
TDS0202
TDS0202
Borewell
Borewell-2
TDS0202
M. Singh
MYS, Near N.T. South (Sector)
MYS, Near N.T. South (Sector 46, N)

Analysis Report

Sr. No.	Parameters	Unit	Test Results		Standard	IS:4563-2015 Permissible Limits (µg/l)
			Obs. 1	Obs. 2		
1	pH	---	8.28	8.28	6.5-8.5 (pH)	6.5-8.5
2	Temperature	°C	28.7	28.4	15-25 (°C)	---
3	Electrical Conductivity	µmhos/cm	4000	4000	50-200 (µmhos/cm)	---
4	Turbidity	NTU	<1	<1	APHA 20° (NTU)	---
5	Total Dissolved Solids	mg/l	2800	2800	50-500 (mg/l)	---
6	Hardness as CaCO ₃	mg/l	1800	1800	APHA 20° (mg/l)	---
7	Hardness as MgCO ₃	mg/l	83	83.74	IS:3500 (mg/l)	---
8	Total Hardness	mg/l	8.18	8.18	IS:3500 (mg/l)	---
9	Total Suspended Solids	mg/l	12	12	IS:3500 (mg/l)	---
10	Dissolved Oxygen as O ₂	mg/l	8.4	8.4	IS:3500 (mg/l)	8.0
11	Mineral Oxygen Demand	mg/l	18	1	IS:3500 (mg/l)	8.0
12	Chemical Oxygen Demand	mg/l	40	40	IS:3500 (mg/l)	---
13	Copper as Cu	mg/l	0.11	0.11	APHA 20° (mg/l)	---
14	Iron as Fe	mg/l	0.11	0.11	APHA 20° (mg/l)	---
15	Zinc as Zn	mg/l	0.09	0.09	APHA 20° (mg/l)	---
16	Manganese as Mn	mg/l	ND (DL: 0.05)	ND (DL: 0.05)	APHA 20° (mg/l)	---
17	Lead as Pb	mg/l	ND (DL: 0.01)	ND (DL: 0.01)	APHA 20° (mg/l)	---
18	Cadmium as Cd	mg/l	ND (DL: 0.01)	ND (DL: 0.01)	APHA 20° (mg/l)	---
19	Permissible Inorganics	mg/l	ND (DL: 0.01)	ND (DL: 0.01)	APHA 20° (mg/l)	---
20	Chloride as Cl	mg/l	1	1	APHA 20° (mg/l)	---
21	Fluoride as F	mg/l	1.8	1.8	APHA 20° (mg/l)	---
22	Sulfate	mg/l	11.8	11.8	IS: 4563	---
23	Ammonia as NH ₃	mg/l	0.05	0.05	IS:3500 (mg/l)	---
24	Total Nitrogen as N	mg/l	0.04	11.16	IS:3500 (mg/l)	---
25	Inorganic Phosphorus	mg/l	0.03	0.40	IS:3500 (mg/l)	---
27	Total Phosphorus as P	mg/l	0.40	0.08	IS:3500 (mg/l)	---
28	Total Coliform	MPN (100 ml)	000	000	IS:4563	ND (DL: 0)

Notes:

1. All test results are subject to the accuracy of the analytical methods used.

2. The test results are based on the sample received at the laboratory.

3. The test results are not valid if the sample is not properly preserved.

4. The test results are not valid if the sample is not properly labeled.

5. The test results are not valid if the sample is not properly stored.

6. The test results are not valid if the sample is not properly handled.

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Issued To: **M/s. Sanyasaan Port Trust**
 Water Dept. Chennai, India.

Test Report No: **20000130020 LAB**
 Test Report Date: **20000000**

Sample Particulars
 Name of the Sample
 Sample Quantity & Packaging
 Sample Received at Lab
 Test Conducted On
 Test Completed On
 Method of Sampling
 Date of Sampling
 Monitoring Conducted By
 Sample Description

Market Status
 1.0 Ltr. (Standard Pot Water (Dist))
 10000000
 10000000
 20000000
 10000000
 10000000
 M. Prasad
 1000. Near M.T. Bury (Bhubaneswar)
 1000. Near M.T. Bury (Bhubaneswar)

Analysis Result

Sr. No.	Parameter	Test Results		Remarks
		SI-1	SI-2	
1	Physicochemical (200 ml water)			
	Colour	4.2	1.2	APHA 20°C
	Turbidity	0.2	1.8	
	Notes:	Physicochemical parameters analyzed as per IS: 3025 (Part 1) - 1993	Standardization of colorimetric & nephelometric systems	
2	Residual Chlorine (200 ml water)			
	Residual	0.00	0.04	APHA 20°C
	Free Chlorine	0.2	0	
	Notes:	Residual chlorine analyzed as per IS: 3025 (Part 1) - 1993	Standardization of residual chlorine analysis (iodometric method)	
3	Hardness			
	Notes:	As per IS: 3025 (Part 1) - 1993	Standardization of hardness analysis (titrimetric method)	APHA 20°C

(NITYA LABORATORIES)
 CHYI TEST REPORT

(NITYA LABORATORIES)
 (CHYI TEST REPORT)

BUILDING & ROAD, MATERIAL, CIVIL, ENVIRONMENTAL & CALIBRATION TESTING LAB



Issued To: **M/s Homepage Plast Trade**
 Hakeem Nagar, Chaitanya, India

Test Report No.: **20230801/0004/100**
 Test Report Date: **20230801**

Sample Particulars

Article of the Sample
 Sample Quantity & Packaging
 Sample Preservation/Lab
 Test Conducted On
 Test Completed On
 Method of Sampling
 Date of Sampling
 Monitoring Conducted By
 Sample Description

Water Sample
 1.0 Liter (Bottled For Testing Purposes)
 14080000
 14080000
 20230801
 20230801
 7.0000000
 M. Shivan
 MWD: Near Project Jalya (Barkur)
 MWD: Near Project Jalya(Barkur) (K.A.)
Drinking Water

Sr. No.	Parameters	Unit	Test Results		Method	IS:Code/IV Method Remarks
			Obs'd	Std'd		
1	pH	-	8.26	7.01	IS:3025 (P-17)	8.26.1
2	Temperature	°C	26	25.1	IS:3025 (P-18)	-
3	Electrical Conductivity	µmhos	1940	1940	IS:3025 (P-19)	-
4	Turbidity	NTU	1	1	APHA 2170A	-
5	Total Dissolved Solids	mg/l	2176	2400	IS:3025 (P-20)	-
6	Biomass as BOD ₅	mg/l	172	1740	APHA 2171A	-
7	Biomass as COD	mg/l	1136	824	IS:3025 (P-24)	-
8	Total Ammonia	mg/L	0.14	0.28	IS:3025 (P-25)	-
9	Total Suspended Solids	mg/l	1	1	IS:3025 (P-27)	-
10	Dissolved Oxygen as DO ₂	mg/l	8.8	8.8	IS:3025 (P-28)	7.0
11	Biological Oxygen Demand	mg/l	14	12	IS:3025 (P-40)	8.0
12	Chemical Oxygen Demand	mg/l	66	66	IS:3025 (P-48)	-
13	Copper as Cu	mg/l	0.14	0.16	APHA 2175A	-
14	Iron as Fe	mg/l	0.25	0.28	APHA 2176A	-
15	Zinc as Zn	mg/L	0.26	0.28	APHA 2177A	-
16	Mercury as Hg	mg/l	ND (DL - 0.01)	ND (DL - 0.01)	APHA 2178A	1
17	Lead as Pb	mg/l	ND (DL - 0.01)	ND (DL - 0.01)	APHA 2179A	-
18	Cadmium as Cd	mg/l	ND (DL - 0.01)	ND (DL - 0.01)	APHA 2179A	-
19	Cadmium as Cd	mg/l	ND	ND	APHA 2179A	-
20	Permium Hydroxide	mg/l	ND (DL - 0.01)	ND (DL - 0.01)	APHA 2179A	-
21	Chlorophyll A	mg/l	2.4	2.1	APHA 2179A	-
22	Phaeophytin	mg/l	17.1	17.2	APHA 2179A	-
23	Salinity	ppt	26.4	26.2	IS:3025	-
24	Nitrite as NO ₂	mg/l	0.26	ND (DL - 0.01)	IS:3025 (P-34)	-
25	Total Nitrogen as N	mg/l	11.75	8.60	IS:3025 (P-34)	-
26	Organic Phosphate	mg/l	0.26	0.26	IS:3025 (P-31)	-
27	Total Phosphate as P	mg/l	0.41	0.41	IS:3025 (P-31)	-
28	Fixed Carbon	mg/l (ISO 91)	271	276	IS:3025	28000 (ml)

ANALYST:

(JAYANTH BABU)

AUTHORISED SIGNATORY:

(VAISHALI MITTAL)

NOTE: This report is valid only for the purpose for which it is issued. It is not valid for any other purpose. The user of this report is advised to verify the test results with the original data and to ensure that the test results are used for the intended purpose.



Issued To: **M/s. Karsanpur Pvt. Trust**
Address: **Wazirpur, Gurgaon, Haryana**

Test Report No.: **2024/12/05-12**
Test Report Date: **20/12/2024**

Sample Particulars

Name of the Sample
Sample Quantity & Packaging
Sample Received at Lab
Test Requested On
Test Completed On
Method of Sampling
Date of Sampling
Monitoring Conducted By
Sample Description

Market Name

100% Pure White Pet Rocks (Batch)
Batch No. 1
Batch No. 2
Batch No. 3
Batch No. 4
Batch No. 5
Mr. Director
M/s. New Finger-Jony (Gurgaon)
Road: New Finger-Jony (Station 1 & 2)

Analysis Report

Sl. No.	Parameter	Test Results		Remarks
		Std. I	Std. II	
1	Physicochemical (30 ml each)			
	Acidity	1.80	2.1	APHA 2015
	Alkalinity	0.1	0.0	
	Specific Gravity	1.0000000000000000	1.0000000000000000	
Specific Gravity	Chemical analysis	Temperature, Moisture, etc. Chemical analysis		
2	Suppliment (300 ml each)			
	Acidity	0.00	0.00	APHA 2015
	Alkalinity	0.0	0.0	
	Specific Gravity	1.0000000000000000	1.0000000000000000	
Specific Gravity	Temperature, Moisture, etc. Chemical analysis	Temperature, Moisture, etc. Chemical analysis		
3	Water			
	Acidity	0.0000000000000000	0.0000000000000000	APHA 2015

ANALYST SIGNATURE
NITYA BAJORI

NITYA LABORATORIES
(RANDESH MITAL)

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Issued To: M/s Navneet Plast Plast
 Water Plast, Gurgaon, India

Test Report No.: NNY/2025/0017/101
Test Report Date: 28/08/2025

Sample Particulars

Nature of the Sample:
Sample Quantity & Packaging:
Sample Received at Lab:
Test Started On:
Test Completed On:
Method of Sampling:
Site of Sampling:
Monitoring Conducted By:
Sample Description:

Matrix Water

1.2 L, in Sterilized Poly Bottle (Dist)
 14/08/2025
 14/08/2025
 20/08/2025
 20/08/2025
 14/08/2025
 M. Shrivastava
 M/s. Navneet Plast Water Plast Water (Surface)
 M/s. Navneet Plast Water Plast Water (Bottom 1.5m)

Analysis Report

Sl. No.	Parameter	Unit	Test Results		Standard	SIS Class/IS 15021:2016
			MP-1	MP-2		
1	pH	-	7.28	7.27	IS 3025 (P-11)	5-8.5
2	Temperature	°C	29.4	27.8	IS 3025 (P-12)	-
3	Electrical Conductivity	µmhos/cm	2000	2000	IS 3025 (P-13)	-
4	Turbidity	NTU	1	1	IS 3025 (P-14)	-
5	Total Dissolved Solids	mg/l	2257	2240	IS 3025 (P-15)	-
6	Sulphate as SO ₄	mg/l	71.5	67.5	IS 3025 (P-16)	-
7	Chloride as Cl ₂	mg/l	1.45	1.40	IS 3025 (P-17)	-
8	Total Hardness	mg/l	9.13	9.0	IS 3025 (P-18)	-
9	Total Suspended Solids	mg/l	19	12	IS 3025 (P-19)	-
10	Dissolved Oxygen as DO ₂	mg/l	8.9	8.4	IS 3025 (P-20)	5.0
11	Biological Oxygen Demand	mg/l	18	14	IS 3025 (P-21)	5.0
12	Chemical Oxygen Demand	mg/l	40	40	IS 3025 (P-22)	-
13	Copper as Cu	mg/l	0.14	0.21	IS 3025 (P-23)	-
14	Iron as Fe	mg/l	0.24	0.20	IS 3025 (P-24)	-
15	Zinc as Zn	mg/l	0.40	0.70	IS 3025 (P-25)	-
16	Mercury as Hg	mg/l	ND (DL: 0.01)	ND (DL: 0.01)	IS 3025 (P-26)	-
17	Arsenic as As	mg/l	ND (DL: 0.01)	ND (DL: 0.01)	IS 3025 (P-27)	-
18	Lead as Pb	mg/l	ND (DL: 0.01)	ND (DL: 0.01)	IS 3025 (P-28)	-
19	Cadmium as Cd	mg/l	ND	ND	IS 3025 (P-29)	-
20	Hexavalent Chromium	mg/l	ND (DL: 0.01)	ND (DL: 0.01)	IS 3025 (P-30)	-
21	Chromium A	mg/l	1.1	1.1	IS 3025 (P-31)	-
22	Fluoride	mg/l	18	17.44	IS 3025 (P-32)	-
23	Barium	mg/l	26.3	22.2	IS 3025 (P-33)	-
24	Strontium as Sr	mg/l	ND (DL: 0.01)	ND (DL: 0.01)	IS 3025 (P-34)	-
25	Total Nitrogen as N	mg/l	4.72	5.75	IS 3025 (P-35)	-
26	Nitrogen Phosphate	mg/l	0.45	0.30	IS 3025 (P-36)	-
27	Total Phosphate as P	mg/l	0.81	0.68	IS 3025 (P-37)	-
28	Total Chlorine	MPH/100 ml	175	171	IS 3025 (P-38)	150-200

(AUTHORIZED SIGNATORY)
 NITYA BASANTI

(AUTHORIZED SIGNATORY)
 NANDINI MITTAL

BUILDING & ROAD, MATERIAL, SOIL, ENVIRONMENTAL & CALIBRATION TESTING LAB

01/01/2024

Issued To: Mr. Manoj Kumar Pillai
 Vaidhyanathan, Chennai, India

Test Report No: NITYA/2024/01/01
 Test Report Date: 01/01/2024

Sample Particulars
 Name of the Sample
 Sample Quantity & Packaging
 Source/Received at Lab
 Test Standard(s)
 Test Completed On
 Method of Sampling
 Date of Sampling
 Monitoring Conducted By
 Sample Description

Water Sample
 1) 1 Lit. Distilled Water (DW)
 2) 1 Lit. Tap Water (TW)
 3) 1 Lit. Borewell Water (BW)
 4) 1 Lit. Rain Water (RW)
 5) 1 Lit. Pond Water (PW)
 6) 1 Lit. River Water (RW)
 7) 1 Lit. Lake Water (LW)
 8) 1 Lit. Sea Water (SW)
 9) 1 Lit. Ground Water (GW)
 10) 1 Lit. Surface Water (SW)
 11) 1 Lit. Wastewater (WW)
 12) 1 Lit. Industrial Water (IW)
 13) 1 Lit. Agricultural Water (AW)
 14) 1 Lit. Domestic Water (DW)
 15) 1 Lit. Drinking Water (DW)
 16) 1 Lit. Bottled Water (BW)
 17) 1 Lit. Filtered Water (FW)
 18) 1 Lit. Softened Water (SW)
 19) 1 Lit. Hardened Water (HW)
 20) 1 Lit. Deionized Water (DW)
 21) 1 Lit. Reverse Osmosis Water (RO)
 22) 1 Lit. Ultra Pure Water (UPW)
 23) 1 Lit. High Purity Water (HPW)
 24) 1 Lit. Low Purity Water (LPW)
 25) 1 Lit. Ultra Pure Water (UPW)
 26) 1 Lit. High Purity Water (HPW)
 27) 1 Lit. Low Purity Water (LPW)
 28) 1 Lit. Ultra Pure Water (UPW)
 29) 1 Lit. High Purity Water (HPW)
 30) 1 Lit. Low Purity Water (LPW)

Analysis Report

Sl. No.	Parameters	Test Results		Remarks
		Observed	Std. Value	
1	Temperature (25°C)	25	25	APHA 2100C
	Dissolved Oxygen	8.2	8.2	
	DO Saturation	12.1	12.1	
2	Temperature (25°C)	25	25	APHA 2100C
	Dissolved Oxygen	8.2	8.2	
	DO Saturation	12.1	12.1	
3	Temperature	25	25	APHA 2100C
	Dissolved Oxygen	8.2	8.2	


 (Authorized Signatory)
 (NITYA LABORATORIES)


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BUILDING & ROAD, MATERIAL, SOIL, ENVIRONMENTAL & CALIBRATION TESTING LAB

Issued To: **M/s Kaveriagar Post Trust**
 Village: **Post, District: Noida**

Test Report No: **202201010101**
 Test Report Code: **20220101**

Sample Particulars

Name of the Sample:
 Sample Quantity & Packaging:
 Sample Received at Lab:
 Test Started On:
 Test Completed On:
 Method of Sampling:
 Date of Sampling:
 Laboratory Conducted By:
 Sample Description:

Matrix Water

10 Ltrs. (Sealed Per Bottle Each)

10200003

10200003

20200003

20200003

10200003

Mr. Dinesh

M001: Clear Mouth-Fast Flow Water (Surface)

M010: Clear Mouth-Fast Flow Water (Bottom 1.5m)

Analysis Report

Sl. No.	Parameters	Unit	Test Results		Protocol	IS: 4550 IS: 4550
			Obs. Val.	Std. Val.		
1	pH	-	7.50	7.50	IS: 4550 (P-1)	-
2	Temperature	°C	26	26.7	IS: 4550 (P-1)	-
3	Dissolved Oxygen	mg/L	24.00	20.00	IS: 4550 (P-1)	-
4	Turbidity	NTU	11	11	IS: 4550 (P-1)	-
5	Total Dissolved Solids	mg/L	10100	10100	IS: 4550 (P-1)	-
6	Calcium as Ca	mg/L	1010	1010	IS: 4550 (P-1)	-
7	Magnesium as Mg	mg/L	4.41	4.41	IS: 4550 (P-1)	-
8	Total Alkalinity	mg/L	80	80	IS: 4550 (P-1)	-
9	Total Suspended Solids	mg/L	8	11	IS: 4550 (P-1)	-
10	Dissolved Copper as Cu	mg/L	0.8	0.8	IS: 4550 (P-1)	1.0
11	Dissolved Copper Element	mg/L	12	12	IS: 4550 (P-1)	1.0
12	Dissolved Copper Element	mg/L	0.12	0.12	IS: 4550 (P-1)	-
13	Cadmium as Cd	mg/L	0.00	0.00	IS: 4550 (P-1)	-
14	Iron as Fe	mg/L	0.00	0.00	IS: 4550 (P-1)	-
15	Zinc as Zn	mg/L	0.00	0.00	IS: 4550 (P-1)	-
16	Manganese as Mn	mg/L	NO DATA	NO DATA	IS: 4550 (P-1)	-
17	Ammonia as NH ₃	mg/L	NO DATA	NO DATA	IS: 4550 (P-1)	-
18	Nitrite as NO ₂	mg/L	NO DATA	NO DATA	IS: 4550 (P-1)	-
19	Nitrate as NO ₃	mg/L	NO DATA	NO DATA	IS: 4550 (P-1)	-
20	Fluoride as F	mg/L	NO DATA	NO DATA	IS: 4550 (P-1)	-
21	Chloride as Cl	mg/L	11.00	11.00	IS: 4550 (P-1)	-
22	Sulfate as SO ₄	mg/L	10.1	10.1	IS: 4550 (P-1)	-
23	Barium	mg/L	0.00	0.00	IS: 4550 (P-1)	-
24	Strontium as Sr	mg/L	0.00	NO DATA	IS: 4550 (P-1)	-
25	Total Hardness as Ca	mg/L	10.10	10.10	IS: 4550 (P-1)	-
26	Total Hardness as Ca	mg/L	10.10	10.10	IS: 4550 (P-1)	-
27	Total Hardness as Ca	mg/L	10.10	10.10	IS: 4550 (P-1)	-
28	Fluoride as F	mg/L	11	11	IS: 4550 (P-1)	-

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Issued To: **Mrs. Namrata Paul Triast**
Vastu Post, Chennai, India

Test Report No.: **200007/2019/101**
Test Report Date: **2019/05/01**

Sample Particulars

Nature of the Sample
Sample Quantity & Packaging
Sample Received at Lab
Year Analyzed On
Year Collected On
Method of Sampling
Type of Sampling
Monitoring Conducted By
Sample Description

Source Water

10 Litre, Sterilized Poly Bottle (Each)
H0000001
H0000002
2019/0003
0019/00-3
1/2019/003
W, Surface
WMS, Outer South-East Road Near River (Ghatkopar)
MMS, Outer South-East Road Near (Sector 13, GATE)

Analysis Report

Sl. No.	Parameters	Test Results		Prescribed
		SW 10	SW 15	
1	Hydrogenion* (pH unit neutral)			APHA 2450A
	Result	7.4	7.8	
	Quality	7.4	7.8	
	Source	Neutralization potential, alkalinity performance	Alkaline water, Sulfide content, Dissolved oxygen	
2	Dissolved Oxygen* (DO) unit mg/l			APHA 2010A
	Result	0.04	0.01	
	Quality	1.0	2.0	
	Source	Unpolluted water, alkalinity, oxygen	Excessive nitrate, Excessive nitrite, Hydrogen sulfide	
3	Ammonia*			APHA 2010A
	Source	Ammonia nitrate, Nitrite, ammonia	Excessive nitrate, Excessive nitrite	


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(NAVNEET MITTAL)



Issued To: **M/s Kamalraj Park Road**
Gurgaon Road, Gurgaon, India

Test Report No: **NYL/2019/102**
Test Report Date: **15/01/2019**

Sample Particulars

Name of the Sample:
Sample Quantity & Packaging:
Sample Received at Lab:
Test Conducted On:
Test Completed On:
Method of Sampling:
Name of Sampling:
Monitoring Conducted By:
Service Description:

Water Used:

1.2 Liter (Expured For Testing Used)
1000000
1000000
2000000
5000000
1000000
1000000
NY11 - Outer South-South West Road Water (Gurgaon)
NY12 - Outer South-South West Road Water (Sector 14 G)

Analysis Report

Sr. No.	Parameters	Unit	Test Results		Percent	ISIRI/ISRI/ISRI Method Standards
			NY 11	NY 12		
1	pH		8.38	7.22	IS 3025 (P-11)	-
2	Temperature	°C	25.5	25.7	IS 3025 (P-11)	-
3	Electrical Conductivity	µmhos/cm	16200	41100	IS 3025 (P-11)	-
4	Turbidity	NTU	11	11	IS 3025 (P-11)	-
5	Total Dissolved Solids	mg/L	14000	14000	IS 3025 (P-11)	-
6	Alumina as SO ₄	mg/L	14.5	13.0	IS 3025 (P-11)	-
7	Magnesia as SO ₄	mg/L	7.30	7.70	IS 3025 (P-11)	-
8	Total Alkalinity	mg/L	6.10	6.00	IS 3025 (P-11)	-
9	Total Hardness	mg/L	4	4	IS 3025 (P-11)	-
10	Residual Chlorine as Cl ₂	mg/L	0.0	0.1	IS 3025 (P-11)	1.0
11	Stagnant Chlorine Demand	mg/L	1	1	IS 3025 (P-11)	1.0
12	Chemical Oxygen Demand	mg/L	30	30	IS 3025 (P-11)	-
13	Chlorine as Cl ₂	mg/L	0.10	0.10	IS 3025 (P-11)	-
14	Free Chlorine	mg/L	0.00	0.00	IS 3025 (P-11)	-
15	Total Chlorine	mg/L	0.10	0.10	IS 3025 (P-11)	-
16	Mercury as Hg	MG/DL-0.001	MG/DL-0.001	MG/DL-0.001	IS 3025 (P-11)	-
17	Arsenic as As	MG/DL-0.01	MG/DL-0.01	MG/DL-0.01	IS 3025 (P-11)	-
18	Cadmium as Cd	MG/DL-0.01	MG/DL-0.01	MG/DL-0.01	IS 3025 (P-11)	-
19	Copper as Cu	MG	MG	MG	IS 3025 (P-11)	-
20	Fluoride Fluoride	MG/DL-0.01	MG/DL-0.01	MG/DL-0.01	IS 3025 (P-11)	-
21	Chlorophyll A	mg/L	3.7	3.7	IS 3025 (P-11)	-
22	Chlorophyll B	mg/L	10.8	11.3	IS 3025 (P-11)	-
23	Alumina	mg/L	11.7	10.7	IS 3025 (P-11)	-
24	Alumina as SO ₄	MG/DL-0.01	MG/DL-0.01	MG/DL-0.01	IS 3025 (P-11)	-
25	Total Hardness as Ca	mg/L	0.14	0.14	IS 3025 (P-11)	-
26	Iron as Fe	mg/L	0.42	0.30	IS 3025 (P-11)	-
27	Total Phosphorus as P	mg/L	0.01	0.01	IS 3025 (P-11)	-
28	Total Sulfur	mg/L	00	00	IS 3025 (P-11)	-

(AUTHENTIC SIGNATURE)
(AUTHENTIC SIGNATURE)

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Issued To: **Ms. Anandhan Parth Prasad**
 Value Point Chemicals

Test Report No.: **20230100141-100**
 Test Report Date: **03/01/2023**

Sample Particulars

Name of the Sample
 Sample Quantity & Packaging
 Sample Received at Lab
 Test Standard
 Test Completed On
 Method of Sampling
 Date of Sampling
 Monitoring Conducted By
 Sample Description

Material Name

1.2 Litre, Overhead Tank Water (Distt)
 10000002
 10000003
 10000004
 10000005
 10000006
 10000007
 10000008
 10000009
 10000010
 10000011
 10000012
 10000013
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 10000099
 10000100

Analysis Result

Sl. No.	Particulars	Test Results		Remark
		04/11	05/11	
1	Hydrochloric Acid (ppm)			APHA 20° Pl
	Acidity	0.4	0.0	
	Alkalinity	0.0	0.0	
	Chloride	Calcium chloride, Sodium chloride	Magnesium chloride, Sodium chloride, Potassium chloride	
2	Sulphate (ppm)			APHA 20° Pl
	Acidity	0.00	0.00	
	Alkalinity	0.7	0.0	
	Chloride	Tris (2,4,6) Chloroquinone, Ind. Chloroquinone	Sulphuric acid, Calcium chloride	
3	Barium	Hydrochloric Acid, Potassium chloride	Ammonium chloride, Potassium chloride, Potassium nitrate	APHA 20° Pl
	Acidity			

(AUTHENTIC SIGNATURE)
 ANANDHAN PARTH PRASAD

(AUTHENTIC SIGNATURE)
 (SIGNATURE WITH IN)

CORPORATE OFFICE & CENTRAL LABORATORIES -

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Test Reports of Marine Sediment



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Issued To: **M/s. Nityaagar Fort Trust**
Address: **Okhla Post, Okhla, India**

Test Report No: **20220701014710**
Test Report Date: **22/07/2022**

Sample Particulars

- ✓ Nature of the Sample
- ✓ Sample Quantity & Packaging
- ✓ Sample Received at Lab
- ✓ Test Standard
- ✓ Test Environment
- ✓ Method of Sampling
- ✓ Date of Sampling
- ✓ Monitoring Conducted by
- ✓ Sample Description

Matrix Substrate Details

- ✓ 1.0 kg, Polyethylene (PE)
- ✓ 1000/2000
- ✓ 1000/2000
- ✓ 2200/2000
- ✓ BOPIS/D.O
- ✓ 1000/2000
- ✓ M: 20/01/20
- ✓ 01: New Project Job
- ✓ 02: New Machine Liquid Terminal (MLT)
- ✓ 03: New General Cargo Centre
- ✓ 04: Other Matrix

Analysis Report

Sl. No.	Parameter	Unit	Test Results			
			SI	SI	SI	SI
1	Polychlorinated Biphenyls (PCBs)	mg/kg	0.06	0.07	0.08	0.09
2	Dioxin Content	%	20.50	21.8	23.4	24.8
3	Dioxin Weight	%	80.20	75.4	80.50	78.20
4	Copper as Cu	mg/kg	4.50	6.80	7.90	8.8
5	Lead as Pb	mg/kg	1.80	2.10	2.20	2.80
6	Cadmium as Cd	mg/kg	60	65	62	60
7	Mercury	mg/kg	60	60	60	60
8	Arsenic	mg/kg	60	60	60	60



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Kamarajar Port Limited

Vallur Post, Chennai-600 120, Tamil Nadu, India

Reports on Environmental Monitoring of Kamarajar Port Limited



Study Period: October 2023

Prepared By



NITYA LABORATORIES

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Test Reports of Ambient Air Quality Monitoring



(AUTHORISED SIGNATURE)

(RAVINDER NITYAL)

BUILDING & ROAD, MATERIAL, SOIL, ENVIRONMENTAL & CALIBRATION TESTING LAB

10/0001

Issued To: **Mr. Kamender Park Trust**
Vastu Post, Chennai, India

Test Report Date: 05/11/2023

Sample Particulars

Name of the Sample:
Purpose of Monitoring:
Sampling Location:
Method of Sampling:
Monitoring Conducted by:
Sampling Duration (If any):

Ambient Air Quality Monitoring

To Check the Pollution Level

Quart Name:

Q-0102 (Plot 104)

Mr. Kamender

Q4 No.

Analysis Report

Sr. No.	Date of Sampling	SLR No.	Concentration
			Micrograms (µg)
1	05/10/2023	00010000111	ND
2	06/10/2023	00010000111	ND
3	08/10/2023	00010000111	ND
4	12/10/2023	00010000111	ND
5	16/10/2023	00010000111	ND
6	20/10/2023	00010000111	ND
7	24/10/2023	00010000111	ND
8	27/10/2023	00010000111	ND
Test Method			FD Quartz Wetness Analyser

Notes

1. Results are valid only if the sample is properly preserved and analyzed within the specified time frame. 2. Results are valid only if the sample is properly preserved and analyzed within the specified time frame. 3. Results are valid only if the sample is properly preserved and analyzed within the specified time frame. 4. Results are valid only if the sample is properly preserved and analyzed within the specified time frame.



(KAMENDER MITTAL)

NOTE: The laboratory is not responsible for any errors or omissions in the analysis. The results are valid only if the sample is properly preserved and analyzed within the specified time frame. The laboratory is not responsible for any errors or omissions in the analysis. The results are valid only if the sample is properly preserved and analyzed within the specified time frame.

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Issued To: **M/s Hindalco Port Trust**
 (Hydr. Post: Chennai, India)

Test Report No: **00110023**



Sample Particulars

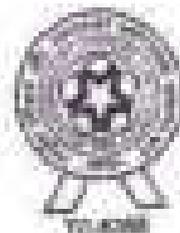
Nature of the Sample
 Purpose of Monitoring
 Sampling Location
 Method of Sampling
 Monitoring Conducted By
 Sampling Duration (Hrs.)

Appoint. for Quality Monitoring
 To Check the Pollution Level
 Admin Building
 IS 3102 (Part-1a)
 M. Sharma
 24 Hrs.

Analysis Report

Sl. No.	Date of Sampling	LCR No	Concentration				
			Particulate Matter (PM10) (µg/m ³)	Particulate Matter (PM2.5) (µg/m ³)	Sulphur Dioxide (as SO ₂) (µg/m ³)	Nitrogen Dioxide (as NO ₂) (µg/m ³)	Carbon Monoxide (as CO) (mg/m ³)
1	08/10/2023	TC08023000004700	28.20	48.20	12.00	23.40	ND
2	09/10/2023	TC08023000004800	30.10	52.20	14.00	27.20	ND
3	09/10/2023	TC08023000004900	23.00	41.20	10.00	26.00	ND
4	12/10/2023	TC08023000005100	25.40	43.20	12.20	18.20	ND
5	16/10/2023	TC08023000005300	20.00	38.20	12.40	18.20	ND
6	20/10/2023	TC08023000005400	27.20	50.00	12.40	26.40	ND
7	24/10/2023	TC08023000005500	27.40	50.20	11.00	26.20	ND
8	27/10/2023	TC08023000005600	20.00	44.00	11.40	27.00	ND
MAQOM Standards			80	100	80	80	1
Test Method			IS-3102 Part II GPCB Sub-section	IS-3102 (P-2)	IS-3102 (P-2)	IS-3102 (P-4)	IS-3102 (P-10)

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BUILDING & ROAD, MATERIAL, SOIL, ENVIRONMENTAL & CALIBRATION TESTING LAB

Issued To: **Mr. Kanchanraj Puri Trust**
Villar Post, Chennai, India

Test Report Date: **02/11/2023**

Sample Particulars

Nature of the Sample:

Purpose of Monitoring:

Sampling Location:

Method of Sampling:

Monitoring Conducted By:

Sampling Duration (hrs.):

1. **Ambient Air Quality Monitoring**

2. **To Check the Pollution Load**

3. **Aerosol Sampling**

4. **IS-3142 (Part 14)**

5. **No. of Sites:**

6. **28 Nos.**

Analysis Report

Sr. No.	Date of Sampling	ILR No.	Concentration
			Methane (%)
1	02/11/2023	202311020112	ND
2	02/11/2023	202311020212	ND
3	02/11/2023	202311020312	ND
4	12/11/2023	202311020412	ND
5	16/11/2023	202311020512	ND
6	20/11/2023	202311020612	ND
7	24/11/2023	202311020712	ND
8	27/11/2023	202311020812	ND
Test Method			ND Based Methane Analyser

Notes:

1. ND (Not Detected) means that the concentration of the substance being tested is below the detection limit.
2. ND (Not Detected) does not mean that the substance is not present, it only means that the concentration is below the detection limit.
3. ND (Not Detected) does not mean that the substance is not present, it only means that the concentration is below the detection limit.



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BUILDING & ROAD, MATERIAL, SOIL, ENVIRONMENTAL & CALIBRATION TESTING LAB

Issued To: Mr. Kameshwar Patel Trust
Vastu Plan: Chennai, India

Test Report Date: 03/11/2023

Sample Particulars

Nature of the Sample:

Purpose of Monitoring:

Sampling Location:

Method of Sampling:

Monitoring Conducted By:

Sampling Duration (hrs):

1. Ambient Air Quality Monitoring

2. To Check the Pollution Level

3. Project Job

4. IS 3102 (Part 14)

5. 08. Synthetic

6. 24 hrs.

Analysis Report

Sl. No.	Date of Sampling	SLM No.	Concentration				
			Particulate Matter (PM ₁₀) (µg/m ³)	Particulate Matter (PM _{2.5}) (µg/m ³)	Sulphur Dioxide (SO ₂) (µg/m ³)	Nitrogen Dioxide (NO ₂) (µg/m ³)	Carbon Monoxide (CO) (mg/m ³)
1	03/11/2023	TC000003000000478P	18.35	21.42	18.35	25.35	ND
2	03/11/2023	TC000003000000481P	20.52	25.35	21.42	18.35	ND
3	03/11/2023	TC000003000000484P	18.35	21.42	18.35	18.35	ND
4	12/11/2023	TC000003000000487P	18.35	21.42	18.35	18.35	ND
5	18/11/2023	TC000003000000490P	20.52	25.35	21.42	25.35	ND
6	20/11/2023	TC000003000000493P	20.52	25.35	21.42	25.35	ND
7	24/11/2023	TC000003000000496P	20.52	25.35	21.42	25.35	ND
8	27/11/2023	TC000003000000499P	20.52	25.35	18.35	20.52	ND
Maximum Observed			20.52	25.35	21.42	25.35	ND
Test Method			IS 3102 Appendix I Part 14 CPCal Optical	IS 3102 (P-2)	IS 3102 (P-3)	IS 3102 (P-4)	IS 3102 (P-5)

NOTE: Measurements of Ambient Air Quality Monitoring are performed in accordance with the provisions of the Environmental Protection Act, 1986 and the Central Pollution Control Board (CPCB) Guidelines for the Monitoring of Ambient Air Quality. The laboratory is not responsible for any errors or omissions in the data reported. The data reported is for information only and is not intended to be used for any legal or regulatory purposes. The laboratory is not responsible for any errors or omissions in the data reported. The data reported is for information only and is not intended to be used for any legal or regulatory purposes.



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Issued To: **Shri Kamaljeet Park Trust**
(Water Tank, Ghanna, India)

Test Report Date: 05/11/2023

Sample Particulars

Nature of the Sample:

Purpose of Monitoring:

Sampling Location:

Method of Sampling:

Monitoring Conducted by:

Sampling Duration (min):

Ambient Air Quality Monitoring

To Check the Pollution Level

General Cargo Road

05.01.23 (Post-14)

Mr. Jyoti

24 hrs

Analysis Report

Sl. No.	Date of Sampling	LQR No	Concentration
			Methane (%)
1	05/10/2023	102310000118	60
2	05/10/2023	102310000118	60
3	08/10/2023	102310000118	60
4	12/10/2023	102310120118	60
5	16/10/2023	102310160118	60
6	20/10/2023	102310200118	60
7	24/10/2023	102310240118	60
8	27/10/2023	102310270118	60
Test Method			FD Gas / Methane Analyser

Note:

1. Every Sample should be fully properly sealed by using airtight container and kept in cool place to be analysed.
2. Concentration of Total concentration of pollutants that are to be analysed, measured under specified environmental condition.
3. Sample should be taken care that the test of sampling. (FD Gas Analyser) (General Road)



MULTI-PURPOSE LABORATORY

(RANDEEP MITAL)

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BUILDING & ROAD, MATERIAL, SOIL, ENVIRONMENTAL & CALIBRATION TESTING LAB

Client To: **M/s Kamrajpur Port Trust**
 (Water Poll. Control, India)

Test Report Date: **03/11/2023**

Sample Particulars:

Source of the Sample:

Process of Monitoring:

Sampling Location:

Method of Sampling:

Monitoring Conducted By:

Sampling Duration (hrs.):

1. Ambient Air Quality Monitoring

2. To Check the Pollution Load

3. Car Parking

4. IS 5102 (Part 14)

5. 60' Diameter

6. 24 Hrs

Analysis Report:

Sl. No.	Date of Sampling	SLR No.	Concentration
			Method (%)
1	03/10/2023	202310000114	ND
2	06/10/2023	202310000114	ND
3	09/10/2023	202310000114	ND
4	12/10/2023	202310000114	ND
5	15/10/2023	202310000114	ND
6	18/10/2023	202310000114	ND
7	24/10/2023	202310000114	ND
8	27/10/2023	202310000114	ND
Test Method			FD Based Malvern Analyser

Note:

1. All test results are subject to the accuracy of the test method used. The results are for information only and should not be used for legal or regulatory purposes. The results are for information only and should not be used for legal or regulatory purposes. The results are for information only and should not be used for legal or regulatory purposes.



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BUILDING & ROAD, MATERIAL, SOIL, ENVIRONMENTAL & CALIBRATION TESTING LAB

Issued To: **Shri Ramrajgarh Farm Trust**
Upper Road, Chinnai, INDIA

Test Report Date: **02/11/2022**

Sample Particulars

Nature of the Sample

Purpose of Monitoring

Sampling Location

Method of Sampling

Monitoring Conducted By

Sampling Duration (hrs.)

1. Ambient Air Quality Monitoring

2. To Check the Pollution Level

3. Fire Station

4. IS 1102 (Part 14)

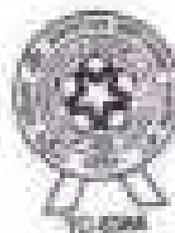
5. Mr. Sindher

6. 24 hrs.

Analysis Report

Sl. No.	Date of Sampling	SLR No.	Concentration				
			Particulate Matter (PM ₁₀) µg/m ³	Particulate Matter (PM _{2.5}) µg/m ³	Sulphur Dioxide (SO ₂) µg/m ³	Nitrogen Dioxide (NO ₂) µg/m ³	Carbon Monoxide (CO) mg/m ³
1	02/11/2022	TC00000000000004190F	23.62	23.62	12.18	23.88	40
2	08/11/2022	TC00000000000004202F	23.91	23.40	18.33	23.33	40
3	09/11/2022	TC00000000000004191F	23.46	21.40	18.40	22.33	40
4	12/11/2022	TC00000000000004197F	26.78	45.78	20.10	28.88	40
5	15/11/2022	TC00000000000004198F	21.36	40.00	14.00	24.44	40
6	20/11/2022	TC00000000000004199F	28.78	38.78	17.00	20.78	40
7	24/11/2022	TC00000000000004200F	25.40	42.33	18.33	21.40	40
8	27/11/2022	TC00000000000004201F	25.88	41.20	18.20	22.88	40
NAACM Standard			60	100	80	88	1
Test Method			IS 1102 Appendix C Part 14 (Part 14) Guidelines	IS 1102 (P-2)	IS 1102 (P-2)	IS 1102 (P-2)	IS 1102 (P-10)

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BUILDING & ROAD, MATERIAL, SOI, ENVIRONMENTAL & CALIBRATION TESTING LAB



Issued To: **Sh. Kamender Park Trust**
 Your Ref. Chemical Code:

Test Report Date: **03/11/2023**

Sample Particulars:

Name of the Sample:

Purpose of Monitoring:

Sampling Location:

Method of Sampling:

Monitoring Conducted By:

Sampling Duration (hrs.):

- 1. **Ambient Air Quality Monitoring**
- 2. **To Check the Pollution Load**
- 3. **Free Station**
- 4. **IS 5182 (Part 14)**
- 5. **M. Singh**
- 6. **24 hrs.**

Analyses Report

Sl. No.	Date of Sampling	SLP No.	Concentration
			Metres (%)
1	03/10/2023	202310030111	ND
2	04/10/2023	202310040111	ND
3	04/10/2023	202310050111	ND
4	12/10/2023	202310120111	ND
5	16/10/2023	202310160111	ND
6	20/10/2023	202310200111	ND
7	24/10/2023	202310240111	ND
8	27/10/2023	202310270111	ND
Test Method			FD Based Method Analyser

Note:

1. Sample concentration is subject to accuracy of instrument used. Periodic check of instrument is to be done. All the samples are to be collected in the correct manner, if a mistake the result may be incorrect. Sample should be kept in cool place for the best result. OTC (Over Test) should be done.



(AUTHORIZED SIGNATURE)

(RANJAN MITAL)

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BUILDING & ROAD, MATERIAL, SOIL, ENVIRONMENTAL & CALIBRATION TESTING LAB

Issued To: **M/s. Nageswar Post Trust**
Vallur Post, Chennai, India

Lab No.: **TC/MS/2022/0000201-000021**
Test Report Date: **08/11/2022**

Sample Particulars:

Nature of the Sample	Wastewater (DTP)
Sample Quantity & Packaging	1.0 Liter, Poly Bottle (Each)
Sample Received at Lab	30/10/2022
Test Started On	30/10/2022
Test Completed On	03/11/2022
Method of Sampling	IS 3043-2
Date of Sampling	27/10/2022
Monitoring Conducted By	M. Srinivas
Service Description	W-1: DTP (DL) of Sewer Sampling W-2: DTP (DL) of Car Parking

Analysis Report

Sl. No.	Parameter	Unit	Result		Permissible Limit	Remark
			W-1	W-2		
1	pH	-	7.32	7.20	5.5 to 9.0	IS 3043 (P-15)
2	Total Suspended Solids (TSS)	mg/l	140	210	50	IS 3043 (P-17)
3	Chemical Oxygen Demand (COD)	mg/l	38	31	150	IS 3043 (P-56)
4	Biochemical Oxygen Demand (5 Days at 20°C) (BOD)	mg/l	10	3	30	IS 3043 (P-44)
5	Fecal Coliform	MPN/100 ml	425	342	1500	IS 1502

(AUTHORIZED SIGNATORY)

(RHYTHM BASSONI)



TC-008



(AUTHORISED SIGNATORY)

(RAJESH MITAL)

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Kamarajar Port Limited
Vedar Post, Chennai-600 125, Tamil Nadu, India

Reports on Environmental Monitoring of Kamarajar Port Limited



Study Period: November 2023

Prepared By



NITYA LABORATORIES

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Laboratories | Faridabad (Haryana) | Jammu (J&K) | Mangalore (Karnataka) |

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BUILDING & ROAD, MATERIAL, SOIL, ENVIRONMENTAL & CALIBRATION TESTING LAB

Introduction

Karnataka Port Trust is the first corporatized Port in India and the 12th Major Port. It Works on the model of 'Landlord' terminal. KPT's policy is to manage the port in a proactive manner to minimize any impacts from port operations or new developments. Karnatak port handles coal for Tamil Nadu Electric Board, PCL, products and export of automobiles. Data generation on environmental quality constitute the basis for environmental appraisal of the project. Thus, data on environmental quality has to be periodically monitored and also to comply with the TNPCB / MPCB conditions.

With this background and need Karnataka Port Limited has appointed M/s. Nitya Laboratories to undertake the same. KPL has awarded the work to M/s. Nitya Laboratories vide work order No. KPL/AM/HR/ENV/000003 dated 10.07.2023.

Accordingly, environmental quality data on Ambient Air and Effluent (Sewage) for the month of October 2023 is presented in this report.

2.0 Scope and Methodology

The scope of work, works carried out and methodology adopted for the survey are described below.

2.1 Ambient Air Quality

As a part of study, Ambient Air Quality Parameters were measured during the monitoring days date of PM₁₀, PM_{2.5}, SO₂, NO₂, Methane and CO were monitored.



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AMBIENT AIR QUALITY MONITORING:

Ambient air quality was monitored at different locations inside the port. The study area covers the periphery of Port and different parts of the port. A Total of 8 Ambient Air Quality Monitoring Stations covering both upwind and downwind were monitored during November 2023.

Table: Detail of Ambient Air Quality Monitoring Locations

Sr. No	Station Code	Sampling Locations
1	AACM-1	Security Man Gate
2	AACM-2	Inside Port Administrative Building
3	AACM-3	Signal Station
4	AACM-4	Finger Jetty
5	AACM-5	At Car Parking Yard
6	AACM-6	At General Cargo Berth
7	AACM-7	At Fire Station
8	AACM-8	Guest House

Ambient Air Quality Monitoring was carried out with a frequency of two samples per week i.e. at 8 Locations. A Total of 32 Samples each of PM₁₀, SPM₁₀, Samples of SO₂, NO₂, Methane and CO each were monitored by using Respirable Dust sampler, Fine Particulate Sampler, Methane & CO Analyser.



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Test Reports of Ambient Air Quality Monitoring



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Issued To: Shri Kankaraj Patel Trust
Vidya Park, Chennai 600028

Test Report Date: 04/12/2023

Sample Particulars

Address of the Sample
Purpose of Monitoring
Sampling Location
Method of Sampling
Monitoring Conducted By
Sampling Duration (hrs)

Ambient Air Quality Monitoring
To Check the Pollution Level
Main Gate
IS 3163 (Part-1)
Mr. Srinath
24 hrs

Analysis Report

Sl. No.	Date of Sampling	Project No.	Concentration
			Methane (%)
1	04/12/2023	0023196019	ND
2	04/12/2023	0023196019	ND
3	04/12/2023	0023196019	ND
4	04/12/2023	0023196019	ND
Test Method			FID Based Methane Analyser

Notes:

Quality Management System is Quality Standard. Management should check the quality of the test results. The laboratory is not responsible for the quality of the test results if the test results are not used for the purpose of the test. The laboratory is not responsible for the quality of the test results if the test results are not used for the purpose of the test.



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Issued To: **M/s. Hansraj Plast Trust**
 Water Proof, Chemical, India

Test Report Date: **04/02/2011**

Sample Particulars

Name of the Sample:
 Purpose of Monitoring:
 Sampling Location:
 Method of Sampling:
 Monitoring Conducted By:
 Sampling Duration (hrs.):

- ✓ Ambient Air Quality Monitoring
- ✓ To Check for Pollution Load
- ✓ Road Noise
- ✓ IS-5182 (Part 1A)
- ✓ Mr. Director
- ✓ 24 hrs

Analysis Report

Sl. No.	Date of Sampling	Report No.	Concentration
			Microg (µg)
1	07/11/2010	102711000111	40
2	14/11/2010	202711000111	40
3	21/11/2010	302711000111	40
4	28/11/2010	402711000111	40
Test Method			PM 10 Gravimetric Analysis

NOTE: Nitya Laboratories India, Gurgaon, Haryana (India) is ISO 9001:2008 certified organization.
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 Management system (certification) is awarded by ISO 9001:2008 (India) Ltd.



NOTE: The quality control system is designed to ensure that the laboratory is providing accurate and reliable test results. The laboratory is committed to providing the highest quality of service to its customers. The laboratory is also committed to providing the highest quality of service to its customers. The laboratory is also committed to providing the highest quality of service to its customers.

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Issued To: Mr. Rameshwar Prasad
Vastha Plast, Okhla, India

Issue Report Date: 28/03/2023

Sample Particulars:

Feature of the Sample

Purpose of Monitoring

Sampling Location

Method of Sampling

Monitoring Conducted By

Sampling Duration (hrs.)

Ambient Air Quality Monitoring

To Check the Pollution Load

From Building

IS 3106 (Part 14)

10 Working

24 Hrs.

Analysis Report

Sl. No.	Date of Sampling	Report No.	Concentration
			Microg/m ³
1	07/11/2022	20221106010	60
2	10/11/2022	20221106010	60
3	17/11/2022	20221106010	60
4	28/11/2022	20221106010	60
Test Method			PM10 Based Microg/m³ Analyser

Notes:

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BUILDING & ROAD, MATERIAL, SOIL, ENVIRONMENTAL & CALIBRATION TESTING LAB

Issued To: **M/s. Narmada Plast Trust**
Village: P.M.A. Charnok, India.

Test Report Date: 08/10/2022

Sample Particulars

Name of the Sample:

Purpose of Monitoring:

Sampling Location:

Method of Sampling:

Monitoring Conducted On:

Sampling Duration (hrs.):

Ambient Air Quality Monitoring

To Check the Pollution Level

Signal Station:

IS 3102 (Part 14)

At: Gurgaon

24 hrs

Ambient Report

Sl. No.	Date of Sampling	Report No.	Concentration
			Method (%)
1	08/10/2022	002211000175	ND
2	08/10/2022	002211000175	ND
3	08/10/2022	002211000175	ND
4	08/10/2022	002211000175	ND
Test Method			FD Based Monitor Analyser

Note:

These results are valid only for the purpose for which they are intended. They do not constitute a warranty of any kind, expressed or implied, and shall not be used for any other purpose. The results are subject to the limitations of the test methods used and the quality of the samples provided. The results are not valid if the samples are not properly labeled and stored.



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BUILDING & ROAD, MATERIAL, SOIL, ENVIRONMENTAL & CALIBRATION TESTING LAB

Request To: **Shri Hanumanji Park Trust**
 Yash Park, Chennai, India

Test Request Date: **16/11/2022**

Sample Particulars
 Nature of the Sample
 Purpose of Monitoring
 Sampling Location
 Method of Sampling
 Monitoring Conducted By
 Sampling Duration (If any)

Ambient Air Quality Monitoring
 To Check the Pollution Load
 Car Parking
 (S. 110) (Part 14)
 00 - Street
 24 hrs

Analysis Report

Sl. No.	Date of Sampling	Point No.	Concentration
			Metane (µg)
1	05/11/2022	0001/00016	ND
2	12/11/2022	0002/00016	ND
3	19/11/2022	0003/00016	ND
4	26/11/2022	0004/00016	ND
Test Method			ISO 15687 Non-flame Analysis

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Issued To: **M/s. Kumbharji Part Trust**
Village Post, Chahal, 151001

Test Report No: **04/10/2023**

Sample Particulars
Nature of the Sample
Purpose of Monitoring
Sampling Location
Method of Sampling
Monitoring Conducted By
Sampling Division (If any)

Ambient Air Quality Monitoring
To Check the Pollution Load
The Station
IS 3182 (Part 14)
01 - Ambient
24 hrs.

Analysis Report

Sl. No.	Date of Sampling	Location	Concentration				
			Particulate Matter (PM ₁₀) (µg/m ³)	Particulate Matter (PM _{2.5}) (µg/m ³)	Sulphur Dioxide (as SO ₂) (µg/m ³)	Nitrogen Dioxide (as NO ₂) (µg/m ³)	Ozone Monoxide (as O ₃) (µg/m ³)
1	04/10/2023	XXXXXXXXXXXXXXX	28.50	15.40	22.50	14.70	40
2	04/10/2023	XXXXXXXXXXXXXXX	28.40	20.00	22.80	16.10	40
3	11/10/2023	XXXXXXXXXXXXXXX	17.50	40.00	14.50	12.00	40
4	20/10/2023	XXXXXXXXXXXXXXX	24.00	44.00	16.00	14.10	40
NAAQM Standards			60	60	60	60	2
Test Method			IS 3182 Appendix 1 Part 10 (PM ₁₀) (IS 3182)	IS 3182 (P-25)	IS 3182 (P-21)	IS 3182 (P-4)	IS 3182 (P-16)

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Client: **M/s Ramlingar Feet Trust**
VAFU Post, Channarayana

Test Report No: **NR/1000022**

Sample Particulars

1. Name of the Sample:

2. Purpose of Monitoring:

3. Sampling Location:

4. Method of Sampling:

5. Monitoring Conducted by:

6. Sampling Duration (Date):

1. **Ambient Air Quality Monitoring**

2. **To Check the Pollution Level**

3. **Five Dates**

4. **10:00 AM to 11:00 AM**

5. **Mr. Sindhu**

6. **24 hrs**

Analysis Report

Sl. No.	Date of Sampling	Expn. No.	Concentration
			Method (%)
1	08/11/2022	080811000110	ND
2	08/11/2022	080811000210	ND
3	08/11/2022	080811000310	ND
4	08/11/2022	080811000410	ND
Test Method			PM 10 Standard Method - Analytical

NOTE: Please refer to Safety Data Sheet (SDS) of the chemicals used in the test.
 The detection limit of the method is 100 µg/m³. The results are reported as ND (Not Detected) if the concentration is below the detection limit.
 Sample Report valid for 90 days from the date of issuance. 1000 (Ten Thousand) copies only.



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Test Reports of Wastewater (STP)



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Kamarajar Port Limited
Vellore Port, Chennai-600 121, Tamil Nadu, India

Report on Environmental Monitoring of Kamarajar Port Limited



Study Period: December 2023

Prepared By:



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Introduction

Kamang Port Trust is the First Corporational Port in India and the 12th Major Port. It Works on the model of "Landlord" system. KPT's aim is to manage the port in a pro-active manner to minimize any impacts from port operations or new developments. Various port facilities used for Cargo (Bulk, Container, Steved, PG), petroleum and export of automobiles. Data generations on environmental quality constitute the basis for environmental appraisal of the project. Thus, data on environmental quality has to be periodically monitored and also to comply with the TSPCB / MOEF standards.

With this background and need Kamang Port Limited has appointed M/s. Nitya Laboratories to undertake the same. KPL has awarded the work to M/s. Nitya Laboratories vide work order No. NPL/NO/2020/04/001/0002 dated 11.02.2020.

Accordingly, environmental quality (air and effluent (Storage) for the month of October 2021 is presented in this report.

2.0 Scope and Methodology

The scope of work, work carried out and methodology adopted for the survey are described below:

2.1 Ambient Air Quality

As a part of study, Ambient Air Quality Parameters were measured during the monitoring days 2000 of PM₁₀, PM_{2.5}, SO₂, NO₂, Methane and CO were monitored.



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AMBIENT AIR QUALITY MONITORING:

Ambient air quality was monitored at different locations inside the port. The study area covers the periphery of Port and different parts of the port. A Total of 8 Ambient Air Quality Monitoring Stations covering both upwind and downwind were monitored during November 2023.

Table: Detail of Ambient Air Quality Monitoring Locations

Sr. No	Station Code	Sampling Location
1	AADM-1	Security Main Gate
2	AADM-2	Inside Port Administrative Building
3	AADM-3	Signal Station
4	AADM-4	Finger Jetty
5	AADM-5	At Car Parking Yard
6	AADM-6	At General Cargo Ramp
7	AADM-7	At Pier Station
8	AADM-8	Crane House

Ambient Air Quality Monitoring was carried out with a frequency of two samples per week i.e. at 8 Locations. A Total of 32 Samples each of PM₁₀ & PM_{2.5}, Sample of SO₂, NO₂, Methane and CO each were monitored by using Respotech dual sampler, Fine Particulate Sampler, Methane & CO Analyser.



Test Reports of Ambient Air Quality Monitoring



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BUILDING & ROAD, MATERIAL, SOIL, ENVIRONMENTAL & CALIBRATION TESTING LAB

Issued To: **M/s Kamangal Plast Trust**
Vedic Plast, Chennai, India

Test Report Date: **18/07/2024**

Sample Particulars

Nature of the Sample:

Purpose of Monitoring:

Sampling Location:

Method of Sampling:

Monitoring Conducted by:

Sampling Duration (Hrs.):

Ambient Air Quality Monitoring

To Check for Pollution Load

Start Date:

18/07/2024

At: **Chennai**

24 Hrs

Analysis Report

Sr. No.	Date of Sampling	Test Report No.	Concentration
			Microg (µg)
1	18/07/2024	2024000018	ND
2	19/07/2024	2024000019	ND
3	19/07/2024	2024000018	ND
4	18/07/2024	2024000018	ND
5	20/07/2024	2024000018	ND
6	20/07/2024	2024000018	ND
7	20/07/2024	2024000018	ND
Test Method			ISO Based Methods Analyst

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Report To: **Mr. Kanchappa Poojara**
Vidyalaya, Channarayana, 560022

Test Report Date: 08/08/2024

Sample Particulars

- Name of the Sample
- Purpose of Monitoring
- Sampling Location
- Method of Sampling
- Monitoring Conducted By
- Sampling Duration (hrs)

Ambient Air Quality Monitoring

- To Check the Pollution Level
- Check House
- IS 5182 (Part 1)
- Mr. Kanchappa
- 24 Hrs.

Analysis Report

Sl. No.	Date of Sampling	Test Report No.	Concentration
			Microg/m ³
1	07/08/2024	20240807011	ND
2	14/08/2024	20240814011	ND
3	15/08/2024	20240815011	ND
4	16/08/2024	20240816011	ND
5	20/08/2024	20240820011	ND
6	26/08/2024	20240826011	ND
7	29/08/2024	20240829011	ND
Test Method			FD Direct Method Analyzer

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Issued To: **M/s. Kanchangar Post Trust**
Village POCC, Chanda, India

Test Report Date: 18/05/2024

Sample Particulars

Name of the Sample:
Purpose of Monitoring:
Sampling Location:
Method of Sampling:
Monitoring Commenced By:
Sampling Duration (hrs):

Ambient Air Quality Monitoring

To Check the Pollution Level
Address Monitoring
ID: 2024/0001/10
Mr. Shreshth
24 hrs.

Analysis Report

Sl. No.	Date of Sampling	Test Report No.	Concentration
			Microg/m ³
1	07/05/2024	2024/0001/10	ND
2	11/05/2024	2024/0001/10	ND
3	15/05/2024	2024/0001/10	ND
4	18/05/2024	2024/0001/10	ND
5	20/05/2024	2024/0001/10	ND
6	22/05/2024	2024/0001/10	ND
7	18/05/2024	2024/0001/10	ND
Test Method			NI 0029 Method adopted

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Issued To: **M/s. Karmangar Port Trust**
Water Port, Chennai, India

Test Report Date: 16/11/2014

Sample Particulars

Reason of the Sample

Purpose of Monitoring

Sampling Location

Method of Sampling

Monitoring Conducted By

Sampling Division (If any)

Ambient Air Quality Monitoring

To Check the Pollution Level

Signal Station

02/0001 Part 141

15, Street

24/14

Analysis Report

Sr. No.	Date of Sampling	Test Report No.	Concentration
			Method No.
1	07/12/2013	001310001113	ND
2	10/12/2013	001310002113	ND
3	10/12/2013	001310003113	ND
4	10/12/2013	001310004113	ND
5	22/12/2013	001310005113	ND
6	26/12/2013	001310006113	ND
7	28/12/2013	001310007113	ND
Test Method			ND Based Method Analysis

NOTE: Nitya Laboratories (Pvt.) Limited, Chennai, India is an ISO 9001:2008 certified organization. The laboratory is also certified under ISO 17025:2005 for the testing of various parameters. For more information, please visit our website: www.nityalab.com



AUTHORIZED SIGNATORY

(NAME OF NITYA)

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BUILDING & ROAD, MATERIAL, SOIL, ENVIRONMENTAL & CALIBRATION TESTING LAB

Issued To: **M/s. Maheshwar Park Trust**
Village Park, Gurgaon, India

Test Report No.: **2021000014**

Sample Particulars

Name of the Station:
Purpose of Monitoring:
Sampling Location:
Method of Sampling:
Monitoring Conducted by:
Sampling Duration (hrs.):

Ambient Air Quality Monitoring
To Check the Pollution Level
Frequency:
03:00 (Post 1st)
09:00 (Post)
14:00

Analysis Report

Sl. No.	Date of Sampling	Test Report No.	Concentration
			Microg (µg)
1	01/02/2021	2021000014	ND
2	01/02/2021	2021000014	ND
3	01/02/2021	2021000014	ND
4	14/02/2021	2021000014	ND
5	20/02/2021	2021000014	ND
6	20/02/2021	2021000014	ND
7	20/02/2021	2021000014	ND
Test Method			ND Based Method Analysis

ND: Not Detected. The concentration of the pollutant is less than the detection limit. The detection limit is the minimum concentration of a pollutant that can be detected by the method used. The detection limit is determined by the laboratory and is subject to change. The detection limit is not a constant value and is dependent on the method used. The detection limit is not a constant value and is dependent on the method used.



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BUILDING & ROAD, MATERIAL, SOIL, ENVIRONMENTAL & CALIBRATION TESTING LAB

Issued To: **M/s. Kameshwar Park Trust**
Village Post, Ghosia, Noida

Test Report Date: 26/11/2014

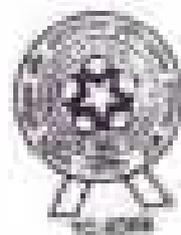
Sample Particulars:
Name of the Sample:
Purpose of Monitoring:
Sampling Location:
Method of Sampling:
Monitoring Conducted By:
Sampling Interval (hrs.):

Ambient Air Quality Monitoring
To Check the Pollution Level
General Designation:
IS:1585 (Part 1)
IS: 2185
24 hrs

Analysis Report

Sl. No.	Date of Sampling	L.A.R. No.	Concentration				
			Particulate Matter (PM ₁₀) in µg/m ³	Particulate Matter (PM _{2.5}) in µg/m ³	Sulphur Dioxide (SO ₂) in µg/m ³	Ozone Density (O ₃) in µg/m ³	Carbon Monoxide (CO) in µg/m ³
1	27/11/2014	TC04020000000000000000	22.40	18.10	16.80	21.40	40
2	17/11/2014	TC04020000000000000000	24.40	18.40	17.20	19.40	40
3	17/11/2014	TC04020000000000000000	17.20	11.20	16.80	24.80	40
4	18/11/2014	TC04020000000000000000	25.40	14.40	17.80	22.20	40
5	20/11/2014	TC04020000000000000000	26.20	12.40	16.20	26.20	40
6	20/11/2014	TC04020000000000000000	28.20	18.40	16.80	27.20	40
7	28/11/2014	TC04020000000000000000	24.20	22.80	13.80	21.20	40
NAACM Standard			50	150	80	80	1
Test Method			IS:1585 (Part 1) Part 10-ISO/IEC Guidelines	IS:1585 (Part 1) Part 10	IS:1585 (Part 1) Part 10	IS:1585 (Part 1) Part 10	IS:1585 (Part 1) Part 10

NOTE: Nitya Laboratories Quality System, certified by ISO 9001, is accredited by NABL to ISO 17025 for Calibration of Analytical Instruments, for Environmental Monitoring of Air Quality and for Environmental Monitoring of Water Quality. Nitya Laboratories is also a member of the International Laboratory Accreditation Cooperation (ILAC) and is a signatory to the ILAC Mutual Recognition Arrangement (MRA).



BUILDING & ROAD, MATERIAL, SOIL, ENVIRONMENTAL & CALIBRATION TESTING LAB

Client To: **M/s. Karmajit Pest Treat**
Vafar Post, Chhatar, 122002

Test Report No: **2023/0224**

Sample Particulars

Address of the Sample

Presence of Monitoring

Sampling Location

Method of Sampling

Monitoring Conducted by

Sampling Duration (hrs)

Ambient Air Quality Monitoring

To Check the Pollution Level

General Category

IS 3180 (Part 14)

Mr. Shrihar

24 hrs

Analysis Report

Sl. No.	Date of Sampling	Test Report No.	Concentration
			Microg (µg)
1	24/02/23	2023/020178	ND
2	24/02/23	2023/020179	ND
3	24/02/23	2023/020180	ND
4	24/02/23	2023/020181	ND
5	24/02/23	2023/020182	ND
6	24/02/23	2023/020183	ND
7	24/02/23	2023/020184	ND
Test Method			FD Based Method Analyser

NOTE: Responsibility is upon Client, Nitya Lab will not be liable for any loss or damage to the sample or any other loss or damage to the client's property. If the client has any complaint, please contact Nitya Lab immediately. Nitya Lab is not responsible for any loss or damage to the client's property.



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BUILDING & ROAD, MATERIAL, SOIL, ENVIRONMENTAL & CALIBRATION TESTING LAB

Issued To: **Mrs. Ramandeep Kaur (Trust)**
Water Test, Chennai, 1999

Test Report Date: 18/01/2024

Sample Particulars

Nature of the Sample

Frequency of Monitoring

Sampling Location

Method of Sampling

Monitoring Conducted by

Sampling Duration (Year)

- Ambient Air Quality Monitoring
- To Check for Polluted Load
- Car Emission
- In-Plant Operation
- Air Sampling
- etc. etc.

Analysis Report

Sl. No.	Date of Sampling	O.C.N. No.	Concentration				
			Particulate Matter (PM ₁₀) (µg/m ³)	Particulate Matter (PM _{2.5}) (µg/m ³)	Sulphur Dioxide (as SO ₂) (µg/m ³)	Nitrogen Dioxide (as NO ₂) (µg/m ³)	Ozone Monoxide (as CO) (µg/m ³)
1	14/01/2024	Y00000000000000000000	24.00	21.00	18.00	20.00	40
2	14/01/2024	Y00000000000000000000	26.40	20.40	20.00	19.00	40
3	14/01/2024	Y00000000000000000000	19.20	20.40	22.00	21.00	40
4	14/01/2024	Y00000000000000000000	21.40	20.00	18.00	19.40	40
5	14/01/2024	Y00000000000000000000	21.40	24.00	18.40	19.00	40
6	14/01/2024	Y00000000000000000000	20.70	20.00	24.00	20.70	40
7	14/01/2024	Y00000000000000000000	22.40	24.20	20.00	22.70	40
NACM Standard			50	100	50	50	10
Test Method			IS: 3102 (P-01) For 10 CM Ca Dustiness	IS: 3102 (P-01)	IS: 3102 (P-01)	IS: 3102 (P-01)	IS: 3102 (P-10)

Report prepared in accordance with the Indian Standards. The results are valid only for the purpose for which the sample was collected. The laboratory is not responsible for the accuracy of the data provided by the client. The client is responsible for the accuracy of the data provided. The laboratory is not responsible for the accuracy of the data provided by the client. The client is responsible for the accuracy of the data provided.



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BUILDING & ROAD, MATERIAL, SOIL, ENVIRONMENTAL & CALIBRATION TESTING LAB

Client: M/s. Ramanga Post Trust
Vastu Plot, Chennai, India

Test Report No: NLT/2020

Sample Particulars

Name of the Sample

Purpose of Monitoring

Sampling Location

Method of Sampling

Monitoring Conducted by

Sampling Duration (hrs)

Amplified Air Quality Monitoring

To Check the Pollution Level

Five Station

IS 3162 (Part 14)

At 5m height

24 hrs

Analysis Report

Sl. No.	Date of Sampling	Test Report No.	Concentration
			Microg/m ³
1	07/12/2020	0021000011	40
2	14/12/2020	0021000017	40
3	15/12/2020	0021000018	40
4	16/12/2020	0021000019	40
5	22/12/2020	0021000020	40
6	08/12/2020	0021000012	40
7	09/12/2020	0021000013	40
Test Method			ISO based Methods Applicable

Quality Control system for Quality Assurance. Standard for: Ambient Air Quality Monitoring, ISO 15189:2013, ISO 9001:2015
 All samples sent for analysis should be at a suitable temperature. Samples should be stored in a cool, dry place. Samples should be analyzed within 24 hours of collection. Sample should be stored in a cool, dry place. Samples should be analyzed within 24 hours of collection.



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Test Reports of Wastewater (STP)



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BUILDING & ROAD, MATERIAL, SOIL, ENVIRONMENTAL & CALIBRATION TESTING LAB

Send To: Mr. Ranjeet Puri Trust
Vijay Park, Chandigarh

SLR No.: TCE/MS/CA/CONSTR/1094
Test Report Date: 16/06/2024

Sample Particulars

Nature of the Sample:

Sample Quantity & Packaging:

Sample Received At Lab:

Test Started On:

Test Completed On:

Method of Sampling:

Date of Sampling:

Monitoring Conducted By:

Service Description:

Wastewater (WW)

1.0 Liter, Polyethylene Bottle

01/01/2024

01/01/2024

01/01/2024

IS 15789-3

01/01/2024

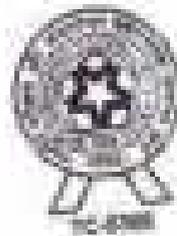
Mr. Ranjeet Puri

W-1: BTP Cell of Admin Building

W-2: BTP Cell of Car Parking

Analysis Report

Sl. No.	Parameter	Unit	Result		Permissible Limits	Remark
			W-1	W-2		
1	pH	---	7.62	7.15	6.5 to 8.5	IS 15789-3 (11)
2	Total Suspended Solids (TSS)	mg/l	118	250	30	IS 15789-3 (11)
3	Chemical Oxygen Demand (COD)	mg/l	42	30	100	IS 15789-3 (12)
4	Bio Chemical Oxygen Demand (BOD) @ 20°C (50°C)	mg/l	8	7	30	IS 15789-3 (14)
5	Fecal Coliform	MPN/100 ml	400	600	<1000	IS 15789-3



(ANALYST SIGNATURE)
(NEWYUB SAINI)

(CLIENT SIGNATURE)
(RANJEET PURI)

NOTE: The information provided in this report is based on the samples received and tested as per the methods specified. It is not intended to be used for any other purpose. The laboratory is not responsible for any consequences arising from the use of the results of this report. The information provided in this report is for the use of the client only and should not be used for any other purpose. The laboratory is not responsible for any consequences arising from the use of the results of this report.

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KAMARAJAR PORT LIMITED



Compliance Report

On

Ministry's guidelines for

**“ESTABLISHMENT OF 1MLD RO DESALINATION PLANT AT
KAMARAJAR PORT, VALLUR POST, CHENNAI-120”**

BY

M/s. KAMARAJAR PORT LIMITED

Point wise compliance report on Ministry's guidelines for Establishment of 1MLD RO Desalination Plant at Kamarajar Port by M/s Kamarajar Port Limited - CRZ clearance.

Ref: MoEF's Ltr No. F.No.11-51/2012-1A-111, dated 22.04.2022

Brief Description of the Project:

Port is obtaining water of 250 KLD against the sanctioned 1 MLD form CMWSB for potable purpose. During summer season, acute shortage of potable water is envisaged. To overcome the water crisis, it was decided to install a Sea Water RO desalination plant of 1 MLD capacity within the port based on the meeting held on 03-03-2018 under the chairmanship of Hon'ble Ministry of Shipping, Road Transport & Highways, Water Resources and Ganga Rejuvenation.

The proposed desalination process will make use of Reverse Osmosis (RO) technology to remove salt from sea water, thereby producing fresh product water. The Sea Water based RO desalination plant is proposed with intake well for withdrawing sea water, intake and outfall conveyance lines, RO plant building to house 2 X 0.5 MLD production units and Outfall disposal unit. The sea water intake structure is proposed at water depth of 4m and the intake pipeline of around 350m connects the sea water intake to the plant. The plant is designed with recovery efficiency of 40% and the total water requirement of the desalination plant is about 117 m³ /hr, out of which 46 m³ /hr of fresh water will be produced and 71 m³ /hr of brine will be disposed into the sea through buried pipe line of diameter 150mm HDPE pipe.

Brine of high salinity will be discharged into the sea and hence Brine dispersion model using Cornell Mixing Zone Expert System (CORMIX) was carried out to ensure proper dispersion. The study indicated that the salinity concentration reduced from 60 ppt to 35.6ppt with 100% dilution within 16m in 5.12 seconds. Hence, the water quality in the environment is not disturbed.

The geographical location of the desalination plant is (13°15'27.67" N, 80°20'8.09" E), intake structure (13°15'28.32"N, 80°20'18.08"E), outfall (13°15'27.34"N, 80°20'39.03"E).

Ministry of Environment, Forests & Climate Change has accorded clearance under CRZ Notification vide letter No. F.No.11-10/2022-IA.III dated 22.04.2022.

Compliance report to the Conditions stipulated vide Ltr No. F.No.11-10/2022-IA.III dated 22.04.2022.

S.No	MoEF Guidelines	Compliance Status
A.	Specific Conditions	
(i)	All construction shall be strictly in accordance with the provisions of CRZ Notification, 2011 and as amended from time to time.	Noted.
(ii)	No storage reservoir for sea water shall be permitted and only a pipelines conveyance system shall be installed	Noted.
(iii)	No groundwater shall be extracted within the CRZ area to meet water requirements during the construction and/or operational phase of the project.	Noted for compliance.
(iv)	No excavated material during the construction shall be dumped in water bodies or adjacent areas. The site shall be restored to its near original condition after completion of construction	Noted for compliance.
(v)	Any physical infrastructure set up during construction period shall be removed simultaneously with the completion of laying of each segment of the project.	Noted for compliance.
(vi)	All the conditions stipulated by the Tamil Nadu Coastal Zone Management Authority vide its Letter No. 22895/EC.3/2021-1 dated 08/02/2022, and commitments made by the PP before the CZMA and EAC shall be followed in letter and spirit.	Noted for compliance.
(vii)	All necessary clearance from the concerned authority, as may be	

	applicable should be obtained prior to commencement of the project or activity.	
General Conditions		
(i)	Management of solid waste by the Solid Waste Management Rules, 2016 shall be strictly implemented.	Noted for compliance.
(ii)	'Consent to Establish' and /or 'Consent to Operate' shall be obtained from State Pollution Control Board under the provisions of the Air (Prevention and Control of Pollution) Act, 1981 and/or the Water (Prevention and Control of Pollution) Act, 1974, as may be applicable.	Consent To Establish for the project accorded to the project vide consent order Nos. 2201148160108 & 2201248160108, dated 03.11.2022. The installation process is yet to commence. Consent To Operate will be obtained after completion of installation of all the units of Desalination Plant in all aspects.
(iii)	Disposal of muck during the construction phase should not create any adverse effect on the neighbouring communities and be disposed of taking the necessary precautions for general safety and health aspects of people, only in approved sites with the approval of Competent Authority.	Noted for compliance.
(iv)	All liquid waste arising from the proposed development will be disposed of as per the norms prescribed by the Central/ State Pollution Control Board. There shall not be any disposal of untreated effluent into the sea/coastal water bodies. It shall be ensured that the wastewater generated is treated in the STP as committed by the project proponent. The treated waste water shall be reused for landscaping,	Noted for compliance.

	flushing and/or HVAC cooling purposes etc. within the development. The project proponent should also make alternate arrangements for situations arising due to malfunctioning STP. There shall be regular monitoring of standard parameters of the effluent discharge from STP under intimation to the SPCB.	
(v)	Any hazardous waste generated during the construction phase, shall be disposed off as per applicable rules and norms with the necessary approvals of the State Pollution Control Board.	Noted for compliance.
(vi)	A copy of the clearance letter shall be uploaded on the website of the concerned State Coastal Zone Management Authority/State Pollution Control Board. The Clearance letter shall also be displayed at the Regional Office, District Industries Centre and Collector's Office/Tehsildar's Office for 30 days.	Noted.
(vii)	A six-monthly monitoring report shall need to be submitted by the project proponent to the concerned Regional Office of this Ministry regarding the implementation of the stipulated conditions.	Being complied with.
(viii)	The Ministry of Environment, Forest & Climate Change or any other Competent Authority may stipulate any additional conditions or modify the existing ones, if necessary in the interest of the environment and the	Noted.

	same shall be complied with.	
(ix)	Full co-operation shall be extended to the officials from the Regional Office of MoEF&CC, during monitoring of the implementation of environmental safeguards stipulated. It shall be ensured that documents/data sought pertinent is made available to the monitoring team. A complete set of all the documents submitted to MoEF&CC shall be forwarded to the concerned Regional Office of MoEF&CC.	Noted for compliance.
(x)	In the case of any change(s) in the scope of the project, the project would require a fresh appraisal by this Ministry.	Noted.
(xi)	The Ministry reserves the right to add additional safeguard measures subsequently, if considered necessary, and to take action to ensure effective implementation of the suggested safeguard measures in a time-bound and satisfactory manner, including revoking the environment clearance under the provisions of the Environmental (Protection) Act, 1986, for non-compliance.	Noted for compliance.
(xii).	All other statutory clearances such as the approvals for storage of diesel 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 proponent from the respective Competent Authorities.	Noted for compliance.

(xiii)	<p>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 CRZ Clearance and copies of clearance letters are available with the State Pollution Control Board (SPCB) and may also be seen on the website of the Ministry of Environment, Forest and Climate Change at https://parivesh.nic.in/. The advertisement should be made within seven days from the date of receipt of the Clearance letter and a copy of the same should be forwarded to the concerned Regional Office of this Ministry.</p>	<p>Complied with.</p> <p>The clearance to the project was advertised in two local news papers dated 05.05.2022.</p>
(xiv)	<p>A copy of the clearance letter shall be sent by the proponent to the concerned Panchayat, Zilla Parisad/Municipal Corporation, Urban Local Body and the Local NGO, if any, from whom suggestions/representations, if any, were received while processing the proposal.</p>	<p>Complied with.</p> <p>The copy of the CRZ clearance letter was forwarded to the Commissioner, Greater Chennai Corporation vide KPL's letter dated 30.04.2022.</p> <p>No representations were received against the project clearance.</p>
(xv)	<p>The proponent shall upload the status of compliance of the stipulated conditions, including results of monitored data on their website and shall update the same periodically. It shall simultaneously be sent to the Regional Office of MoEF&CC, the respective Zonal Office of CPCB and the SPCB.</p>	<p>Being complied with.</p>
(xvi)	<p>The environmental statement for each financial year ending 31st March in</p>	<p>Complied with.</p>

	Form-V is mandated to be submitted by the project proponent to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be put on the website of the project proponent along with the status of compliance of clearance conditions and shall also be sent to the respective Regional Office of the Ministry by e-mail.	
6	This Clearance is subject to the final order of the Hon'ble Supreme Court of India in the matter of Goa Foundation Vs Union of India in Writ Petition (Civil) No.460 of 2004 as may be applicable to this project	Noted.
7	The Ministry reserves the right to stipulate additional conditions if found necessary at subsequent stages and the project proponent shall implement all the said conditions in a time-bound manner. The Ministry may revoke or suspend the CRZ clearance if the implementation of any of the above conditions is not found satisfactory.	Noted.
8	Concealing factual data or submission of false / fabricated data and failure to comply with any of the conditions mentioned above may result in withdrawal of this clearance and attract action under the provisions of the Environment (Protection) Act, 1986.	Noted.
9	Any appeal against this CRZ clearance lies with National Green Tribunal, if	Noted.

	preferred within a period of 30days as prescribed under Section 16 of the National Green Tribunal Act, 2010	
10	The above conditions shall be enforced, inter-alga under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986, Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 and the Public Liability Insurance Act, 1991 along with their amendments and Rules and any other orders passed by the Hon'ble Supreme Court of India / High Courts and any other Court of Law relating to the subject matter.	Noted.

Conditions stipulated by the Tamil Nadu Coastal Zone Management Authority vide its Letter No. 22895/EC.3/2021-1 dated 08/02/2022

S.No	Special Conditions	Compliance Status
(i)	All the provisions of the CRZ Notification, 2011 shall be adhere with.	Noted for compliance.
(ii)	The project proponent shall undertake the establishment only after getting the required Clearances from Competent authorities such as Planning Permission, Plan Approval etc., including the clearance under CRZ Notification, 2011 and other statutory clearances.	Consent To Establish for the project accorded to the project vide consent order Nos. 2201148160108 & 2201248160108, dated 03.11.2022. The installation process is yet to commence. Consent To Operate will be obtained after completion of installation of all the units of Desalination Plant in all aspects.

(iii)	The clearances/approvals from the Revenue Department and Tamil Nadu Maritime Board for laying of pipeline in the areas under their control shall be obtained before the commencement of the establishment.	Consent To Establish for the project accorded to the project vide consent order Nos. 2201148160108 & 2201248160108, dated 03.11.2022. The installation process is yet to commence.
(iv)	The project proponent shall not draw any groundwater in CRZ area, under any circumstances.	Noted for compliance.
(v)	No excavated material during the construction shall be dumped in water bodies or adjacent areas.	Noted for compliance.
(vi)	The project proponent shall adhere to the Construction and Demolition Waste Management Rules, 2018.	Noted for compliance.
(vii)	The project proponent shall ensure that the temporary structures installed for laying of pipe lines are removed within one months of accomplishment of the work.	Noted for compliance.
(viii)	No storage reservoir for sea water shall be permitted and only pipelines conveyance system shall be installed.	Noted for compliance.
(ix)	The project proponent shall ensure that an inbuilt mechanism appropriate for the management of solid waste is in place which shall be pre-requisite for obtaining CTO under Air and Water Acts from the TNPCB.	Noted for compliance.
(x)	The proponent shall furnish the HTL map from Institute of Remote Sensing (IRS), Anna University or from any authorized Institute, authenticated by the Govt. of India for this purpose in the village level 1:4000 Scale, duly marking the proposed project features in the	The HTI map was submitted to TNSCZMA and MoEF & CC during proposal called for review. The respective authorities have examined the details and recommended the proposal for CRZ

	approved CZMP map of Tamil Nadu.	clearance.
(xi)	The Project Proponent has submitted the compliance report with reference to the above conditions and submitted the HTL Demarcation map obtained from the NIOT who is one of the authorized agency for preparation of HTL Demarcation map. With reference to the NoC from the State Pollution Control Board, the Project Proponent has stated that the TNPCB has informed that NoC will be issued in the form of Consent To Establish (CTE) after obtaining CRZ Clearance from the MoEF8s CC, GoI.	Being complied with.
B	General Conditions	Compliance Status
(a)	The Project Proponent should ensure that the salinity of the output water does not affect the environment and the organisms.	Noted for compliance.
(b)	The Project Proponent should check the quality of the intake water especially for oil and heavy metals contamination.	Noted for compliance.
(c)	The Project Proponent should ensure that the dredging activity should not hinder with the outlet pipe of the desalination plant.	Noted for compliance.
(d)	The project proponent shall undertake the establishment only after getting all the required Clearances such as Planning Permission, CTE from TNPCB, Clearance under CRZ Notification, 2011 etc., from Competent authorities.	Consent To Establish for the project accorded to the project vide consent order Nos. 2201148160108 & 2201248160108, dated 03.11.2022. The installation process is yet to commence.
(e)	The project proponent shall not draw any groundwater in CRZ area, under any circumstances.	Noted for compliance.

(f)	The temperature of water at the outfall point should be maintained within the prescribed levels. This may be monitored regularly through an institute and fact may be reported to Department of Environment.	Noted for compliance.
(g)	The Project should not affect the fishing activities in any way and also should not hinder the livelihood of the Fishermen.	Noted for compliance.
(h)	All the provisions of the CRZ Notification, 2011 shall be adhered with.	Noted for compliance.
(i)	The project proponent shall undertake the establishment only after getting the required Clearances from Competent authorities such as Planning Permission, Plan Approval etc., including the clearance under CRZ Notification, 2011 and other statutory clearances.	MoEF&CC has accorded the CRZ clearance for the project, vide F.No.11-51/2012-1A-111, dated 22.04.2022. TNPCB has accorded the Consent To Establish for the project, vide consent order Nos. 2201148160108 & 2201248160108, dated 03.11.2022. The installation process is yet to commence.
(j)	The clearances/approvals from the Revenue Department and Tamil Nadu Maritime Board for laying of pipeline in the areas under their control shall be obtained before the commencement of the establishment.	MoEF&CC has accorded the CRZ clearance for the project, vide F.No.11-51/2012-1A-111, dated 22.04.2022. TNPCB has accorded the Consent To Establish for the project, vide consent order Nos. 2201148160108 & 2201248160108, dated 03.11.2022. The installation process is yet to commence.
(k)	No excavated material during the construction shall be dumped in water bodies or adjacent areas.	Noted for compliance.

(l)	The project proponent shall adhere to the Construction and Demolition Waste Management Rules, 2018	Noted for compliance.
(k)	The project proponent shall ensure that the temporary structures installed for laying of pipe lines are removed within one month of accomplishment of the work.	Noted for compliance.
(m)	No storage reservoir for sea water shall be permitted and only pipelines conveyance system shall be installed.	Noted for compliance.
(n)	The project proponent shall ensure that an inbuilt mechanism appropriate for the management of solid waste is in place which shall be pre-requisite for obtaining CTO under Air and Water Acts from the TNPCB.	Noted for compliance.
(o)	The Project Proponent should remit 2% on the total project cost to Environment Management Agency of Tamil Nadu (EMAT) account, towards carrying out need based CER activities.	Complied with. An amount of 36lakhs (<i>being 2% of the project cost of Rs.18Crores</i>) was remitted to Environment Management Agency of Tamil Nadu (EMAT) account, towards carrying out CER activities.