

## Subramanian A

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**From:** Sathish Kumar R  
**Sent:** Thursday, September 22, 2022 4:42 PM  
**To:** eccompliance-tn@gov.in; DEE GMP TNPCB  
**Cc:** Ramde Karangiya; Subramanian A  
**Subject:** Submission of Environmental Statement (Form V) for the financial year ending 31st March, 2022 of Marine Infrastructure Developer Private Limited, Kattupalli Port, Chennai  
**Attachments:** MIDPL\_ Form- V (2021-22).pdf  
**Importance:** High

Dear Sir / Madam,

With reference to the captioned subject, we submit herewith the **Environmental Statement of M/s Marine Infrastructure Developer Private Limited**, in **Form-V** prescribed under Rule 14 of the Environment (Protection) Rules 1986 for the financial year ending 31st March 2022.

Submitted for your kind information and records.

Thanks and Regards

**R. Sathish Kumar**  
Deputy General Manager - Environment | Adani Ports and SEZ Limited |  
Mob +91 91760 00959 | Direct: +91 44 2796 8177 | Extn. 69177 |  
[sathish.r@adani.com](mailto:sathish.r@adani.com) | [www.adaniports.com](http://www.adaniports.com) |

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**MIDPL/TNPCB/2021-22/179**

**Date: 22.09.2022**

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 31<sup>st</sup> March, 2022 of Marine Infrastructure Developer Private Limited, Kattupalli Port, Chennai

**Ref:** 1. Consent Order No. 2105136876761 under Water Act dated 13.09.2021  
2. Consent Order No. 2105236876761 under Air Act dated 13.09.2021

With reference to the captioned subject and cited references above, we submit herewith the Environmental Statement of **M/s Marine Infrastructure Developer Private Limited**, in Form-V prescribed under Rule 14 of the Environment (Protection) Rules 1986 for the financial year ending 31<sup>st</sup> March 2022.

Submitted for your kind information and records.

Thanking you,

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

  
**R. Sathish Kumar**  
**Head - Environment**



Encl: 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.

## Form-V

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

### Environmental Statement for the financial year ending 31<sup>st</sup> March 2022

#### PART - A

i) Name and Address of the owner/occupier of the industry operation or process	: Mr. G.J. Rao Chief Executive Officer Marine Infrastructure Developer Private Limited Kattupalli Port, Kattupalli Village, Ponneri Taluk, Thiruvallur District - 600 120 Tamil Nadu, India																		
ii) Industry Category	: Primary : Red Secondary : 1065- Ports & Harbour, Jetties and Dredging Operations.																		
iii) Production Capacity	: Cargo Handling Capacity: 24.65 MMTPA <table border="1"><thead><tr><th>S.No.</th><th>Description</th><th>Quantity in MMTPA</th></tr></thead><tbody><tr><td>1.</td><td>Containers</td><td>21.60</td></tr><tr><td>2.</td><td>Ro-Ro (Automobiles)</td><td>0.07</td></tr><tr><td>3.</td><td>Project cargo</td><td>0.44</td></tr><tr><td>4.</td><td>Break Bulk / General Cargo (Barytes/ Gypsum/ Limestone/ Granite/ Steel Cargo/ Rock Phosphate/ Bauxite/ Dolomite Cargo)</td><td>1.82</td></tr><tr><td>5.</td><td>Edible oil, CBFS, Base Oil, Lube Oil and Non-Hazardous Liquid Cargo</td><td>0.72</td></tr></tbody></table>	S.No.	Description	Quantity in MMTPA	1.	Containers	21.60	2.	Ro-Ro (Automobiles)	0.07	3.	Project cargo	0.44	4.	Break Bulk / General Cargo (Barytes/ Gypsum/ Limestone/ Granite/ Steel Cargo/ Rock Phosphate/ Bauxite/ Dolomite Cargo)	1.82	5.	Edible oil, CBFS, Base Oil, Lube Oil and Non-Hazardous Liquid Cargo	0.72
S.No.	Description	Quantity in MMTPA																	
1.	Containers	21.60																	
2.	Ro-Ro (Automobiles)	0.07																	
3.	Project cargo	0.44																	
4.	Break Bulk / General Cargo (Barytes/ Gypsum/ Limestone/ Granite/ Steel Cargo/ Rock Phosphate/ Bauxite/ Dolomite Cargo)	1.82																	
5.	Edible oil, CBFS, Base Oil, Lube Oil and Non-Hazardous Liquid Cargo	0.72																	
iv) Year of establishment	: 2009, with the issue of Environmental Clearance to L&T Ship Building. Bifurcation of Environmental Clearance of L&T Ship Building to Marine Infrastructure Developer Private Limited on 09 <sup>th</sup> February 2018.																		
v) Date of the last environmental statement submitted	: Vide our Letter No. MIDPL/TNPCB/2021-22/119 dated 23.09.2021.																		



**PART - B**

**WATER AND RAW MATERIAL CONSUMPTION**

**(i) Water Consumption**

S. No	Water Consumption (m <sup>3</sup> / Day)	During the previous Financial year (2020-2021)	During the Current Financial year (2021-2022)
1.	Process	NIL	NIL
2.	Cooling	NIL	NIL
3.	Domestic	124.66	111.46

The unit does not undergo any manufacturing process. The water consumed is mainly for Firefighting, dust suppression on roads, Greenbelt development and maintenance, etc.

**(ii) Raw Material Consumption**

S. No	Name of the Raw Material	Name of the Product	Consumption during the financial year 2020-21.	Consumption during the financial year 2021-22.
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 reasons			
<b>a) Water</b>	STP Treated Water Characteristics: -					
	Parameter	Consent Limit	Actual			% Variation with prescribed standard
			30 KLD	10 KLD	5 KLD	
	pH	5.5-9	7.3	7.7	7.4	-Nil-
	Total Suspended Solids (mg/l)	30	18.2	14.4	7.6	-Nil-
BOD (3 days at 27°C) (mg/l)	20	11.9	13.0	8.1	-Nil-	
Fecal Coliform (MPN/100ml)	1000	195	174.7	135.8	-Nil-	
<b>b) Air</b>	<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 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 &gt;70%.</p> <p>All the monitored parameters are well within the prescribed standards.</p>					
<b>Particulate Matter (mg/Nm3)</b>	DG stack emission report is enclosed as <b>Annexure 1</b> .					
<b>Sulphur Dioxide (ppm)</b>						
<b>Nitrogen Oxide (ppm)</b>						



**PART-D**

**HAZARDOUS WASTES**

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

Hazardous Wastes	Total Quantity (Kg)	
	During the current financial Year (2020-21)	During the current financial Year (2021-22)
(a) From Process	<ul style="list-style-type: none"><li>• Cargo residue, washing water and sludge containing Oil (3.1)- 44.42 MT</li><li>• Discarded Containers/ Barrels (33.1)- 3.57 MT</li><li>• Used/Waste/ Spent Oil (5.1)- 6.0 KL</li></ul>	<ul style="list-style-type: none"><li>• Used/Waste/ Spent Oil (5.1)- 2.31 KL</li></ul>
(b) From Pollution control facilities	NA	NA

**PART-E**

**SOLID WASTES**

TOTAL QUANTITY GENERATED			
Solid Waste		During the previous Financial Year (2020-21)	During the current Financial Year (2021-22)
a)	From process	NIL	NIL
b)	From pollution control facilities- STP	168 kgs	278 kgs
c)	1. Quantity recycled or reutilized within the Unit	168 kgs	278 kgs
	2. Sold	NIL	NIL
	3. Disposed	NIL	NIL



## **PART-F**

**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 wastes.**

- **"Zero Waste to Landfill" Initiative** - No waste is being sent to landfill or incineration facility. MIDPL is having Integrated Waste Management System (IWMS) to proper segregate & recover the materials and are handled as per 5R (Reduce, Reuse, Recycle, Recover and Reprocess) principle.
- MIDPL has awarded with Zero Waste to Landfill Management System (ZWTL MS 2020) from TÜV Rheinland India Pvt. Ltd (Annexure – 2).
- Hazardous waste includes Cargo residue, washing water and sludge containing oil, Discarded Containers/ Barrels and Used/Waste/ Spent Oil. All the hazardous wastes are collected and stored properly in Integrated Waste Management Shed & are being disposed to TNPCB authorized /registered recyclers in line with the Hazardous and Other Waste (Management & Transboundary Movement) Rules, 2016 (As amended).
- The used batteries and E-waste are stored in Integrated Waste Management Shed and disposed through TNPCB approved recyclers as per the 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 & Transboundary Movement) Rules, 2016.
- 100% utilization of STP sludge for greenbelt maintenance as manure.
- MIDPL certified as "Single Use Plastic (SUP) Free" site from CII –ITC Centre of Excellence for Sustainable Development (Annexure – 3)



## PART-G

### **Impact on pollution control measures on conservation of natural resources and consequently on the cost of production**

- Roof Top Solar Plant with the solar power generation capacity of 1000 kW were installed at MIDPL. Around 12,60,000 Units per Annum being generated from Solar Plant. MIDPL has invested nearly Rs.4 Crs. for developing this solar plant there by achieved reduction of conventional energy and contributed for resource conservation.
- 15 RTGs retrofitted into Electrical power-driven system at the project cost of Rs.45 Crs. Key Cost benefits includes reduction in diesel consumption and emission level.
- Sewage Treatment Plants (30 KLD, 10 KLD and 5 KLD STPs) are in continuous operation and the treated effluent water quality is meeting the TNPCB norms. STP treated water is used for Gardening purpose, thereby reducing freshwater consumption. The total cost spent on STP operation and maintenance during the year 2021-22 is Rs. 17.34 Lakhs.
- Biogas facility was setup at MIDPL to convert the kitchen waste to useful heat energy. The biogas unit generates output of 3kg / day. The plant capacity is 6 cubic meter / day.
- Unit is undertaking Regular Environmental Monitoring in port through NABL accredited laboratory. We have also installed and operating Continuous Ambient Air Quality Monitoring Station (SO<sub>2</sub>, NO<sub>x</sub>, CO, PM<sub>10</sub> & 2.5, BTX analyser to monitor VOC) and Meteorological Station (Wind Speed, Wind Direction, Ambient Temperature, Atmospheric Pressure, Relative Humidity, Rainfall and Solar Radiation). Real time data of CAAQMS is connected to TNPCB server. All the monitored environmental parameters are well within the prescribed standards and the details of monitored data is regularly being submitting to TNPCB, CPCB, MoEF&CC and other concerned authorities.
- All the domestic effluent generated at port is treated at existing Sewage Treatment Plants (30 KLD, 10 KLD and 5 KLD) and the entire treated sewage water is being reused within port premises for gardening.
- Motion sensor and timers installed at buildings to reduce energy consumption.

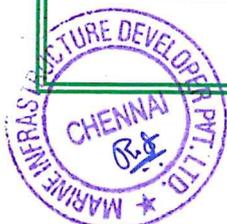


- Installed and operating Vehicle Pollution Under Control (PUC) checking facility to control vehicular emission in port premises.
- RTG Container Stacking monitoring system implemented and achieved energy saving up to 18000 Units per year amounting to Rs. 1.35 L /Year.
- Air conditioners fitted with energy saving device "Eco Plug" and achieved energy saving of around 22.1MWH per year.
- Streetlight and High mast lighting controlled by light intensity sensor. Energy savings achieved around 29,000 units per year amounting to Rs. 2.15 Lakhs/Annum.
- 10,292 trees & 19,880 Shrubs planted as part of Greenbelt development program in the year 2021-22. Drip Line and Sprinkler System is provided at MIDPL for irrigation in Greenbelt and landscape areas.

#### **PART-H**

**Additional investment proposal for Environment protection including abatement of pollution, prevention of pollution**

<b><u>Regular Expenditure (cost in INR lakhs/year)</u></b>		
<b>S. No</b>	<b>Description</b>	<b>Cost</b>
1	Comprehensive Environmental Monitoring	28.96
2	AAQ/NL/SM Survey & STP Treated Water Quality Analysis	0.55
3	Environment Studies	36.86
4	Retrofitting of DG Sets	56.57
5	Integrated Waste Management & Pollution Under Check Facility	2.17
6	O&M of STP's	17.34
7	Housekeeping	73.69
8	Greenbelt Maintenance	107.57
<b>Total</b>		<b>322.98</b>



## PART-I

### **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 to 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 50001:2018) certified Port.
- obtained "5S" Certification at MIDPL
- MIDPL is bestowed with the top honors and the details of accolades received during the year 2021-22 are mentioned here under;
  - EKDKN's "**Platinum Award**" under 10<sup>th</sup> Exceed Environment Award 2021 for **Energy Conservation** Category.
  - "**Golden Peacock Environment Management Award - 2021**" for Transportation (Ports) Sector, under 'Environment Management' Category.
- **Community Development:**

Kattupalli 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 11 panchayats covering about 46 villages within 10 Km radius of the Kattupalli 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

Date: 22.09.2022

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



Name : **G.J. Rao**

Designation: **Chief Executive Officer**

Address : Marine Infrastructure Developer Pvt Ltd (MIDPL)  
Kattupalli Village, Ponneri Taluk,  
Thiruvallur District – 600 120  
Tamil Nadu, India.



## Annexure - 1

MIDPL- STACK MONITORING REPORT (April'2021 to March'2022)													
Location		DG 2000KVA - 1											
Month & Year		Apr-21	May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	Nov-21	Dec-21	Jan-22	Feb-22	Mar-22
S.No.	Parameters	21.04.21	20.05.21	18.06.21	20.07.21	18.08.21	15.09.21	21.10.21	15.11.21	24.12.21	25.01.21	16.02.22	23.03.22
1	Stack Temperature, °C	281	287	-	291	-	265	245	257	-	262	-	250
2	Flue Gas Velocity, m/s	26.08	26.91	-	28.92	-	25.48	24.72	26.29	-	26.01	-	25.83
3	Gas Discharge, Nm <sup>3</sup> /hr	6334	6465	-	6899	-	6372	6420	6674	-	6543	-	6645
4	Sulphur Dioxide, mg/Nm <sup>3</sup>	10.7	11.2	-	10.9	-	9	7.1	7.9	-	8.1	-	7.9
5	NOX (as NO <sub>2</sub> ) in ppmv	248	255	-	257	-	249	228	236	-	224	-	218
6	Particular matter, mg/Nm <sup>3</sup>	37.3	35	-	35.1	-	37.4	12	14.3	-	12	-	11.3
7	Carbon Monoxide, mg/Nm <sup>3</sup>	98	94	-	93	-	95	69	75	-	56	-	52

Location		DG 2000KVA - 2											
Month & Year		Apr-21	May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	Nov-21	Dec-21	Jan-22	Feb-22	Mar-22
S.No.	Parameters	21.04.21	20.05.21	18.06.21	20.07.21	18.08.21	15.09.21	21.10.21	15.11.21	24.12.21	25.01.21	16.02.22	23.03.22
1	Stack Temperature, °C	-	-	298	-	258	-	247	-	242	-	254	263
2	Flue Gas Velocity, m/s	-	-	27.56	-	26.75	-	25.46	-	24.68	-	24.98	26.12
3	Gas Discharge, Nm <sup>3</sup> /hr	-	-	6494	-	6778	-	6587	-	6447	-	6376	6557
4	Sulphur Dioxide, mg/Nm <sup>3</sup>	-	-	12.7	-	9.7	-	6.9	-	7.3	-	7.7	8.9
5	NOX (as NO <sub>2</sub> ) in ppmv	-	-	261	-	242	-	220	-	214	-	212	225
6	Particular matter, mg/Nm <sup>3</sup>	-	-	37.3	-	33	-	15	-	13.1	-	10.8	12.1
7	Carbon Monoxide, mg/Nm <sup>3</sup>	-	-	99	-	87	-	75	-	70	-	47	54

Location		DG 500 KVA											
Month & Year		Apr-21	May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	Nov-21	Dec-21	Jan-22	Feb-22	Mar-22
S.No.	Parameters	21.04.21	20.05.21	18.06.21	20.07.21	18.08.21	15.09.21	21.10.21	15.11.21	24.12.21	25.01.21	16.02.22	23.03.22
1	Stack Temperature, °C	-	185	-	180	-	171	174	165	-	169	-	-
2	Flue Gas Velocity, m/s	-	16.88	-	18.12	-	16.87	17.41	18.57	-	15.78	-	-
3	Gas Discharge, Nm3/hr	-	1639	-	1780	-	1690	1732	1886	-	1588	-	-
4	Sulphur Dioxide, mg/Nm3	-	7.9	-	7.1	-	6.3	5.8	5.2	-	6.5	-	-
5	NOX (as NO2) in ppmv	-	91	-	103	-	94	80	69	-	92	-	-
6	Particular matter, mg/Nm3	-	27.8	-	24.6	-	22.6	8.3	7	-	6.8	-	-
7	Carbon Monoxide, mg/Nm3	-	69	-	64	-	68	54	51	-	16	-	-

Location		DG 125 KVA											
Month & Year		Apr-21	May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	Nov-21	Dec-21	Jan-22	Feb-22	Mar-22
S.No.	Parameters	21.04.21	20.05.21	18.06.21	20.07.21	18.08.21	15.09.21	21.10.21	15.11.21	24.12.21	25.01.21	16.02.22	23.03.22
1	Stack Temperature, °C	127	-	134	-	116	-	119	-	124	-	-	128
2	Flue Gas Velocity, m/s	12.93	-	12.01	-	11.48	-	12.05	-	11.26	-	-	11.94
3	Gas Discharge, Nm3/hr	611	-	558	-	559	-	581	-	535	-	-	563
4	Sulphur Dioxide, mg/Nm3	5.6	-	5.9	-	4.4	-	3.2	-	3.7	-	-	4
5	NOX (as NO2) in ppmv	69	-	74	-	57	-	47	-	53	-	-	58
6	Particular matter, mg/Nm3	16.4	-	14.8	-	17.1	-	4.8	-	4.6	-	-	5.2
7	Carbon Monoxide, mg/Nm3	26	-	30	-	22	-	16	-	18	-	-	20

Location		LIQUID TERMINAL HOT OIL GENERATOR											
Month & Year		Apr-21	May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	Nov-21	Dec-21	Jan-22	Feb-22	Mar-22
S.No.	Parameters	21.04.21	20.05.21	18.06.21	20.07.21	18.08.21	15.09.21	21.10.21	15.11.21	24.12.21	25.01.21	16.02.22	23.03.22
1	Stack Temperature, °C	151	-	-	452	-	159	-	-	-	-	152	-
2	Flue Gas Velocity, m/s	10.03	-	-	10.21	-	10.75	-	-	-	-	11.47	-
3	Gas Discharge, Nm3/hr	36254	-	-	36818	-	38137	-	-	-	-	41362	-
4	Sulphur Dioxide, mg/Nm3	6.8	-	-	7.9	-	7	-	-	-	-	7.9	-
5	NOX (as NO2) in ppmv	20.3	-	-	25.1	-	27.4	-	-	-	-	21	-
6	Particular matter, mg/Nm3	11.2	-	-	12.3	-	14.2	-	-	-	-	11.4	-
7	Carbon Monoxide, mg/Nm3	24	-	-	30	-	35	-	-	-	-	22	-



# Certificate

Standard: **Zero Waste to Landfill Management System  
(ZWTL MS 2020)**

Certificate Holder: **Marine Infrastructure Developer Private Limited**  
Kattupalli Port, Tiruvallur - 600120  
Tamil Nadu, India

Scope: **Providing Port Facilities for Handling and Storage  
of Bulk Cargo, Containerized Cargo and Liquid  
Terminal Operations**

Validity: **This certificate is valid from 01-06-2021 until 31-05-2024  
Subject to satisfactory annual surveillance audits.**

Certificate No. TUV/ZWLMS/2021/Adani Ports/0502

A handwritten signature in black ink, appearing to be 'Gang'.

New Delhi, 01-06-2021

TÜV Rheinland India Pvt. Ltd.  
Office 610, 6<sup>th</sup> Floor, iThum  
Tower, A-40, Sector-62,  
Noida- 201301, India

# Accolades



**EKDKN's Platinum Award – 2021**



**Golden Peacock Environment Management Award 2021**